

## COUNSELING IN SCHOOLS

### THE NEED OF COUNSELING IN SCHOOLS

In modern India, apart from the family structure, the educational system plays a major role in child socialization even though many children are out-of-school (Pramanik, 2007). The influence of this formal structure on the life of school-going children is somewhat contradictory however. Undoubtedly, school kids are in many ways better off than those out-of-schools. The former have more life options and chances to improve the socio-economic status of the family they (will) belong to. At the same time however and over the years, problems of school going children have multiplied in the present educational set-up. Besides, the hidden or overt pressure to perform and achieve has negative impact on teachers and students' parents as well. Most mental health workers therefore welcome the recent guidelines of the Central Board of Secondary Education (CBSE) that stipulate the appointment of one counselor in each of its affiliated schools. Yet, experience teaches us that school authorities either do reject the need for school counseling or support it for the wrong reasons. Besides, schools teachers, school kids as well as their guardians are often oblivious about the existence or role of such counselors. What is more: many mental health workers have no precise idea about their function and the role of counselors in school is not clearly defined. In this editorial I want to muse a bit about this need of counselors in schools.

Perhaps, the ambiguity around school counseling is caused by the term "counseling" itself. The Wikipedia rightly states that there are probably as many definitions of counseling as there are practitioners to describe it. The word counseling comes from the Middle English *conseil*, from Old French *conseil*, from Latin *cōsiliū*; akin to *cōsulere*, to take counsel, consult. Yet we can rightly ask: consultation about what and who? Besides, should the counselor consult their clients whether they want advice or should he/she wait till they asked for advice. In other words is the role of a counselor preventive or responsive?

### COUNSELING ABOUT WHAT?

Let us first consider the first question as to what a counselor

is supposed to "counsel" about. Many school authorities (as well as guardians) define counseling as psychotherapy and deny the need of such counseling. They feel that counseling stigmatizes the school or the student. On the other side of the spectrum there are those schools and parents that define counseling as academic coaching (only) and these adults eagerly seek the help of such "career counselors". Yet, counseling though important does not only concern (further) study options. It concerns stimulating the full and healthy development of all aspects of childhood and adolescence. Unfortunately, many studies have shown that many school children do not grow up healthy or in a healthy environment. Different disorders (WHO, 2006) that are encountered in various Indian schools are conduct disorder, attention deficit hyperactive disorder, anxiety disorder, depression, mental retardation, epilepsy and learning disabilities in particular among those younger than twelve years old. During the adolescence period (that is thirteen years and above) conduct disorder, depression, substance abuse, phobia, unfounded school absenteeism and sexual problems and misconduct are more common disorders that are detected by health workers. These problems are distressing to the children as well as the parents, school authorities and the wider community yet teachers overburdened by their own tasks and often ignorant about symptoms, causes and treatment of these disorders can not be expected to play the role of a counselor. An efficient counselor has therefore to be trained in abuse counseling, relationship counseling (parents-child; teacher-child and child-child (male and female) relationships and conflict resolution), grief and loss counseling, child development and effective parenting/teaching counseling and career counseling.

### COUNSELING WHO?

Fact is that in all kind of schools and among all student communities (attempted) suicides do take place. Besides, it is an undeniable fact that every parent desires his/her child to excel in their studies. Yet, it remains mind-boggling how students can achieve in overfull classes of around sixty students and increasingly vast syllabi and shortages of (qualified) teachers. Besides, in this state-of- affairs there is almost no space for extracurricular activities so much needed

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for an overall healthy development of children. On top of that, each school expects its students to excel academically and school teachers are supposed to deliver the results (Jacob, 2002). Clearly, school-going children are under varied and tremendous pressures and counseling mainly concerns them. Yet, in the state of Jharkhand, for instance, there is additional pressure on teachers and school authorities that is on those financially helped by the Government, as this financial support depends on the number of students passing each year with first division. In general, competition among all schools and students is increasing. The overall situation is therefore extremely complex and shows that counseling should not only concern students but also their teachers and guardians. A counselor therefore is not only useful for students but also for educational personnel and family members of school-going children. School authorities and teachers should be served by counselors whenever they face disciplinary problems, physical and mental health problems of students such as headaches, depression, anxiety, stress, burn-outs, low self-esteem, etc. Besides, many parents might like to avail the services of counselors in order to obtain advice in their task as main socialization agents. Of course, counselors themselves should thus be trained in such a way that they can serve this varied clientele and fulfill their various tasks in different fields of counseling. A counselor should not only have a comprehensive knowledge of behavioral problems arising with children's corresponding age but also understand the dynamics of family and educational environments. A successful counselor is also the one who guides students in the art of time management and demonstrates the importance of filling in academics with extracurricular activities. Besides, counselors should have a solid understanding of adult psychology/psychiatry as well in order to provide advice to teachers and school authorities and help guardians in properly carrying out their parental duties.

#### **PREVENTIVE OR RESPONSIVE ROLE OF COUNSELOR?**

The last question to address here concerns the time of intervention. It is often thought that a counselor should wait for the child, parent or teacher to come to her/him for advice. Yet, we can argue in favor of a more preventive role of the counselor as an early identification of problems can prevent their escalation. Facts are that:

1. Children/parents and teachers rarely seek personal help from professional agencies directly.
2. Symptoms if left untreated may translate into personality problems, disturbed interpersonal relationships, poor academic achievement, low self esteem, etc.

3. Judicious early identification can curtail needless suffering and avoid spiraling of problems.

A successful counselor's job is therefore to identify, assess and intervene even before being asked for advice. This task should also include advice to consult other experts if needed.

#### **CONCLUSION**

Apart from the above-mentioned functions, a school counselor is naturally also desired to have received a proper psycho-social training, to maintain confidentiality and an open relationship with students, teachers and school authorities. He/she is also expected to have a say in decisions about curriculum and teaching methods and to possess skills to directly address threats to a healthy school environment. Such counselors are indeed needed.

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**Vinod K. Sinha**

## NEUROSCIENCE OF HYSTERIA

Samir Kumar Praharaj<sup>1</sup>, Suchorita Paul<sup>2</sup>, Basudeb Das<sup>3</sup>

### ABSTRACT

Scientific study of hysteria is a conceptually difficult area because it covers diverse disorders according to the current nosology; the diagnosis of hysteria itself is contingent upon assumption of unconscious mechanisms. Nevertheless, there is a recent surge of interest to unravel its neurobiological underpinnings. Recent neuroimaging findings implicate areas such as anterior cingulate and prefrontal cortices in generation of conversion symptoms. Most of the findings point towards abnormalities in higher level cognitive processing of information, which may involve volition, awareness etc. Contemporary models have broadened to place conversion symptoms within an evolutionary framework.

**Key Words:** *Conversion, neurobiology, functional neuroimaging*

### INTRODUCTION

The early concepts of hysteria (e.g. *wondering womb* hypothesis, *master organ* theories, neural theories as *nervous irritation* and *reflex theory* etc.) tried to explain it as disorder of soma, as opposed to disorder of mind (Kozłowska, 2005). But, with the psychoanalytic formulation of hysteria by Freud (1896), the previous theories were overshadowed into oblivion, and since then these concepts have been trailing, reflections of which are evident in the current nosology. In the contemporary nosological systems [ICD-10 (WHO, 1992) and DSM-IV-TR (APA, 2000)], conversion disorder is diagnosed when psychological factors are judged to be associated with symptom formation. Whereas, in clinical practice there is no sharp distinction between somatoform disorder and conversion disorder, and patients can shift from one to other, both symptomatically and diagnostically (Marsden, 1986). Conversion disorder can be seen as a 'neurological subtype' of somatoform disorder; similarly dissociative disorder can be conceptualized as a more specific subtype of conversion disorder, involving disturbances of memory, identity and perception. Therefore, all these disorders should be classified together; the term *autosuggestive disorder* for this group of disorders was suggested by Oakley (1999). Slater (1965) had reported localized neurological disorders in 56% of patients previously diagnosed with conversion disorder,

although later studies (Mace & Trimble, 1996; Crimlisk et al, 1998) have been less impressive. Clinical studies have reported an excess of left-sided conversion symptoms (Magee, 1962; Galin et al, 1977; Alexrod et al, 1980), and conversely, hysterical symptoms have been reported with right brain lesions (e.g., infarcts) (Ramasubbu & Sandor, 1997), suggesting a right-sided or nondominant hemisphere abnormality. Some of the earlier neurobiological models have addressed the evolutionary perspective of conversion symptoms. It has been viewed as instinct for self-preservation and related to two instinctive reaction patterns: *violent motor reaction* and *immobilization reflex* (Kretschmer, 1926), and as conflict around personal and social responsibility with consequent fears of rejection and ostracism (Ludwig & Lexington, 1972).

### NEUROBIOLOGICAL BASIS OF HYSTERIA

Studies which have used functional neuroimaging to examine conversion or medically unexplained symptoms have used either single photon emission computed tomography (SPECT) or positron emission tomography (PET) which allow scans to be taken and provide an estimate of activity averaged over several minutes, indirectly obtained by a measure of cerebral blood flow during a resting or task period (Vuilleumier, 2005).

### Single photon emission computed tomography (SPECT)

The first SPECT study by Tiihonen et al (1995) on a woman with long-standing hysterical left hemisensory disturbances revealed hyperperfusion of the right frontal lobe and hypoperfusion in the right parietal region while stimulating the affected limb, which normalized after recovery suggesting simultaneous activation of frontal areas and inhibition of the somatosensory cortex. A subsequent study (Yazici & Kostakoglu, 1998) using hexamethylpropyleneamine oxime labeled with Technetium-99m ( $^{99m}\text{Tc}$ -HMPAO) SPECT in five patients with various conversion symptoms found decreased perfusion over cortical areas of dominant hemisphere in four patients, specifically in temporal and parietal areas. A more systematic SPECT study (Vuilleumier et al, 2001) using ethylenecysteinate dimer labeled with Technetium-99m ( $^{99m}\text{Tc}$ -ECD) in seven patients with unilateral hysterical sensorimotor loss, revealed consistently decreased blood flow in the thalamus and basal ganglia contralateral to the deficit, which resolved after clinical recovery. The findings of this study indicate dysfunction of striathalamocortical circuits controlling sensorimotor functions and voluntary motor behaviors in generation of conversion symptoms.

### Positron emission tomography (PET)

In a PET study (Marshall et al, 1997) on a single patient with chronic hysterical paralysis, the attempt to move the paralyzed leg failed to activate contralateral primary motor cortex; and instead activation appeared in the right orbitofrontal and right anterior cingulate cortex, which were interpreted as actively inhibiting the primary motor cortex. In another case (Snyder et al, 1998) diagnosed as having hysterical blindness with Ganser-like symptoms, PET scan revealed bilateral, focal hypometabolic areas in posterior cortex. A larger study (Spence et al, 2000) using PET during movement of the left hand in patients with hysteria, as compared to control and feigners, revealed that the patients exhibited relative hypoactivity of left dorsolateral prefrontal cortex; whereas feigners exhibited hypofunction of the right anterior prefrontal cortex. Halligan et al (2000) used PET to study regional cerebral blood flow (rCBF) in a right-handed subject with hypnotically induced paralysis of the left leg; when asked to move the 'paralyzed leg', rCBF increased in the contralateral orbitofrontal and anterior cingulate cortices but not in the motor cortex. These studies indicate inhibitory effect of frontal cortex on volitional movements.

### Functional magnetic resonance imaging (fMRI)

Mailis-Gagnon et al (2003) studied patterns of activation using fMRI while applying innocuous and noxious stimuli to both the affected and normal limb with chronic pain and nondermatomal somatosensory deficits. Unperceived stimuli in the affected limb failed to activate areas that were activated by perceived stimulation such as anterior insula, thalamus, caudal anterior cingulate cortex and ventrolateral prefrontal cortex. They were also associated with deactivation in primary and secondary somatosensory cortex (S1, S2), posterior parietal cortex and prefrontal cortex; and also activated the rostral and perigenual anterior cingulate cortex. It was suggested that conversion disorder may be functional deafferentiation due to active inhibition of somatosensory processing by limbic areas concerned with emotion and attention. Another fMRI study (Werring et al, 2004) during stimulation by whole field color flickers reported reduced activation in visual cortical areas and anterior cingulate cortex, whereas increased activation was noted in posterior cingulate cortex, insula, temporal poles as well as the thalamus and striatum on both sides. The areas of deactivation reported in these studies may correspond to either inhibitory effects or they may be just due to greater activation at baseline condition (Vuilleumier, 2005). These functional neuroimaging studies are limited by small sample size (the largest study included only seven patients); samples were clinically heterogeneous (e.g., motor vs sensory symptoms); duration of deficit (acute vs chronic); presence of comorbidity (e.g., depression or chronic pain); and different experimental design between studies (Black et al, 2004). In the studies of changes in blood flow or metabolism, it is not possible to control the confounding influence of attentional variation. Similarly, it is difficult to separate the effects of other accompanying changes in mental state from the effects relating specifically to hysteria. Nevertheless, newer data analysis approaches that are being used, such as statistical parametric mapping (SPM) and scaled subprofile modeling (SSM), allow voxel by voxel analysis of the areas of activation (Black et al, 2004). Overall, they suggest variable alteration in the activity of specific cortical and subcortical areas underlying conversion disorders, specially prefrontal and parietal cortices, thalamus and basal ganglia.

### Neurophysiology and psychophysiology studies

These studies can be divided into two broad groups: those

demonstrating normal neurophysiological responses despite subjective functional losses, and those trying to determine some abnormal pattern correlating with functional symptoms.

### **Electroencephalogram (EEG) and Quantitative EEG (qEEG)**

Paroxysmal epileptiform discharges may be seen in up to 3% of healthy people (Fenton, 1982). EEG studies in nonepileptic attack disorder reveal high rates of nonspecific changes (Lelliot & Fenwick, 1991), thus limiting its use. Nevertheless, a qEEG study (Drake et al, 1988) demonstrated less EEG mobility (related to number of polarity changes per second) in left frontal lobe in a group of hysterical and somatoform patients as compared to controls.

### **Event related potentials (ERP)**

Hernandez-Peon et al (1956) recorded somatosensory evoked potentials in a patient with glove and sleeve type of analgesia, and found loss of evoked activity when the anaesthetic arm was stimulated, which returned with intravenous administration of barbiturates. However, in subsequent studies the early components of ERP, as N1 and N2 waves, were reported to be normal in conversion disorder (Howard & Dorfman, 1986; Drake, 1990; Fukuda et al, 1996; Lorenz et al, 1998; Hoehstetter et al, 2002), which was interpreted as intact early cortical processing, and became the hallmark of conversion hysteria. Nevertheless, the early somatosensory potentials do not necessarily correlate with subjective perceptual experience, as S1 responses can be elicited by unperceived stimuli in patients with parietal lobe tumors sparing S1 area (Preissl et al, 2001). The late components of evoked potentials (e.g., P300) involving a more cognitive stage of attentive processing are abnormal with reduced amplitude (Towle et al, 1985; Fukuda et al, 1996; Lorenz et al, 1998), pointing to a defect in higher level processing of information or representations where sensory or motor signals are integrated with more complex information related to meaning and self-relevance of stimuli or actions (Vuilleumier, 2005). Contingent negative variation (CNV) which is normally evoked during motor preparation in response to a cue prior to an expected stimulus was reported to be abnormal in a patient with conversion disorder (Drake, 1990). In a recent study (Roelofs et al, 2006), increased N2 congruency effect was seen while stimulating the conversive paretic hand with hyperactivity of anterior cingulate cortex during initiation of movement.

### **Transcranial magnetic stimulation (TMS)**

A functional hemispheric asymmetry has been reported in two patients with left-sided conversive hemiparesis using TMS, the right hemisphere was less excitable than left (Foong et al, 1997), pointing to dominant hemisphere abnormality.

### **Magneto encephalography (MEG)**

MEG is a non-invasive electrophysiological technique that uses superconducting electrodes to measure the neuromagnetic fields generated by the brain's electrical activity. Hoehstetter et al (2002) used MEG to record activity in primary (S1) and secondary (S2) somatosensory cortices in three patients with unilateral psychogenic motor and sensory loss in response to tactile stimulation of the index finger of the affected and unaffected hands: both the patients and normal controls showed normal responses in the contralateral S1 and bilateral S2 areas, regardless of the stimulated side, consistent with previous studies indicating that the early components of somatosensory processing are normal in conversion disorder.

### **Neuropsychology**

Flor-Henry et al (1981) reported bifrontal and right posterior hemispheric cognitive dysfunction in hysteria as compared to normals. However these ERP, TMS, MEG and neuropsychology studies are scarce and reported findings have rarely been replicated to draw any firm conclusion regarding neural correlates of conversion symptoms. *Binding* refers to transient oscillatory hypersynchrony in *gamma band (40 Hz)* in order of few hundred milliseconds among group of neurons in thalamus, posterior heteromodal association cortex and anterior brain areas making higher level cognitive functions such as memory, motivation, planning and conscious experience possible (Tononi & Edelman, 1998). Although binding studies in hysteria are lacking, they would account for the functional disconnectivity seen in these disorders (Van der Kolka, 2000).

### **NEUROBIOLOGICAL MODELS OF HYSTERIA**

Rapid advances in neuroscience have paved ways in understanding hysteria which has resulted in various neurobiological models. Most of the theoretical models trying to link hysterical disorders to specific neurophysiological

mechanisms have been inspired by speculative arguments or analogies with general brain-mind models rather than by convergence of systematic empirical research. The current theories, i.e. information-processing theories have emerged from the field of cognitive neuroscience. Charcot (1889) had suggested that functional changes in the nervous system could be induced by particular ideas, suggestions or psychological states, as demonstrated by effect of hypnosis in hysterical states; similar recent proposals of selective impairments in 'action representations' for intentional motor planning have been put forward (e.g., Spence et al, 2000). Recent neurophysiological speculations regarding the proposed role for inhibitory or filtering mechanisms as a likely neural substrate for conversion symptoms (e.g., Tiihonen et al, 1995; Mailis-Gagnon et al, 2003) have been articulated much before by Pavlov (1933), who suggested that in predisposed individuals, overactivation of sub-cortical cerebral centers could lead to reactive inhibition of cortical inputs imposed by the frontal cortex, which was responsible for hysterical paralysis or anesthesia. Current neurobiological models of hysterical conversion disorder have been summarized below.

#### **Hilgard's Neodissociation model**

The neodissociation model (Hilgard, 1973) conceptualized mind to be made up of hierarchical structures; on the top lays the executive system which monitors and controls the subordinate systems. Hysterical symptoms arise out of dissociation between these structures, resulting in a reduction of normal voluntary control or in awareness of a body process controlled by a subordinate structure. This model was based on the observation that hypnotized subjects, although registered and processed sensory information unconsciously, were unaware of the sensory input; this was named as '*hidden observer*' phenomenon (Hilgard, 1973), which is currently known as *implicit perception* (Kihlstron et al, 1992). Although the model was attractive, it fails to explain the biological substrates of executive and subordinate structures, as well as development of a particular symptom in a given individual (Kozłowska, 2005).

#### **Oakley's information processing model**

Oakley (1999) based his model on the observation from several imaging studies showing activation of frontal cortex during hypnosis (Rainville et al, 1997; Gruzeliier, 1998;

Crawford et al, 1998). According to this model there are two levels of attentional mechanisms: a *low-level* system monitoring routine or automatic behaviors that are implicit and a *high-level* one associated with novel situations requiring conscious volition and effort; the latter localized to prefrontal cortex, whereas the localization of former remain unspecified. The *self-awareness system* (cerebral cortex) lies at the top of the hierarchy, below lies the *executive system* (prefrontal cortex) controlling information flow, and the *active representation of internal and external phenomena* processing habitual repetitive tasks. The production of hysterical symptoms is similar to neodissociation model; the self-awareness system is dissociated from the lower structures. Although this model tried to describe the structures involved, it does not address the evolutionary aspect of conversion symptoms.

#### **Discrete Behavioral State model**

Putnam (1988) postulated that there are *discrete mental-behavioral states* in newborn infants, as respiratory rate, extremity motor tone, activity level, vocalization, facial expression and eye-movement patterns (Wolff, 1987), transitions between them smooth out with maturation and becomes less obvious as the child grows up. Nijenhuis et al (1996) applied this model to conversion disorder, in which the individual's consciousness is organized into a series of discrete mental-behavioral states characterized by specific affects, body images, modes of cognition, perceptions, memories and behaviors; transition between the states remain abrupt and discontinuous. The mental state initiates a body response resulting in hysterical symptom which is shaped by past and ongoing relationship and other contextual factors (Kozłowska, 2005). Nijenhuis et al (1998) have argued that states of somatoform dissociation may be analogous to animal defense responses in the face of severe threat, thus putting it in an evolutionary framework; which is reminiscent of early neurobiological theories of Kretschmer (1926) and Ludwig & Lexington (1972).

#### **Somatic Marker Hypothesis**

According to this model (Damasio, 1996; 2000), *body maps* are generated from afferent inputs in autonomic nervous system through the projections from lamina-I of spinothalamic system to anterior cingulate, somatosensory cortices S1 and S2, and right insula (Craig, 2002; 2003), forming the '*body*

*loop*' and the second pathway through ventromedial frontal cortex and other structures forming the '*as-if body loop*'. These are mapped continuously at multiple brain levels: brainstem nuclei, hypothalamus, thalamus, anterior cingulate cortex and somatosensory cortices, with the right insula accomplishing the highest level of integrated body mapping (Damasio, 2003; Craig, 2003); these maps provide the neural substrate for the subjective evaluation of body state. This model proposes that transient but radical changes in 'body maps', leading to *false body maps* may be responsible for development of conversion symptoms (Damasio, 1996; 2000). Direct signaling to body-sensing brain regions, using the *as-if body loop*, can theoretically result in these regions receiving information that does not correspond to the actual body state, resulting in the generation of *false body maps*, in which the individual's perception of body state will be false (Damasio, 2003). False body maps can also result from interference of information coming into body-sensing regions along the afferent pathways (Damasio, 2003). Somatic marker hypothesis was developed based on studies on patients with damage to ventromedial frontal cortex who had severe impairments in social and personal decision making as well as abnormalities in emotion and feeling (Damasio, 1996). From an evolutionary perspective, this model explains all the levels of organization as functioning to maintain life by protecting from dangers, helping the organism to be opportunistic and facilitating social relationships. However, one limitation of this model is that the neural process by which the patterns become mental images remains unknown.

### Striathalamocortical hypothesis

This model explains conversion symptoms on the basis of functional disorder in striathalamocortical circuits controlling sensorimotor function, and is substantiated by a SPECT study (Vuilleumier et al, 2001) demonstrating blood flow abnormalities in subcortical structures. Striathalamocortical premotor loops were found to be involved in the generation of intentional movements and the learning of adaptive motor programs, and have been shown to influence sensory and pain processing (Tracey et al, 2000). The thalamus, in particular, acts as the main relay of afferents to the cortex and may potentially affect cortical areas involved with motor, sensory, and cognitive functions (Vuilleumier et al, 2001); stimulation of specific thalamic nuclei is known to trigger volitional movements (Hecaen et al, 1949) and to inhibit voluntary action (Strafella et al, 1997), and thalamic damage

can cause motor neglect, with patients failing to use the affected limb despite normal motor and sensory function (Von Giesen et al, 1994). A complementarity appears to be present between the somatic marker model and this model: striathalamocortical dysfunction may represent the neural correlate of the interference with sensory processing that result in false body maps and false perception of body state (Kozłowska, 2005).

### Brown's integrated cognitive model

According to Brown (2004), sensory information automatically triggers multiple related *representations* in the memory generating a number of *hypotheses*, each one representing a possible interpretation of the stimulus in the context of past experience. Finally, the most active hypothesis is selected, which is used to organize the information into a primary representation that provides the basis for action and the contents of consciousness. The conversion symptoms reflect the selection of inappropriate cognitive representation by low level attention or primary attention (Brown, 2004); this takes place during the creation of primary representation which underlies activation of thought and action schemata, the subjective experience and control of action. One key feature of the model is that all subjective experience is an *inference*, an interpretation of reality constructed in the context of past knowledge and experience. This model does not give precise anatomical correlates of cognitive processes and reasons why certain representation are privileged; it also overlooks the evolutionary value of the symptoms (Kozłowska, 2005).

### CONCLUSION

Contemporary models of hysteria conceptualize two mechanisms of symptom formation: (1) implicit processing of information resulting in an automatic motor response; (2) errors in representation and processing of information regarding the body state. To put it in another way, symptoms reflect errors within the cognitive processing and neural representation of information, rather than any disturbance in neural hardware itself. This view of generation of hysterical symptoms due to disturbances of 'cognitive processing' is in sharp contrast to the current concept of their traumatic origin. The evolutionary perspective has also changed, emphasizing not only the survival value of psychological phenomena in the regulation of the organism's internal state and in maintaining the organism's ability to respond to the environment, but also

the role of neural representations of body state as the biological substrate of both implicit cognitive processing and the individual's subjective experience of the body. Although the recent studies have been promising, much more need to be done to solve the mystery behind hysteria.

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1. **Dr. Samir Kumar Praharaj**, D.P.M., M.D., Junior Resident, Central Institute of Psychiatry, Ranchi-834006, Jharkhand.
  2. **Ms. Suchorita Paul**, MPhil (M&SP), Central Institute of Psychiatry, Ranchi-834006, Jharkhand.
  3. **Dr. Basudeb Das**, M.D., (Corresponding author), Assistant Professor of Psychiatry, Central Institute of Psychiatry, Ranchi-834006,
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## DEPRESSION AT PRIMARY CARE IN INDIAN CONTEXT

S. Haque Nizamie<sup>1</sup>, Pushpal Desarkar<sup>2</sup>

### ABSTRACT

Detection, assessment and management of psychiatric illnesses have become a major challenge to primary health care physicians all over the world today. The specialty mental health sector provides care to a minority of those seeking assistance, and more than half of identified treatment episodes occur in the primary medical care sector. In Indian context, as high as one-third of patients attending primary care were found to have moderate to severe depression. Indian patients having classical depressive symptoms constitute only the visible part of the proverbial depression iceberg. Submerged are those individuals who are nevertheless depressives but masquerade with bodily symptoms in the forefront. It constitutes a real challenge to discover this submerged iceberg of huge number of depressed population. Despite the major effects of depression on health and normal functioning, and the potential fatal outcome in the form of suicide, the disease is still mostly under diagnosed and under treated at primary care level. A certain degree of familiarity with the various presentations of depression, their thorough evaluation with consideration of differential diagnoses, skillful assessment of suicide risk, understanding of the basic pharmacological management strategies and timely psychiatric referral are essential at primary care level.

**Key Words:** *Depression, primary health care, India*

### INTRODUCTION

Owing to the changing policy of integrating mental health care at the primary care interface of health care delivery, detection, assessment and management of psychiatric illnesses have become a major challenge to primary health care (PHC) physicians all over the world today. The specialty mental health sector provides care to a minority of those seeking assistance, and more than half of identified treatment episodes occur in the primary medical care sector (Schulberg, 1985).

Depressive disorders are already the fourth-leading cause of the global disease burden and they are expected to rank second by 2020, behind ischemic heart disease (Murray & Lopez, 1996; World Health Organization, 2001). It has been reported that for as many as one-fifth to one-third of patients attending primary health care clinics in low-income countries, depression is the principal or a secondary reason for seeking care (Almeida-Filho, 1993).

In India, study shows that as high as 33.33% of patients attending primary care were moderate to severely depressed. Despite the major effects of depression on health and normal functioning, and the potential fatal outcome in the form of suicide, the disease is still mostly under diagnosed and under treated at primary care level (Amin et al, 1998).

### Many faces of depression

According to DSM-IV (1994) the various types of depression are:

- \* Major Depressive disorder
- \* Dysthymia
- \* Substance induced depressive disorder
- \* Depression due to a general medical condition

Except dysthymia, other types can have psychotic features (i.e., delusions, hallucinations, catatonic features etc).

### Diagnosis of depression

1) Major Depressive disorder: According to the DSM-IV (1994), a person who suffers from a major depressive disorder must either have a depressed mood most of the day (In children and adolescents, this may be characterized as an irritable mood.), as indicated by either subjective report (e.g., feels sad or empty) or observation made by others (e.g., appears tearful) or a loss of interest or pleasure in daily activities consistently for at least a two week period. This mood must represent a change from the person's normal mood and social, occupational, educational or other important functioning must also be negatively impaired by the change in mood.

This disorder is characterized by the presence of the majority of these symptoms:

- significant weight loss when not dieting or weight gain (e.g., a change of more than 5% of body weight in a month), or decrease or increase in appetite nearly every day.
- insomnia or hypersomnia nearly every day
- psychomotor agitation or retardation nearly every day
- fatigue or loss of energy nearly every day
- feelings of worthlessness or excessive or inappropriate guilt nearly every day
- diminished ability to think or concentrate, or indecisiveness, nearly every day
- recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide.

2) Dysthymia: Dysthymia is diagnosed when a person has depressed mood for most the time almost every day for at least two years. Children and adolescents may have irritable mood, and the time frame is at least one year. While depressed, a person experiences at least two of the following symptoms: either overeating or lack of appetite, sleeping too much or having difficulty sleeping, fatigue, poor self-esteem, difficulty with concentration or decision making, feeling hopeless.

3) Substance induced depressive disorder: To make a diagnosis of a substance-induced mood disorder, the

disturbance can only occur while a person is intoxicated, going through withdrawal, or within four weeks of either.

4) Depression due to a general medical condition: Many a medical conditions with which a patient comes for treatment and many commonly prescribed medicines at primary care can be depressogenic. A working knowledge is required for the detection of depression in such conditions. Table 1 shows common organic causes of depression.

**Table1: Common pharmacological factors and physical diseases associated with onset of depression**

Pharmacological	Corticosteroids, contraceptives, reserpine, alphas-methyl dopa, beta-blockers, anticholinesterases, cimetidine, ranitidine, indomethacin, phenothiazine, cyclosporin, vincristine, vinblastine, disulfiram, metoclopramide etc.
Infectious	Tertiary syphilis, influenza, AIDS, viral pneumonia, viral hepatitis, infectious, mononucleosis, Tuberculosis.
Endocrine	Hypothyroidism, hyperthyroidism, diabetes, hyperparathyroidism, Cushing's disease and syndrome, adrenal insufficiency.
Collagen	SLE, rheumatoid arthritis, fibromyalgia.
Neurological	Multiple sclerosis, Parkinson's disease, head trauma, complex partial seizures, CNS tumors, stroke, early dementia, sleep apnea.
Nutritional	Vitamin deficiencies (B12, C, folate, niacin, thiamine).
Neoplastic	Abdominal malignancies (e.g., CA pancreas),Disseminated carcinomatosis.

### Depression in Special Population

#### **Post partum depression:**

Post-partum depression is a unique syndrome in women attributable to pregnancy. The condition, which is usually insidious, having onset within first 2 to 3 months, is clinically similar to any other types of depression with some subtle differences. The syndrome is typically of mild to moderate severity and is characterized by dysphoric mood in all its variations. The common symptoms are sadness with anxiety (often surrounding baby), tension, self-reproach with pessimism, suicidal ideations, insomnia, and obsessional thinking often with marked somatic or hypochondriacal ideations (Nonacs & Cohen, 2000).

The condition affects approximately 10-15% of all mothers in Western societies (O'Hara & Swain, 1996). Recent epidemiological inquiries have reported prevalence rates for post-partum depression of 23% in Goan women in India (Patel et al, 2002). However, published epidemiological data on post-partum depression from India are predominantly limited to hospital-based data (John et al, 1977; Gautam, 1989; Patel et al, 2002). The incidence of post-partum depression was found to be 11% in the first prospective, community-based study in the rural area of Tamil Nadu (Chandran et al, 2002). Low income, birth of a daughter when a son was desired, relationship difficulties with mother-in-law and parents, adverse life events during pregnancy and lack of physical help emerged as significant risk factors for the onset of post-partum depression in Indian women (Chandran et al, 2002).

### ***Domestic Violence and Depression in Women***

Mental health sequelae to domestic violence are significant and have long-term health implications. Previous studies have estimated that every one out of two to five Indian women are subject to domestic violence (Schuler et al, 1996; Jejeebhoy, 1998) and these women tend to have more depressive symptoms than other women (Campbell & Lewandowski, 1997). Studies have shown that the more severe the abuse, the greater its impact on a woman's physical and mental health (Laserman et al, 1996). Recently, attempts have been made in India to systematically record data on the prevalence, nature and consequences of domestic violence. A population-based, multicentre collaborative project, the Study of Abuse in the Family Environment (India-SAFE) has been conducted in seven sites in India (Kumar et al, 2005). A spin-off paper from this project revealed a significant association between domestic violence and poor mental health. The study showed that every 4 out of 10 battered women reported poor mental health, of which depression emerged as a very significant morbidity (Kumar et al, 2005).

### ***Depression in Children & Adolescents***

Contrary to earlier beliefs, persistent depression occurs in children and becomes progressively more common after puberty. Up to 24% of adolescents will have had a major depression by the age of 18 (Pataki & Carlson, 1990). The condition seriously affects social, emotional and educational development, and is the most important predictor of suicidal behavior in young people aged 15-24 years.

Although the symptoms of depression in children are similar to those seen in adults, they also usually have irritable mood,

may fail to make expected weight gain, and tend to keep secret their depressive thoughts and crying. Moreover, the presentation of depression in childhood or adolescents can be very arcane to the clinician. Somatic complaints in the form of abdominal pain or headache and even frank oppositional defiance are frequent presentation of clinical depression in case of children (Pataki & Carlson, 1990). In case of adolescents, an insidious onset of conduct problems often heralds onset of clinical depression or dysthymia. Since comorbidity is the rule rather than exception in child psychiatry, depression often manifests with other psychiatric disorders such as anxiety, conduct disorder, obsessive-compulsive disorder or ADHD, which require additional assessment and consideration in planning treatment (Pataki & Carlson, 1990). Therefore, clinicians should be aware of such multiple faces of childhood and adolescent depression in order to reach a correct diagnosis and formulate an effective management plan.

### **Approach to patients presenting with depressive symptoms:**

A careful evaluation of depressive symptoms with consideration of differential diagnoses and skillful assessment of suicide risk are essential at primary care level. Selection of an appropriate intervention strategy and timely psychiatric referral of the patients depend upon proper assessment.

### **Evaluation of depression:** This includes

- i) Assessment of the onset, course, presence of precipitating/aggravating/maintaining factors.
- ii) Review of family history, past history, treatment history, personal history
- iii) A thorough review of systems especially endocrine and central nervous systems
- iv) Mental status examination: Empathic listening, patience, minimal interruption of the flow of thought, asking open-ended questions, establishment of rapport, looking for presence/absence of psychotic symptoms and suicidal thoughts.
- v) Judicious use of laboratory investigations (e.g., thyroid profile) in appropriate patients
- vi) Estimation of severity level.

Use of rating instruments may be helpful for structured assessment and improve detection of depression. One such instrument is the Hamilton Depression Rating Scale (HDRS)

(Hamilton, 1960) which is an observer-rated rating scale consisting of 17-21 items and rated on the basis of the clinical interview plus any additional available information such as family member report.

### **Evaluation of suicide risk**

Mood disorders underlie 50-70% of all suicides and nearly 15 out of 100 depressed patients die due to suicide (Akiskal, 2000). Suicidal behavior is complex and frequently occurs in combination. Considering the very high mortality rate associated with the condition, suicidal risk should be assessed routinely in all depressed patients and should be asked directly if not forthcoming.

Risk factors for suicide include (Dubovski, 2003): male sex, socially isolated, recent loss, adverse life events, old age, one or more diagnosable mental (e.g., major depression), substance abuse disorders, chronic medical conditions, family history of mental or substance abuse disorder, family history of suicide, prior suicide attempt or suicidal threat, recovery phase from severe retarded depression, hopelessness, and when means available to carry out the plan.

### **Indian patients with depression: the clinical puzzle**

#### ***Presentation of somatic rather than psychological symptoms:***

Patients having classical depressive symptoms constitute only the visible part of the proverbial depression iceberg. Submerged are those individuals who are nevertheless depressives but masquerade with bodily symptoms in the forefront (Venkoba Rao, 2004). In Indian context, 80% of depression cases present with somatic manifestations instead of classical depressive symptoms (Venkoba Rao, 2004). The illness often employs bodily language to express itself; the 'somatic talk' (Venkoba Rao, 2004). The spectrum of this 'somatic noise' is wide and apart from various bodily symptoms, may also include reproductive symptoms in women and simple 'fatigue' or 'lethargy' in both men and women. Thus, it constitutes a real challenge to discover this submerged iceberg of huge number of depressed population. Such patients are routinely encountered in general medicine, surgery, gastro-enterology, neurology, rheumatology and eye-clinics. A careful and intelligent examination of depressive features is required to diagnose Indian depressed patients amidst 'somatic noise'.

### ***Co-occurrence of medical and depressive symptoms:***

Comorbid medical disorders camouflage depression by sharing somatic symptoms (for example, fatigue may be due to depression or to heart failure) or by providing patients with a reason to be depressed. In cases in which somatic symptoms overlap, special attention should be paid to depressed mood, anhedonia, feelings of guilt or worthlessness, or suicidal ideation. Somatic symptoms should not be discounted when depression is diagnosed unless the symptoms are clearly attributable to a physical disease (for example, insomnia in a patient with paroxysmal nocturnal dyspnea, memory loss in a patient with dementia, or anorexia in a patient with metastatic cancer) (Kroenke, 1997).

### ***Stigma associated with psychological diagnoses and treatments:***

The presumed stigma of depression often inhibits explicit questioning by a primary care physician, particularly if a trusting physician-patient relationship has not yet been established. However, clinicians overestimate patients' resistance; most patients are comfortable discussing psychosocial problems (Spitzer et al, 1994) and welcome questions about them (Hall & Dornan, 1988; Bertakis et al, 1991).

### ***Understanding and managing depression at primary care level: the barriers***

- Inadequate interview and diagnostic skills due to insufficient undergraduate training in psychiatry (Das et al, 2002).
- Insufficient time devoted to adequate diagnostic assessment: Most medical outpatient visits last 15 minutes or less (Schappert, 1992), whereas visits to a mental health specialist typically last 30 minutes or longer (Schappert, 1993). Moreover, depression is but one, often subtle, on the item agenda in a medical encounter. During this encounter, the clinician has to negotiate such competing priorities as acute symptoms, follow-up of chronic medical disorders, prescription refills, review of laboratory test results, and health maintenance.
- Lack of acquisition of new knowledge relevant to provision of psychiatric treatment strategies (Kroenke, 1997).
- Grossly inadequate development of psychiatric consultation – liaison services in the country.

Indications for psychiatric referral for a case of depression at primary care

Timely psychiatric referral of depressed patients is of utmost importance. The following are the indications for prompt referral:

Suicidal urges, extremely severe depression having psychotic symptoms, the practitioner is not skilled in making the diagnosis, the diagnosis is unclear, the practitioner is not skilled in providing the recommended treatment, history of bipolar disorder, failure of medication trials, when the case is unduly complicated or when a specialized evaluation is needed (e.g., psychological testing), and when the patient needs psychiatric hospitalization.

### **Principles of management**

#### ***Therapeutic alliance***

Treatment requires a compassionate, nonjudgmental attitude on the part of the physician. Initially, physicians need to educate patients about the illness concept of depression and to specifically tell them of their expectations for significant or full recovery (instillation of hope) (Remick, 2002).

Patients should be encouraged to ask questions (Remick, 2002).

Family members are essential allies in supporting the depressed patient to comply with treatment, and their involvement is encouraged (Schappert, 1993).

#### ***Antidepressant drug therapy***

Therapy with a single antidepressant agent is the initial preferred treatment in cases of moderate to severe major depression. The rate of response to an antidepressant trial is about 60% and is close to 80% if therapy with a second drug is tried after an initial antidepressant drug failure (Joffe et al, 1996).

Patients should learn that the physiologic symptoms of depression (disturbances of sleep, appetite, energy and motor activity) may resolve before the patient subjectively senses improvement (hence the rationale for "objective" reports from family members) (Remick, 2002). Symptoms typically do not start to resolve until the patient has received an adequate dosage of medication for 2 to 4 weeks (Remick, 2002). Full remission (i.e., back to baseline), the goal of treatment, may take up to 4-6 months (Joffe et al, 1996).

There is an increasing risk of recurrence or chronicity, or both, if residual symptoms persist (Judd et al, 2000).

Patients need to be aware that side effects are typically transient and that they should not stop therapy, even if they are feeling better, without discussing it with the doctor (Remick, 2002).

### **Choosing an antidepressant agent**

Many antidepressants are commercially available in India and this number will certainly increase. The following are basic concepts to consider in choosing an antidepressant:

- If the patient has had a previous positive response to a specific antidepressant, or if a family member has had a previous good response with a certain antidepressant, that agent may be considered (Remick, 2002).
- Safety considerations should be reviewed. In suicidal patients at risk of overdose, the older-generation antidepressants (i.e., tricyclics) can be lethal, whereas the newer-generation selective serotonin reuptake inhibitors (SSRIs) and others are relatively safe in overdose (APA, 2000).
- Side effect tolerability should be matched to the individual patient. No antidepressant is devoid of side effects, but common class side effects, such as orthostatic hypotension (tricyclics), sedation (trazodone, fluvoxamine, paroxetine), stimulation (bupropion), weight gain (tricyclics, mirtazapine) and sexual dysfunction (SSRIs), may be more or less problematic for a specific patient should that side effect develop (APA, 2000).
- Drug interactions are possible due to induction or inhibition of liver enzymes. In patients with coexisting medical disorders who are taking a number of other medications, an antidepressant with few drug-drug interactions (e.g., citalopram, sertraline, venlafaxine, mirtazapine) would be appropriate (APA, 2000).

### ***When to change antidepressants?***

Sixty percent of patients with major depression or a dysthymic disorder will have a clinical response to an adequate trial (4–6 weeks) of an antidepressant. However, if there is no response after 3 weeks, the likelihood of a response is less than 20% and a switch to an antidepressant of a different chemical class should be contemplated (Nierenberg et al, 1995).

### Treatment for special population

In elderly people the tenant "start low, go slow" applies, and the use of the newer agents, in particular those with minimal CYP450 inhibition, is appropriate and safer than the use of tricyclic antidepressants.

There is growing evidence that antidepressants are safe during pregnancy, that they do not increase the risk of teratogenesis and that the risk of depressive relapse may be as high as 75% in pregnant women who stop their antidepressant therapy (Stewart, 2000; Cohen & Rosenbaum, 1998). These data should be incorporated into discussions with pregnant women as they review the benefits and risks of ongoing antidepressant chemotherapy. Data on the use of antidepressants during breast-feeding are limited, and long-term developmental effects are unknown. Preliminary safety data do not contraindicate the use of several tricyclic antidepressants and SSRIs (Misri et al, 2000).

### Maintenance therapy

Current guidelines suggest that, after recovery occurs, antidepressant therapy should be continued at the therapeutic dosage for at least 6 months to significantly lessen the chance of relapse. Indefinite antidepressant maintenance therapy should be considered and discussed with patients with additional risk factors (3 or more episodes of depression, positive family history of mood disorder and poor interepisode recovery) (Rush, 2000).

### CONCLUSION

There has been significant progress in the area of mood disorders over the last 2 decades, encompassing advances in our knowledge of epidemiology, diagnosis, pathogenesis and treatment. As clinicians we must enhance our efforts to recognize this potentially deadly illness in our patients at primary care level and ensure that the myriad of effective treatments are offered and used.

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1. **Dr. S. Haque Nizamie**, M.D., D.P.M., (Corresponding author), Professor of Psychiatry & Director, Central Institute of Psychiatry, Kanke, Ranchi-834006, E-mail : rch\_cip45@sancharnet.in
  2. **Dr. Pushpal Desarkar**, M.D., D.P.M., Senior Resident, Central Institute of Psychiatry, Kanke, Ranchi-834006.
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## FAMILY CARE OF MENTALLY ILL PATIENTS IN IWAKURA, KYOTO, JAPAN —ITS HISTORY AND THE REASON IT ENDED—

Osamu Nakamura\*

### When Did Patients First Visit Daiunji-Temple?

Iwakura is located at about 8 km northeast of Kyoto, the ancient capital of Japan. Local lore claims that a mentally-ill daughter of Emperor Go-Sanjo (reigned 1068~1072 A.D.) was cured after praying to the image of Buddha at Daiunji-Temple (founded in 971) in Iwakura and drinking water from the temple well. It is said that many mentally ill patients wanted to share her good fortune and came for cures at Daiunji.

From the historical materials available, however, mentally ill patients seem to have begun to pray at Daiunji-Temple from around the middle of the 18<sup>th</sup> century. It is certain that a mentally ill patient paid a visit to Daiunji-Temple in 1765 based on an official notice in Kyoto, and an earlier document written in 1754 indicated that the Imai Teahouse in front of Daiunji-Temple had received a mentally ill patient then. By the end of the 18<sup>th</sup> century, Iwakura had established its reputation for healing mentally ill patients (Nakagami, 1796).

### Guest House of Daiunji-Temple and Local Inns

At first, mentally ill patients could reside at farmers' houses and pay visits to Daiunji-Temple only if the family members and a teahouse(=inn) owner assured Daiunji-Temple that they would be responsible for any trouble the patients might cause (Atobe et al, 1995a). Most likely from the latter half of the 18<sup>th</sup> century, however, Daiunji-Temple tried to monopolize service to mentally ill patients at its guesthouse, and prohibited patients from staying at farmers' houses. As the number of mentally ill patients increased, however, Daiunji-Temple's guesthouse could not accommodate all of them and had to permit inns to receive the overflow of mentally ill patients. Around the end of the 18<sup>th</sup> century, the inns became more popular than the Daiunji-Temple's guesthouse among the mentally ill patients and their family members because of their good services. Ueda Inn in 1796, Kimori Inn in 1815 and Imai Inn in 1818 enlarged their buildings and the guesthouse of Daiunji-Temple was placed under the management of those inns sometime between 1818 and 1830.

### The Growth of the Inns

In 1782, a lady who paid a visit to Daiunji-Temple disappeared, and was later found dead in a well. In order to prevent further accidents, some of the mentally ill patients were fettered. However, Jisso-in, Daiunji's superior temple, prohibited the inns from using fetters without permission, and told the inns to hire or appoint attendants for the patients (Atobe et al, 1995b). In this way, the necessity for the attendants increased and the inns enlarged their lodgings in cooperation with attendants.

Who ran the inns and became attendants to mentally ill patients? It was most likely that the attendants were family members who could not inherit property. Becoming attendants and caring for the mentally ill patients were among the few opportunities for family members who could not inherit property to remain in Iwakura when farming was almost the only way to make a living in Iwakura.

### Foundation of Kyoto Mental Hospital and Iwakura

After Japan opened its country to foreign intercourse in 1854, western practices of caring for the mentally-ill were introduced into Japan. Kyoto Prefecture hired a naturalized English doctor, Junker von Langegg (1828-?) and founded Kyoto Mental Hospital (the first mental hospital in Japan) in 1875, where moral treatment—the treatment helping mentally ill patients overcome their insanity by themselves without using scare tactics and violence—was introduced by Langegg and using the translation of Henry Maudsley's 'Insanity' published in 1872. In addition, the Prefectural Government forbade the inns in Iwakura and other private facilities to receive mentally ill patients after 1875, for the reason that they didn't offer modern medical treatment.

The inns found it difficult to make survive until Kyoto Mental Hospital closed in 1882 due to expenditures greatly exceeding income. As a result, many mentally ill patients began to gather in Iwakura again. In order to receive them, some leading

persons of Iwakura village, most of whom were large-scale farmers tried to found a hospital, but they couldn't, because the inns received almost all the patients, although the latter did not provide medical treatment. Subsequently, the inns were forced by Kyoto Prefecture to introduce medical treatment in cooperation with the leading persons of the village, and Iwakura Mental Hospital was established in 1884. The inns and the leading persons of the village, however, remained on bad terms. Though the owners of the inns had money, they did not have a high social standing, and seem to have felt a sense of inferiority and rivalry with leading persons. The inns withdrew from the hospital in 1885 and tried to receive mentally ill patients by themselves but were forced by Kyoto Prefecture to reunite with the hospital in 1890. The inns still persisted in trying to receive mentally ill patients by themselves even after that. It became quite difficult for them to do so after the Japanese government began to enforce the law regarding the care and custody of mentally ill patients in 1900.

#### **Dr. Tsuchiya's Promotion of 'Iwakura, a Geel in Japan'**

In Europe in the latter half of the 19<sup>th</sup> century, the number of mentally ill patients increased rapidly along with economic development, and the number of the patients for whom there was no space in mental hospitals increased year by year. At the same time, it was financially difficult to build additional mental hospitals. The family-care system for mentally ill patients in Geel, Belgium where the patients spent their lives helping with their foster families' farming and household chores, became a model for a more affordable alternative to treatment in hospitals. After Shuzo Kure, who visited Geel in 1900 and became a professor of Tokyo University in 1901, wrote that Iwakura had a similar family care system to that of Geel, Dr. Eikichi Tsuchiya, the director of Iwakura Mental Hospital, proposed a family care system controlled by Iwakura Mental Hospital. He not only promoted 'Iwakura' as 'a Geel in Japan', but urged the neighbors around the hospital to establish residential sanatoria. As a result, in addition to the 4 old sanatoria, 6 new ones were founded between 1923 and 1934. In the new sanatoria, mentally ill patients spent their lives, helping with carrying water, wood-chopping and farming, as well as going for walks. As the number of mentally ill patients increased, the family care system in Iwakura became more famous and, in 1930, Professor Wilhelm Weygandt of Hamburg University visited Iwakura and praised its family care system.

In the first half of the 20<sup>th</sup> century, however, leading psychiatrists and governments in the U.S.A. and in Europe preferred treatment in hospitals to family care of mentally ill patients, and constructed huge mental hospitals one after another. Japan's leading psychiatrists and Government followed them, and didn't appreciate family care of the mentally ill very much (Saito, 1932).

#### **Problem of Care Expenses**

The expenses for the care of the mentally ill patients posed a problem for the patients' families. Since the sanatoria didn't provide their services as public welfare services, care expenses were not cheap (¥36-¥63 per month exclusive of medical expenses and fees for attendants in 1935). ¥36-¥63 per month was very expensive when compared to the monthly salary of ¥48 of a 20-year-old primary school teacher of Kyoto Prefecture in 1937. Many families of poor mentally ill patients could not afford family care in Iwakura.

Care expenses of the sanatoria, however, were reasonable when compared to the hospital charges of Iwakura Mental Hospital (¥100-¥200 per month). Additionally, if care expenses of the sanatoria were not reasonable, sanatoria might not have lasted for as long as they did.

#### **End of Family Care in Iwakura**

Iwakura became famous for family care, and by 1935, 300 mentally ill patients were staying in sanatoria and in farmers' houses in Iwakura (500 stayed in Iwakura Mental Hospital). Later, during World War II, the Japanese people suffered from severe food shortages. People could not survive on short rations and had to buy on the black market. Mentally ill patients in the hospital and in the sanatoria, however, did not have access to the black market and many starved to death. The hospital was forced to close when it was taken over in 1945 by the Japanese army to provide lodging for munitions factory workers, and its medical equipment was sold off. Many sanatoria and farmers' houses were closed around that time as well because of food shortages.

After World War II, Kyoto Prefecture asked the owners of Iwakura Mental Hospital to sell the hospital to it. Kyoto Prefecture wanted to use the buildings as lodging for the people who returned from China and Korea. The owners sold the hospital to Kyoto Prefecture, thus terminating the services of Iwakura Mental Hospital.

Even following World War II, a few mentally ill patients remained in several sanatoria. They were practically family members of the sanatoria, having spent their lives as farmhands and female servants. In 1950, however, family care of mentally ill patients was forbidden by a new law of mental hygiene, and almost all remaining mentally ill patients in sanatoria were turned over to mental hospitals.

### **Medical Treatment of Mentally ill Patients After 1950**

Under the new law of mental hygiene, the number of beds in hospitals for mentally ill patients increased. The number of beds for mentally ill patients per 10,000 people in Japan was 1.8 in 1930, 10 in 1960, 20 in 1967, 25 in 1974, and 30 in 2003. At the same time, the number of beds for mentally ill patients per 10,000 people in Europe and in the U.S.A. decreased dramatically with the introduction of effective medicines for mental diseases, and by the movement of caring for mentally ill patients in local communities. In the U.S.A. for example, the number of beds for mentally ill patients per 10,000 people was 25 in 1930, 57.8 in 1940, 40 in 1960, and 10 in 1980. In the U.K. the number of beds for mentally ill patients per 10,000 people was 32 in 1930, 30 in 1965, and below 20 in 1980 (Hiruta, 2004). We are not sure whether countries in Europe and America better succeeded in caring for mentally ill patients in local communities. Nevertheless, some Japanese people began to realize the importance of caring for mentally ill patients in local communities and tried to reduce the number of beds in large psychiatric facilities. This has proven difficult but perhaps explains the renewal of interest in Iwakura where mentally ill patients seem to have been already successfully cared in the local community.

### **Why Family Care of Mentally ill Patients was Permitted Tacitly?**

The above history of family care of mentally ill patients in Iwakura raises various questions. First question is, how was Dr. Tsuchiya able to carry on family care of mentally ill patients even after the law for taking care and custody of mentally ill patients came into effect in 1900? Concerning this question, he said that it was only permitted tacitly. Then, why was it permitted tacitly? One reason was from the government side. The law governing mental health was strengthened in 1919 and required building public mental hospitals. But the Japanese Government could not build sufficient mental hospitals. Though the number of beds for mentally ill inpatients increased from 2,093 in 1912 to 10,602 in 1935, the number of mentally ill patients increased from 32,964 in 1912 to 83,365

in 1935 (Aoki, 1937), and the number of mentally ill patients who could not be admitted into hospitals increased year by year. So, the Japanese Government had to overlook such informal schemes as those in Iwakura.

Another reason was the demand of family members of mentally ill patients. After the laws of mental health were reinforced in 1919, extremely poor mentally ill patients were sent to mental hospitals at public expense. As a result, the middle class people who had a mentally ill patient as a family member were troubled. If they confined a mentally ill family member to a small room at home when extremely poor mentally ill patients were in mental hospitals, they felt embarrassed (Uchida, 1965). Sending a mentally ill family member to a hospital was, however, quite expensive. So, they sent the patients to sanatoria and farmers' houses in Iwakura. Care expenses at sanatoria in Iwakura were still reasonable compared to the hospital charges of Iwakura Mental Hospital. Besides, 'staying in a sanatorium' sounded better than 'staying in a hospital'.

Since family care of mentally patients was only permitted tacitly, it became prohibited when Japanese Government wanted to catch up to the U.S.A. and Europe and to increase the number of hospital beds for mentally ill patients after World War II (Saito, 1932).

Relations between the owners of Iwakura Mental Hospital, Dr. Tsuchiya, the director of Iwakura Mental Hospital and the owners of sanatoria

Dr. Tsuchiya, the director of Iwakura Mental Hospital, intended to introduce a family care system that was controlled by Iwakura Mental Hospital. He said that medical doctors of Iwakura Mental Hospital would evaluate all the mentally ill patients and direct them to go to Iwakura Mental Hospital, or to a sanatorium. However, the right of management of Iwakura Mental Hospital and the right of management of each sanatorium belonged to different persons. Dr. Tsuchiya was nothing but a hired medical doctor of Iwakura Mental Hospital and was not involved in the management of either Iwakura Mental Hospital or the sanatoria. Then, how could he direct mentally ill patients to a proper place, that is, to Iwakura Mental Hospital, or to a sanatorium? The owners of Iwakura Mental Hospital were displeased when Dr. Tsuchiya sent desirable mentally ill patients—rich and only mildly ill patients—to a specified sanatorium rather than their facility. It is said that the owner of the sanatorium still felt a sense of rivalry with the

owners of Iwakura Mental Hospital and made approaches to Dr. Tsuchiya. Nevertheless, the owners of Iwakura Mental Hospital were not medical doctors and had to obey Dr. Tsuchiya concerning medical care. This was a problem that would not have occurred if Iwakura Mental Hospital and the sanatoria in Iwakura were both public facilities, or if Iwakura Mental Hospital and all sanatoria were managed by the same person. This could be a reason why the owners of Iwakura Mental Hospital sold it and why family care of mentally ill patients still exists in Geel where the public mental hospital examine all the mentally ill patients and direct them to an appropriate family.

### **Distinguishing Feature of Receiving Mentally ill Patients in Iwakura Compared to Other Places**

There were many other places in Japan besides Iwakura that were famous for treatment of mentally ill patients. In almost all of those places, however, mentally ill patients had to be attended by some family member or by some relative. In Iwakura, on the other hand, mentally ill patients could stay at an inn(=sanatorium) or a farmer's house without any attendant family member or relative. So, we could say that the distinguishing feature of receiving mentally ill patients in Iwakura would be receiving mentally ill patients in an inn or in a farmer's house and taking care of them as if they were family members.

Why, then, was it possible in Iwakura? In addressing this question, the following points should be considered:

- (1) Abundant food, little money
- (2) Contribution to regional economy
- (3) Emphasis on providing room and board, not treatment
- (4) Earlier pattern of receiving children put out to nurse

#### **(1) Abundant food, little money**

The main crops of Iwakura were rice and barley. If Iwakura were nearer to Kyoto, the inhabitants would have grown vegetables and sold them in that city. The 8-km-distance, however, was too far away for a peddler. Besides, they had to cross a pass to go to Kyoto. Rice and barley, however, were considerably cheap, and people could not get sufficient money by selling them. If, however, long-term sojourners such as mentally ill patients and children put out to nurse consumed rice, people in Iwakura could get more money than they could from simply selling rice. This offered Iwakura a distinct advantage to most of the other famous places for treatment of

mentally ill patients in Japan. These places for the most part were located in the midst of mountains or on islands, and didn't have enough food, though they were in suitable locations for separating mentally ill patients.

#### **(2) Contribution to regional economy**

Until 1928 when a railway opened between Kyoto and Iwakura, it was quite difficult for people to make a living in Iwakura without inheriting land to work. Those who could not inherit land could not make a living in Iwakura without being adopted by or married to someone who did inherit property. Those who neither inherited property, nor were adopted, nor married to someone who inherited property, had to become an apprentice in a city or go into the domestic service. However, if those people received mentally ill patients—especially those from wealthy families— they could continue to live in Iwakura. In addition, mentally ill patients consumed not only rice, but also firewood, another source of income. Further, receiving mentally ill patients gave inhabitants in Iwakura the chance to work, for example, as attendants, cooks, washerwomen, and so on. Furthermore, mildly mentally ill patients worked as farmhands and female servants. If housing mentally ill patients didn't contribute the region economically, it would not have endured so long.

#### **(3) Emphasis on providing room and board, not treatment**

Since receiving mentally ill patients contributed to the region economically, it seems likely that people in Iwakura would have wanted to prolong the stay of mentally ill patients. In contrast, various other well-known places for treatment of mentally ill patients that were more geographically isolated put emphasis on treatment. They required family members and relatives to attend to the mentally ill patient. However, not all patients had family members and relatives who could attend them for a long time. Some famous places for treatment of mentally ill patients required them to bathe under a waterfall for the sake of treatment as well. Some of the mentally ill patients, however, hated bathing under a waterfall and ran away. Therefore, not so many mentally ill patients wanted to go there. The emphasis in Iwakura 'on providing room and board rather than treatment' was a good reason for the success of Iwakura in receiving many mentally ill patients.

#### **(4) Earlier pattern of receiving children put out to nurse**

Though the reasons above mentioned were good for receiving many mentally ill patients in Iwakura in general, but they do

not explain the prevalence of family care of mentally ill patients. What would explain it? Iwakura already had an 'established pattern of receiving children put out to nurse. Usually, a child was put out to nurse under the age of 1 and returned home at the age of about 5. One reason why children were put out to nurse was that people believed children grew better in the countryside than in the town. Another reason was that lawful wives didn't want to bring up the children of their husbands' concubines. Ninety-eight children were put out to nurse in 1924 in Iwakura (the number of households in Iwakura was 482 in 1924) (Kyoto Prefecture, 1924). The expense of bringing up a child was about ¥200-300 per year in 1924. It was not a small amount of money compared to the monthly ¥38 salary of a 24-year-old man working at the Kyoto Agricultural Association in 1929. If we consider that women in Iwakura had no means of earning money until a railway opened between Kyoto and Iwakura, ¥200-300 per child would have provided a strong economic incentive. Because people in Iwakura became familiar with receiving children put out to nurse, it is possible that they didn't find much difficulty about receiving mentally ill patients. In fact, some families received both children put out to nurse and mentally ill patients. It is certain that the care expenses for a mentally ill patient were much higher than the expenses for bringing up a child. Besides, mentally ill patients could be cared even by men, while children could only have been fed, at least when babies, by wet nurses.

#### **Reasons for the End of Receiving Children Put Out to Nurse in Iwakura**

Receiving children put out to nurse, however, decreased rapidly between 1925-1940, though it was not legally forbidden. Why did receiving children put out to nurse in Iwakura end around that time? One reason was the increase of income as the result of opening of the railway between Kyoto and Iwakura. As a result of its opening, Doshisha Commercial College bought a huge tract of farmland in the southern part of Iwakura around 1928-1929, and college students began to lodge at farmers' houses in Iwakura. Women in Iwakura say 'When we received children put out to nurse, we had to always worry about whether they got sick, they got hurt, they died, they were handled roughly by other kids, so on. But we don't have to worry about such things with lodgers. So, we feel relieved.'

Besides, with the railway, not only men, but also women in Iwakura began to commute to Kyoto and to draw salaries.

The first woman in Iwakura who commuted to Kyoto was born in 1910. As women in Iwakura began to draw their own salaries, they were not interested in receiving children put out to nurse any more.

Furthermore, as a result of opening of the railway, people in Iwakura began to marry people outside Iwakura. Women from outside of Iwakura who married men from Iwakura, however, didn't receive children put out to nurse.

#### **Reasons for the End of Receiving Mentally ill Patients in Iwakura**

As above stated, family care of mentally ill patients in Iwakura seems to have been forced to cease because of war and law. The increase of income as a result of opening of the railway, and mechanization of farming and household duties, however, would have had the same effect on receiving mentally ill patients in Iwakura. Initially, most of the people in Iwakura didn't want to be involved in receiving mentally ill patients, though they didn't feel negatively toward mentally ill patients. Because of the presence of Iwakura Mental Hospital, people in Iwakura were mocked by the people of surrounding areas such as in greater Kyoto. People in Iwakura really wanted to get jobs in Kyoto city in order not to be involved in hosting mentally ill patients.

Secondly, people in Iwakura could not profit from Iwakura Mental Hospital and the sanatoria from around 1927 when the hospital and some of the sanatoria began to purchase staples such as coal and Korean rice from other areas. These products were cheaper than the firewood and rice from Iwakura. One side effect of the increased number of patients living in Iwakura was that the volume of sewage pouring into the Iwakura River increased. The water of the river became so dirty that the inhabitants could not use it for washing. Still, they had to use it for irrigation of their rice fields.

Lastly, since large-scale farmers had to distribute their farmland to small-scale farmers by law after World War II, even the largest-scale farmer's farmland was reduced to 1 hectare at most which removed the need for mildly mentally ill patients as farmhands. Besides, as mechanization of farming and household duties proceeded, people didn't need mild mentally ill patients as female servants any more.

For these reasons, it seems that the family care in Iwakura would have ended even without World War II and food shortages, and even if family care were not forbidden by law

in 1950. We might say that people in Iwakura began to receive mentally ill patients in order to make a living in Iwakura, and that they left off family care because they became able to make a living without having to take in mentally ill patients.

It was true in Geel, Belgium, as well, that not only the increase of income but also mechanization of farming and household duties brought about a decrease in receiving mentally ill patients. As mechanization of farming and household duties proceeded, mentally ill patients lost their jobs. Besides, as the number of factories increased in surrounding areas, people in Geel began to work there and would not host mentally ill patients. The number of mentally ill patients in Geel Colony declined from 3,736 in 1938 to 1300 in 1979 (Roosens, 1979) and 500 in 2005.

### CONCLUDING REMARKS

People in Iwakura wouldn't work at Iwakura Mental Hospital and wouldn't use it before the end of World War II. Recently, however, many people in Iwakura have begun to work at mental hospitals, homes for the aged and for those suffering from various forms of senile dementia, and many elderly in Iwakura also have begun to use them. As more and more people work in homes for the aged and senile, more will become experienced in the care and treatment of people suffering from mental incapacity. This experience will help deepen our understanding of the diseases of aging people and mental diseases.

No matter how much experience we gain, there remains an associated problem. Mentally ill patients and the aged need to feel valued and needed in the society. If we "warehouse" mentally incapacitated people, we will take away their spirit. In sanatoria and farmers' houses in Iwakura, mentally ill patients spent their lives helping families with household chores and farming. It is quite questionable whether they were recompensed for their labor. It is not unlikely, however, that they felt they were needed in some degree. As the mechanization of farming and household duties increased, it became more and more difficult to find suitable jobs for mentally ill patients. This happened not only in Japan, but also in Geel and elsewhere. This has happened not only in mentally ill patients, but also to the aging and in younger generations. We might be able to say this happens in all people. It is certain, however, that mentally ill patients feel this much more severely than the others. The patients became "workless" which certainly must have contributed to

a lower self-esteem as well as less interaction with the community at large. The isolation of mentally ill patients is one of the biggest problems left to be solved.

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\* Dr. Osamu Nakamura, Professor of History of Philosophy, School of Humanities and Social Sciences, Osaka Prefecture University, 1-1 Gakuen-cho, Naka-ku, Sakai, Osaka 599-8531, Japan, E-mail: nakamura@hs.osakafu-u.ac.jp

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## IMPROVING KNOWLEDGE ABOUT HIV AND AIDS AMONG PERSONS WITH A SEVERE MENTAL ILLNESS IN INDIA

Prabha S. Chandra<sup>1</sup>, V. A. S. Krishna<sup>2</sup>, Michael P. Carey<sup>3</sup>

### ABSTRACT

**Background:** Numerous studies conducted in developed countries demonstrate that persons living with a with severe mental illness (SMI) are at elevated risk for HIV infection. Fewer studies have addressed this topic in the developing world, and no study has evaluated the effects of a risk reduction intervention. Because risk reduction requires adequate knowledge regarding HIV-related transmission and prevention strategies, the current study sampled patients diagnosed with SMI in India and assessed (a) knowledge regarding HIV/AIDS, and (b) short-term retention of knowledge following HIV risk reduction education. **Method:** Patients were assessed for HIV knowledge at baseline, received an HIV educational program, and then were re-assessed for their knowledge after one day and again five days later. **Results:** The results indicated a poor level of baseline knowledge, which improved following education; knowledge gains were sustained at five days. Men, and patients with college education, demonstrated better knowledge. However, significant gains in knowledge were observed among all patients regardless of gender, education, psychiatric diagnosis, and prior sexual risk behavior. **Conclusion:** The findings indicate that a brief, HIV-focused educational intervention can help to improve knowledge among Indian psychiatric patients.

**Key Words:** *HIV, AIDS, severe mental illness, India.*

### INTRODUCTION

Contrary to the stereotypical image of the asexual psychiatric patient, research demonstrates that many of the people with a severe mental illness (SMI) are sexually active. Indeed, many engage in sexual behaviors that place them at risk for infection with HIV and other sexually transmitted infections (STIs) (Blumberg & Dickey, 2003; Carey et al, 1999, 2001; Rosenberg et al, 2001). Risk behaviors include unprotected intercourse, multiple sexual partners, high-risk partners, anonymous sexual partners and use of alcohol and other drugs before sex (Carey et al, 1997).

Given that persons with a SMI are at risk for infection with HIV, it is important to develop interventions to assist them in their risk reduction efforts. Common sense as well as most HIV prevention models suggest that knowledge related to HIV transmission and self-protection is necessary if people are to adopt "safer" sexual practices. For example, the Information-Motivation-Behavioral Skills model identifies

information as a key determinant of risk reduction (Fisher & Fisher, 1992). Consistent with this, HIV prevention programs typically provide education about HIV to promote risk reduction (Kalichman, 1998; Kelly, 1995).

Several studies with samples of adults with a SMI have assessed their HIV-related knowledge levels in order to plan effective intervention programs (e.g., Chuang & Atkinson, 1996; Grassi et al, 2001). Most studies find that mentally ill adults have lower knowledge levels relative to the general population (Carey & Schroder, 2002). For example, Carey et al (1997) conducted a survey of 60 outpatients at a public psychiatric facility and found that 30% did not know that a person can be infected but asymptomatic, and many patients believed incorrectly that practices such as douching (45%), oral contraception (23%), or the use of a diaphragm (48%) would protect against HIV infection. Related to such knowledge deficits are concerns regarding the knowledge retention capabilities of persons living with a SMI; that is, are mentally ill adults able to retain information that is given to them, despite

illness-related difficulties in their information processing and memory. Risk reduction can be expected only when patients can retain and benefit from the information that is provided to them.

Most of the literature regarding the determinants of risk behavior and its reduction describes research that has been conducted developed countries. Needed is research to guide the development of HIV-risk reduction programs in non western countries such as India. The aims the current study were (a) to assess knowledge regarding HIV/AIDS in a group of persons being treated for a SMI in India, and (b) assess short-term retention of knowledge following HIV-risk reduction education in this population. Exploratory analyses sought to determine whether patient characteristics, including age, gender, educational level, living circumstances, and psychiatric diagnosis, affected patients' ability to profit from an educational intervention.

## METHODS

### Participants

Inpatients admitted to the National Institute of Mental Health and Neurosciences (NIMHANS) Bangalore, India, during April to December 2001 were eligible if the clinical team judged that that she or he could participate meaningfully in the research, and the patient provided informed consent. Thirty-nine patients (19 women, 20 men) with a mean age of 31 years ( $\pm 7.34$ ) participated. All patients had formal education (62% high school, 38% some college), 36% were married, and most (69%) came from urban areas. Forty-nine percent were employed outside the home, and patients had a mean income of 4196 ( $\pm 12229$ ) Indian rupees per month. The modal diagnosis was that of a psychotic disorder ( $n=17$  patients; 44%) followed by depressive disorder ( $n=9$ ; 23%), bipolar disorder ( $n=8$ ; 20%) and neurotic disorders ( $n=5$ ; 13%). The mean age at first hospitalization was 28 years. Twenty-two patients (56%) had no previous psychiatric admissions. Eleven patients reported a history of risky sexual behavior on a screening measure of HIV related-risk (Gerbert et al, 1998).

### Measures

*Chart Information:* A systematic review of the medical records

provided the following information: International classification of diseases (ICD-10) (WHO, 1992) diagnosis for the psychiatric illness made by a consultant psychiatrist; total duration of illness, duration of the current episode, drug compliance, and number of hospitalizations.

*Semi-Structured Interview:* Sociodemographic details collected included age, gender, place of residence, living arrangement, marital status, education, income, and employment status.

*HIV Knowledge Questionnaire:* HIV-related knowledge was assessed using the 18 item HIV Knowledge Questionnaire (HIV-KQ). HIV-KQ has been used and evaluated with psychiatric patients in prior research. This research has demonstrated that the HIV-KQ is internally consistent, stable, sensitive to the change resulting from intervention, and suitable for use with low-literary populations (Carey & Schroder, 2002).

### Procedure

*Recruitment and baseline assessment:* Inpatients were approached after admission when their clinical condition had stabilized. A member of the team explained the study and obtained informed consent. Patients completed the HIV-KQ in a language comfortable to them.

*Intervention:* The HIV educational intervention, which was provided during a single, one-on-one session that lasted 60 minutes, included factual information related to modes of HIV transmission, disease process, infection control, and prevention. Patients were encouraged to take active role in the session and discuss issues rather than passively receiving information. Questions were encouraged and answered. The session ended with a brief consolidation and review of the contents ensuring that the participant had understood the information.

*Post-intervention assessments:* Patients completed the HIV-KQ one and five days after receiving the educational program.

### Statistical Analysis

Data were double-entered into Epidata 1.5 and analysis

conducted using SPSS 10.0 and Stata 7.0. Paired *t*-tests were used to make pairwise comparisons between the three assessments and to test the variance in the scores of HIV-KQ based on the sociodemographic variables. Repeated measure analyses of variance (ANOVA) were tested change over time.

## RESULTS

### Baseline Knowledge Levels

The frequency of correct responses on all 18 HIV-KQ items is provided in Table 1. As can be seen there, baseline levels of knowledge were high only for a few items. For example, patients tended to know that "Sex with more than one partner can increase a person's chance of being infected with HIV" (85%). However, essential knowledge, as reflected in items such as "A woman can get HIV if she has anal sex with a man," was held by only 69% of the sample. Fewer still (62%) knew that "Coughing and sneezing do not spread HIV," and only one-half of the patients knew that the statements that "A person can get HIV by sharing a glass of water with someone who has HIV," is false. Knowledge regarding condoms was particularly low. For example, very few or no patients answered these items correctly: "A natural skin condom works better against HIV than does a latex condom" (0%), "Showering, or

washing one's genitals/private parts after sex keeps a person from getting HIV" (10%), "There is a female condom that can help decrease a woman's chance of getting HIV" (8%), "Using Vaseline or baby oil with condoms lowers the chance of getting HIV" (8%). On average, at baseline, patients answered 34% (mean 6.15; SD 3.94) of the items correctly.

### Knowledge Improvement and Retention

Next, we evaluated whether patients were able to initially learn HIV-related information, and to retain this information over a 5-day retest interval. One day after receiving an educational intervention, patients answered 11.05 ( $\pm 3.38$ ) of the 18 items correctly (61%), nearly doubling their baseline knowledge. Five days after the first post-intervention assessment, patients answered 10.49 ( $\pm 3.56$ ) of the 18 items correctly (58%). A one-way within-subjects ANOVA with repeated measures indicated that these three scores differed significantly [ $F(2, 116) = 112.44, p < .0001$ ]. Pairwise comparisons indicated that the pre-intervention scores (mean 6.15) were significantly lower than the initial post-intervention score [mean 11.05;  $F(1, 76) = 187.79, p < .0001$ ] as well as the 5-day follow-up [mean 10.49;  $F(1, 76) = 147.02, p < .0001$ ]; the two post-intervention scores did not differ significantly from each other [ $F(1, 76) = 2.49, p = .12$ ].

**Table 1 : Frequency of correct responses on 18 HIV-KQ items**

No.	Content	Pre	Post-I	Post-II
1	Coughing and sneezing DO NOT spread HIV	62%	51%	54%
2	A person can get HIV by sharing a glass of water with someone who has HIV	54%	100%	97%
3	Pulling out the penis before a man climaxes/cums keeps a woman from getting HIV during sex	23%	26%	33%
4	A woman can get HIV if she has anal sex with a man	69%	87%	87%
5	All pregnancy women infected with HIV will have babies born with AIDS	10%	33%	46%
6	People who have been infected with HIV quickly show serious signs of being infected	21%	79%	79%
7	There is a vaccine that can stop adults from getting HIV	64%	97%	82%
8	People are likely to get HIV by keep kissing, putting their tongue in their partner's mouth, if their partner has HIV.	31%	28%	36%
9	A woman cannot get HIV if she has sex during her period.	28%	46%	44%
10	There is a female condom that can help decrease a woman's chance of getting HIV.	8%	36%	18%
11	A natural skin condom works better against HIV than does a latex condom.	0%	26%	26%
12	A person will NOT get HIV if she or he is taking antibiotics.	28%	46%	36%
13	Having sex with more than one partner can increase a person's chance of being infected with HIV	85%	92%	100%
14	Taking a test for HIV one week after having sex will tell a person if she or he has HIV	13%	79%	69%
15	A person can get HIV by sitting in a hot tub or a swimming pool with a person who has HIV.	49%	97%	87%
16	A person can get HIV from oral sex.	38%	79%	67%
17	Using Vaseline or baby oil with condoms lowers the chance of getting HIV.	8%	44%	41%
18	Showering, or washing one's genitals/private parts, after sex keeps a person from getting HIV	26%	62%	51%

### Predictors of Level of Knowledge Change

To determine if knowledge improvement scores differed as a function of patient characteristics, we completed two additional sets of exploratory analyses. First, we conducted five separate ANOVAs using time (within-subjects) and the following patient characteristics (gender, educational level, living location, sexual risk behavior, diagnosis); in these analyses, we expected to find a main effect for time (consistent with the primary analyses, reported earlier) but tested to see if there was a main effect of the patient characteristic and, more importantly, a significant interaction between the respective patient characteristic and time.

**Table 2 : Knowledge Scores as a Function of Patient Gender, Living Location, Education, Psychiatric Diagnosis, and Sexual Behavior Pattern**

	n	Pre -Interven Mean±SD	1Day Post -Interven Mean±SD	5Days Post -Interven Mean±SD
<b>All Patients</b>	39	6.15±3.94	11.05±3.38	10.49±3.56
<b>Gender</b>				
Male	20	07.85±4.12	12.55±3.62	11.85±3.82
Female	19	04.37±2.98	09.47±2.27	09.05±2.68
<b>Living Location</b>				
Rural	12	05.42±3.75	09.83±3.41	09.17±3.79
Urban	27	06.48±4.05	11.59±3.79	11.07±3.36
<b>Education</b>				
<College	24	04.96±2.99	09.92±2.54	09.58±2.95
College	15	08.07±4.61	12.87±3.83	11.93±4.06
<b>Diagnosis</b>				
Psychotic	17	05.65±4.44	10.35±3.67	10.06±3.17
Bipolar	8	06.75±3.33	11.63±2.50	10.75±3.33
Depressive	9	04.89±3.06	10.11±3.22	08.49±3.44
Neurotic	5	09.20±3.70	14.20±2.39	14.40±3.36
<b>Risk Behavior</b>				
Absent	28	05.61±3.61	10.64±3.26	10.32±3.24
Present	11	07.55±4.57	12.90±3.62	10.91±4.41

Thus, the first analysis was a 2 (gender: male vs. female) x 3 (time: pre-, one day post-, and five day post-intervention) ANOVA demonstrated main effects for gender and time but no time-by-gender interaction. As depicted in Table 2, men demonstrated better knowledge (mean 10.75) than did women (mean 7.63); however, both men and women improved over time as a result of the intervention. Similarly, a 2 (education: no college vs. college) x 3 (time) ANOVA demonstrated main effects for both education and time but no interaction. As shown in Table 2, those with any college

education demonstrated more knowledge (mean 10.96) than did patients without any college education (mean 8.15) across all occasions; however, both educational sub-groups improved over time. To explore these two findings further, we evaluated the relationship between gender and education using a chi-square test, and found that male patients were more likely to be college educated (55%) than were female patients (21%),  $\chi^2(1) = 4.74, p < .03$ .

Three additional ANOVAs tested whether (a) living location (rural vs. urban), (b) baseline sexual risk behavior (none vs. some), or (c) psychiatric diagnosis (psychotic, bipolar, depression, vs. neurotic) interacted with time. There were no main effect or interactions with time for any of these patient characteristics (see Table 2).

Second, we also conducted a multiple regression analyses using patient age, gender, GAF score, living location, education, sexual risk behavior status, and diagnosis as predictors, and knowledge change score [change score ( $\Delta$ ) = (knowledge at the two follow-up assessments)/2 – baseline knowledge] as the criterion. Results demonstrated the knowledge improvements ( $\Delta$ ) did not differ as a function of this set of baseline predictors [ $F(9,29)=0.35, p=.95$ ].

### DISCUSSION

Several findings emerged from the current research. First, the patients in this sample evinced a particularly low level of HIV-related knowledge. Baseline knowledge was generally lower than in any previously reported studies of knowledge with any sample (Peruga & Celentano, 1993). Knowledge levels were even considerably lower than other previously sampled psychiatric patients in the Canada (Chuang & Atkinson, 1996), Italy (Grassi et al, 1999; 2001), and the U. S. (Carey & Schroder, 2002). That knowledge levels were so low despite recent media campaigns suggests the severely mentally ill are not receiving such messages through these general communications, and may need informational campaigns tailored to them. Of course, it is also essential for clinicians to address HIV as part of standard clinical care

whether this be in the context of primary medical or mental health care.

Secondly, even a brief educational intervention proved to be very effective, with HIV-related knowledge levels doubling immediately following the intervention, and strong evidence that this knowledge was retained for at least a brief follow-up interval. This very encouraging result is consistent with results from the west (e.g., Carey et al, 2004; Weinhardt et al, 1998); these results are even more encouraging because exploratory analyses indicated that patients benefited from the intervention regardless of their gender, educational level, baseline level of risk behavior, living environment, or psychiatric illness. Thus, all patients demonstrated the ability to benefit from even a brief (one hour) educational intervention.

Lastly, exploratory analyses demonstrated that men were more likely to be better educated and to have higher levels of HIV knowledge. This finding is not particularly surprising but points out traditional gender inequities common throughout the world. Efforts to remediate these gender-differences are essential to promoting the health and safety of women.

These results need to be interpreted in light of the limitations of this study, which include the brief follow-up interval and the absence of a between-subjects control condition. In addition, the sample was predominantly urban and educated. Knowledge levels among severely mentally ill from a rural and lesser educated background may show different results. The knowledge retention in a group which is more deprived may also vary, hence the results of the current study may not be generalisable to the whole mentally ill population. Future research that addresses these limitations will strengthen the confidence that can be placed in the current findings. It will also be important to determine whether improvements in knowledge lead to reduced levels of risk behavior and, ultimately, fewer STIs. In this regard, and based on prior research, it is likely that HIV-related interventions will need to include components designed to improve patient motivation for self-protection and strengthen patients' interpersonal skills as well as HIV-related knowledge (Carey et al, 2004). We

also expect that female patients may benefit from additional skills training to help them to avoid unwanted and unsafe sexual experiences (Chandra et al, 2003). Such research will help to guide practice, and meet the needs of a vulnerable, but understudied population.

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1. **Dr. Prabha S. Chandra**, M.D., (Corresponding author), Professor, Department of Psychiatry, National Institute of Mental Health & Neuro-Sciences, Bangalore-560029, E-mail: chandra@nimhans.kar.nic.in
  2. **Dr. V. A. S. Krishna**, Ph.D., Center for Health and Behavior, Syracuse University, Syracuse, New York, USA.
  3. **Dr. Michael P. Carey**, Ph.D., Center for Health and Behavior, Syracuse University, Syracuse, New York, USA.
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## OUTCOMES OF COMMON MENTAL DISORDERS IN A RURAL COMMUNITY IN SOUTH INDIA

Krishnamachari Srinivasan<sup>1</sup>, Anton Isaacs<sup>2</sup>, Tinku Thomas<sup>3</sup>, Geetha Jayaram<sup>4</sup>

### ABSTRACT

**Background:** Common mental disorders that refer to anxiety and depression syndromes are important cause of psychiatric morbidity in primary health center. Studies evaluating outcomes of common mental disorders (CMD) from India are few. **Objectives:** The aim of the present study was to examine the outcomes of the broad category of CMD and specifically major depression in individuals resident in a rural community following naturalistic treatment with antidepressants. **Methods:** Individuals with a diagnosis of CMD using a 2 stage diagnostic process were invited to seek treatment from a Primary health center. Outcome was assessed in 144 patients diagnosed with major depression using a structured interview schedule (SCID) at 6 months. Outcome was measured using 17-item Hamilton Depression Rating Scale (HAMD) and WHO QOL (Brev) version. Individuals with a score of = 7 on HAMD were deemed to have incomplete remission. **Results:** 114 (79%) individuals with CMD continued to be symptomatic at 6 months. Co-morbid psychiatric conditions especially anxiety was associated with poor outcome. Individuals with higher score on HAMD had poorer quality of life as measured by WHO QOL. Treatment with antidepressant medication did not significantly influence the outcome. **Conclusion:** A significant majority of individuals diagnosed with major depression resident in a rural community had a poor outcome. However, many patients either did not seek treatment or prematurely discontinued treatment. Implications for public health approach to the treatment of CMD are highlighted.

**Key Words:** Common mental disorders, major depression, primary care, antidepressants, outcome

### INTRODUCTION

Common mental disorders (CMD) refer to depression and anxiety syndromes and are among the most important cause of psychiatric morbidity in a primary health center (Goldberg & Lecruiber, 1995; Harding et al, 1980; Patel et al, 1997; Sen & Williams, 1987) with prevalence of CMD exceeding 30% of primary care attendees (Patel et al, 1988). CMD can result in considerable disability (Ormel et al, 1994) and chronic morbidity (Goldberg & Blackwell, 1970; Mann et al, 1981; Patel et al, 1998; Weich et al, 1997) and most patients receive inappropriate symptomatic treatment (Linden et al, 1999; Srinivasan & Murthy, 1986). CMD has been strongly associated with female gender (Kishore et al, 1996; Patel et al, 1988), poverty (Patel et al, 1999; Patel et al, 1998; Weich et al, 1998) and low educational status (Mumford et al, 1997). Although there are many reports from industrialized countries showing the effectiveness of both drug and psychological intervention in depression in primary care settings (De Almeida et al, 2005; Katon et al, 2002; Simon et al, 2002), there are very few published studies on the treatment outcome of CMD from low-income countries (Araya et al, 2003; Patel et al, 2003; Periera & Patel, 1999).

In a study from India that compared imipramine and fluoxetine in the treatment of CMD, in majority of patients compliance with treatment was poor (Periera & Patel, 1999). In a randomized placebo controlled trial comparing antidepressant treatment and psychological intervention in patients with CMD attending general outpatient clinics in Goa, India, the outcome was significantly better with antidepressant treatment than with placebo over a short-term period (2 months) but not over a long-term period (2-12 months) (Patel et al, 2003). Adherence to the treatment protocol beyond a two-month period was low. To improve treatment adherence, a randomized controlled study from Chile using a stepped care approach, reported that 70 % of adult female primary care patients in the experimental group had recovered compared with 30% of the usual care group (Araya et al, 2003). The study concluded that socially disadvantaged patients might gain the most from systematic treatment of major depression.

In summary, the published studies on the effectiveness of antidepressant medication in CMD from low-income countries have been few and based on patients seeking help from primary health care clinics. However, many persons with CMD

in rural communities in developing countries do not seek help either due to lack of awareness or inaccessibility to the health care system. A cost-outcome study that evaluated the treatment of CMD in a rural community noted that a low proportion of patients diagnosed with CMD had contacted treatment services (Chisholm et al, 2000). In the present study, the outcome of CMD in untreated persons living in a rural community was examined at 6 months following naturalistic intervention with antidepressant treatment.

## METHOD

### Subjects

We conducted a population survey using community health workers trained in the administration of a screening questionnaire to identify untreated cases of psychosis, CMD and epilepsy resident in the community. We conducted this survey from March 2003 to September 2003 in 25 villages spread over an area of 10Kms from a primary health center in a rural district located at about 30 Kms away from a major urban metropolis. The present study pertains to those patients diagnosed with depression or anxiety disorders. Study subjects had not sought any mental health intervention either from the primary health center or from any of the private care providers in the area. The institutional ethics review board approved this study.

### Clinical assessments

We initially screened all adult subjects aged 18-65 years resident in rural community located within a distance of 10 Kms from the Primary health Center using the Symptoms in Others Questionnaire (Kapur et al, 1974). The Symptoms in Others Questionnaire has 15 questions that could be administered to any adult member of the household. It is designed to elicit information that might indicate the presence of serious psychiatric illness or epilepsy in either members of the family or someone in the neighborhood (Isaac & Kapur, 1980). For the purpose of this study two questions were added to the original questionnaire: The first question relates to the presence of depressed mood and the second to multiple somatic complaints, which are often regarded as surrogate marker of depression in rural communities (Srinivasan & Murthy, 1986).

Subjects identified on the screening questionnaire to have a potential psychiatric illness were informed of their health status and encouraged to attend a primary health center for

further evaluation and treatment. A consultant psychiatrist at the center on the basis of a clinical interview arrived at an ICD-10 diagnosis and initiated medical treatment. The same consultant psychiatrist evaluated all referred patients at the primary health center throughout the duration of the study. In addition to the diagnostic evaluation by the consultant, a trained research investigator administered the Schedule for Clinical Interview for DSM-IV TR (SCID) to confirm a diagnosis of anxiety / depression. Six months after the initial survey, outcome of CMD was determined on the basis of a face-to-face interview using the following instruments:

1. The Standard of Living Index (SLI). SLI was used in the present study to measure socio-demographic characteristics of the sample. This index was used in the National Family Health Survey 1998-1999 to compare the standards of living between various states and between rural and urban areas in India (Parasuraman et al, 1999). The SLI is comprised of items such as the type of dwelling, whether residents have access to drinking water, ownership of property, land and livestock, and possession of durable goods like vehicles, television, tractor etc. The scores are tabulated and residents are classified into three categories: Low SLI (0-14), Medium SLI (15-24) and high SLI (25-67). We chose the SLI to measure socio-economic conditions as this scale has been well standardized for use in rural India.
2. The Hamilton Depression Rating Scale (17 item version, HAMD). HAMD is available in local language and has been used in previous studies in India (Chisholm et al, 2000). Scores obtained on the HAMD were used as the primary outcome variable. In keeping with the recommendations concerning remission in depression, those patients obtaining a score of 7 or less on HDRS were deemed to have had a clinically good outcome (Donovan, 2004).
3. The WHO QOL (Brev). Quality of life was examined using WHO QOL (Brev). This questionnaire is available in the local language and has been used in a previous study of CMD in rural populations in India (Chisholm et al, 2000).
4. The research investigator also collected details concerning the presence of co-morbid medical conditions and life stressors during the last 6 months, treatment compliance and medication from patient case records maintained at the primary health center.

## Statistical analysis

We used independent samples t test to analyze continuous variables and chi square test to analyze categorical variables. Logistic regression analysis was used to determine the significant clinical and demographic variables that predict outcome. All tests were done using SPSS version 13. The significance level was set at  $p < 0.05$ .

## RESULTS

Out of 7910 adults, 650 individuals (8.2%) responded positively to items pertaining to CMD on the symptoms in others questionnaire. Out of 650 individuals, SCID was administered to 300 respondents chosen by random selection. Five patients refused consent to participate in the study. Ninety-four subjects could not be assigned a DSM IV diagnosis. Of the remaining 201 patients with a primary diagnosis of depression or anxiety, the data set was incomplete in 5 subjects. Thus, 196 patients formed the final sample for the analysis.

**Table 1 :Sociodemographic characteristics**

Characteristics	Patients (n=196)
<b>Age (yr)</b>	
Mean±SD	39.5 (12.9)
<b>Gender, n(%)</b>	
Male	18(9)
Female	178(91)
<b>Marital status</b>	
Married	154(79)
Single	7(4)
Divorced	16(8)
Widowed	19(9)
<b>Education, n(%)</b>	
Literate	110(56)
Illiterate	86(44)
<b>Occupation, n(%)</b>	
Employed	111(57)
Unemployed	26(13)
Housewife	59(30)
<b>Family type, n(%)</b>	
Nuclear	105(54)
Extended	57(29)
Joint	27(14)
Living alone	7(3)
<b>Family size</b>	
Mean±SD	5(3)
<b>Standard of living index, n(%)</b>	
Low	33(17)
Middle	64(32)
High	99(51)

The socio-demographic characteristics of the sample are summarized in Table-1. The majority were women (91%), married (79%), currently employed (57%) and belonging to nuclear family (54%). The mean age of the sample was 39.5 years (S.D.=12.9). The mean family size was 5(S.D.=3). Among the 196 patients with a diagnosis of CMD, the mean duration of illness was 63 days (S.D.=73). On SCID, depressive disorder was the primary diagnosis in a majority of patients (n=176, 90%), while fewer subjects had a diagnosis of anxiety disorder (n=16, 8%) and somatisation disorder (n=4, 2%). The most common co-morbid psychiatric diagnosis was anxiety disorder. One hundred twenty two patients (62%) reported significant ongoing life stressors. Interpersonal difficulties especially with mother-in-law (n=78, 40%), financial problems (n= 53, 27%), and alcoholism in spouse (n=37, 19%) and bereavement (n=27, 14%) were the most commonly reported stressors. Fifty seven patients (29%) had co-morbid medical conditions.

one hundred and five patients took treatment for CMD. Among them 42 patients (21.5%) had been on continuous antidepressant medication as defined by compliance with treatment recommendation and visits to the clinic for a period exceeding 2 months. Sixty three (32.1%) patients had discontinued medication (< 2months), while 91(46.4%) did not attend the clinic nor receive treatment from any of the local private care providers. Medications were provided free of cost to individuals seeking treatment from the primary health center. They had to pay a very nominal consultation fee of Rs 2 per visit. Among those on medication, the majority received amitriptyline (n=67), while 32 patients were on fluoxetine. Six patients were prescribed benzodiazepines. The mean dose of amitriptyline and fluoxetine per day were 42.4 mgs (S.D.=37) and 26.6 mgs (S.D.=14.1) respectively. Among the 154 subjects, the common reasons for discontinuing treatment or not accessing the treatment center was an inability to travel to local primary health center due to lack of transportation (n=31,20 %), financial difficulties (n=27,18 %) and an inability to take time off from work (n= 22,14 %). Fewer subjects discontinued treatment due to lack of efficacy (n=13, 8%) and side effects due to antidepressant medication (n=10,7 %). Eight persons (5%) did not seek help due to the stigma of attending a mental health clinic and 7 (4%) felt well after a single consultation. In a minority of subjects the family did not feel the need for any treatment (n=3, 2%), while an equal number felt that treatment would not make any difference to their mental health (n=3, 2%). Others did not specify any reason for discontinuing treatment or for not accessing treatment (n= 30, 20%).

Patients with a score of  $\geq 7$  on HAMD were deemed to have had incomplete remission. One hundred twenty eight patients (65%) had incomplete remission and 68 (35%) had a clinically good outcome at 6 months. The mean score on HAMD was 11 (S.D.=8) among the incompletely remitted group. There were no significant differences between the completely and incompletely remitted groups on any of the socio-demographic variables. Among the various clinical variables, a history of mental illness in the past, presence of co-morbid psychiatric and life stressors significantly influenced the outcome (Table-2). While the presence of co-morbid psychiatric and life stressors were significantly more common among patients with incomplete remission, a greater percentage of patients (75%) with no past history of psychiatric illness were found to have incomplete remission. Suicidal ideation was significantly more common among patients in the incompletely remitted group (50%). Treatment status, type of antidepressant medication and family history of mental illness did not significantly influence the outcome.

**Table 2 : Relationship between outcome and clinical variables**

Clinical variables	Incomplete remission (n=128)	Complete remission (n=68)
<b>Mean Duration of illness In days</b>		
Mean $\pm$ SD	59 $\pm$ (63.3)	64.7(85)
<b>Family history of Mental illness, n(%)</b>		
Present	27(14)	11(6)
Absent	101(51)	57(29)
<b>Past history of Mental illness, n(%)</b>		
Present	15(8)	30(15)*
Absent	113(58)	38(19)
<b>Co-morbid psychiatric Diagnosis, n(%)</b>		
Present	58(30)	20(10)
Absent	70(36)	48(24)
<b>Co-morbid medical Conditions, n(%)</b>		
Present	43(22)	14(7)*
Absent	85(43)	54(28)
<b>Life stressors, n(%)</b>		
Present	75(38)	29(15)*
Absent	53(27)	39(20)
<b>Suicidal ideation, n(%)</b>		
Present currently	64(33)	6(3)**
Present in past	10(5)	9(4)
Absent	54(28)	53(27)
<b>Treatment status, n(%)</b>		
Continuous	29(15)	13(7)
Discontinuous	38(19)	25(13)
Not treated	61(31)	30(15)

\*p < 0.05, df=1, \*\*p < .001, df=2

A logistic regression analysis was done with outcome status as the dependent variable and various clinical parameters as the independent variables. A history of psychiatric illness in the past (OR=0.15, CI at 95%=0.07-0.33), the presence of co-morbid medical conditions (OR= 2.28, CI at 95%= 0.95-3.75) and life stressors (OR=1.99, CI at 95%=1.03-3.86) were significant predictors of outcome. The odds of a respondent having a good outcome when the past history of psychiatric illness was absent was lower as compared to those with a positive past history of psychiatric illness. The odds of having a good outcome are higher when co-morbid medical conditions and life stressors are absent. Finally, the HAMD was significantly negatively correlated with all domains of WHO Quality of Life scores (Table-3).

**Table 3 : Pearson's correlation coefficient of Hamilton depression score and WHOQOL (Brev)**

WhoQol	coefficient Pearson's correlation
Physical Qol	-0.59*
Psychological Qol	-0.63*
Social Qol	-0.45*
Environmental Qol	-0.45*

\*p < 0.05

## DISCUSSION

The present study describes the outcomes of CMD after 6 months in a rural population that was previously untreated. A significant proportion of patients with

CMD had incomplete remission as indicated by a score of greater than 7 on HAMD. This finding is in agreement with earlier studies conducted on patients with CMD attending primary health centers in that a large number of patients have considerable disability, and many remain chronically ill (Goldberg & Blackwell, 1970; Mann et al, 1981; Ormel et al, 1994; Patel et al, 1998). Traditional risk factors such as co-morbid psychiatric and medical conditions, and presence of ongoing life stressors were associated with incomplete remission. A surprising finding was that a history of past psychiatric illness was associated with good outcome. A plausible explanation is that those subjects who have had previous episodes of CMD may have been more prepared to accept their present illness and may have been educated to some degree about their condition. We do not have details concerning their past treatment and hence, this needs to be examined in greater detail.

A large number of individuals with CMD did not seek help from the primary health center although they were encouraged to do so. Other investigators from India too have observed that many individuals in rural communities with CMD do not access health services even when they are locally available (Chisholm et al, 2000; Patel et al, 2003). Local factors such as lack of transportation, financial difficulties and inability to take time off from daily work can act as significant barriers to accessing health services as has been shown in the present study. These issues assume importance in that the majority of the subjects who suffer from CMD are women. While higher rates of CMD are noted among women across the world, the gender differences are more marked in low-income countries (Mumford et al, 1997). Social and economic issues that have been posited to explain the association between female gender and CMD (Patel et al, 1988) may also influence help seeking behavior among rural women. Social difficulties embedded as they are within a family system (Interpersonal problems with significant others, heavy drinking in spouse) may itself act as a significant barrier in seeking professional help. The finding that a high proportion of subjects with CMD did not access locally available health services has important public health implications. It has been suggested that providing mental health training to general medical and traditional practitioners might help in the early detection of CMD and to institute appropriate treatment (Chisholm et al, 2000). As large numbers of individuals with CMD living in the community do not access any type of formal help from the health sector, merely making psychiatric services available at primary health center may not address the unmet needs of the population. Thus, it is important to understand the various factors that influence help seeking behavior.

In addition, a large number of individuals discontinued treatment prematurely and is in agreement with findings from other studies from India (Patel et al, 2001). Various models of collaborative or stepped up care approach have been used to increase treatment retention in patients with depression seeking help from primary care practitioners (Araya et al, 2003; Katon et al, 2002). Most of these studies have observed improved treatment adherence and better outcomes in depression. There are very few studies using such approaches in low-income countries.

Another salient finding from the present study was that outcome in patients who had not sought treatment or had discontinued treatment was not different from those individuals who were on regular medication. Two prospective studies that assessed outcome in depressed patients treated

naturalistically observed that treatment with antidepressants did not significantly influence outcome (Brugha et al, 1992; Ronalds et al, 1997). It is possible that the mere act of interviewing individuals and advising them to access help itself may be therapeutic for some individuals with CMD (Chisholm et al, 2000). However, in the present study, a significant proportion of patients among the incompletely remitted group had reported suicidal ideas. In addition, individuals who had a higher HAMD score had a poorer quality of life as measured on the WHO QOL. Thus, it may still be important to target individuals at high risk for a more systematic treatment intervention.

This study has some limitations. We do not have baseline information on the HAMD, which was used as the primary outcome variable in the present study. The treatment intervention was naturalistic, although, the same consultant psychiatrist supervised treatment for all patients during the study period. We did not use any standardized scale to measure life stressors. We also cannot comment on the unmet needs of the population as the two stage screening process was administered to only a proportion of individuals identified to have CMD.

In conclusion, a significant proportion of individuals diagnosed with CMD living in a rural community had incomplete remission at 6 months as measured on HAMD. The presence of co-morbid psychiatric and medical conditions and ongoing life stressors were associated with incomplete remission. Individuals who had not completely remitted from their episode of CMD more frequently reported suicidal ideation. A large number of individuals with CMD living in the community did not seek help from the primary health center although they were encouraged to do so. This has important implications for a future public health approach to the treatment of CMD in rural communities in low-income countries.

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1. **Dr. Krishnamachari Srinivasan** (Correspondence), Vice Dean, St. John's Research Institute, Opposite B.D.A Complex, Koramangala, Bangalore 560 034, Karnataka, India, E-mail: srinivas@iphcr.res.in
  2. **Dr. Anton Isaacs**, Department of Community Medicine, St. John's National Academy of Health Sciences, Bangalore.
  3. **Dr. Tinku Thomas**, Ph.D., St. John's Research Institute, Opposite B.D.A Complex, Koramangala, Bangalore 560 034.
  4. **Dr. Geetha Jayaram**, Schools of Medicine, Health Policy and Management, Johns Hopkins University, USA.
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## PREMORBID ADJUSTMENT IN BIPOLAR DISORDER: A COMPARISON WITH SCHIZOPHRENIA

Amrit Patojoshi<sup>1</sup>, D. Ram<sup>2</sup>, Sachin Gandotra<sup>3</sup>

### ABSTRACT

**Background:** Developmental theories hypothesize that the origins of many adult mental disorders can be identified in behavioral characteristics that appear in the first few years of life. **Objective:** The index study was conducted with the aim of comparing the premorbid adjustment of bipolar affective disorder patients with schizophrenia and healthy controls. **Methodology:** A total of 120 subjects (Bipolar affective disorder n=60, Schizophrenia n=30 and healthy controls n=30) entered the study. The subjects' premorbid adjustment in four developmental stages (i.e. childhood, early and late adolescence and adulthood) was assessed by obtaining information from a key relative using the Premorbid Adjustment Scale with modification. **Results:** Significant differences were obtained between the bipolar patients and schizophrenia patients on all the development subscales of premorbid adjustment with bipolar patients having better adjustment. Schizophrenia patients were also found to differ significantly on three of the four developmental subscales with respect to the healthy controls, with the latter having better adjustment than the schizophrenia patients. Further, patients with schizophrenia were found to be impaired socially from a young age, with marked deterioration during adolescence. **Conclusions:** We conclude that poor social adjustment premorbidly is an early manifestation of vulnerability to adult psychotic illness with the possible explanation of neuro-developmental origin.

**Key words:** *Premorbid adjustment, bipolar disorder, schizophrenia.*

### INTRODUCTION

There is a growing body of evidence that some chronic mental and physical disorders originate during childhood or possibly during fetal development (Kraepelin, 1919; Fish, 1977). Premorbid functioning has often been regarded as an important clinical correlate of longitudinal course and outcome among patients with schizophrenia (Bailer et al, 1996; Lindstrom, 1996; Cannon-Spur et al, 1982, 1997; Torgalsboen, 1999; Allen et al, 2001; Reichenberg et al, 2002) and related chronic forms of psychopathology such as schizoaffective disorder (Bailer et al, 1996). Relatively less attention has been paid to the prognostic significance of premorbid adjustment as a determinant of either adult psychopathology or longitudinal course and outcome in patients with bipolar illness. Several studies have found more extensively impaired premorbid adjustment in bipolar patients than healthy controls, but less than that seen among patients with schizophrenia (Kolakowska et al, 1985; Mueser et al, 1990; Gureje et al, 1994; Bailer et al, 1996). Poor premorbid functioning has been identified as one of several dimensions

associated with severe and persistent or "deteriorated" forms of mental illness in patients with affective disorders (Vocisano et al, 1996) and may be a useful predictor of outcome at follow-up in patients with adolescent onset psychotic or mood disorders or both (Werry et al, 1991; Werry & McClellan, 1992). The extent to which premorbid adjustment bears prognostic significance specifically for patients with bipolar illness remains uncertain (Goldberg et al, 2004).

Exclusive focus of psychiatric research on premorbid abnormalities in schizophrenic patients may be due, in part to a blind spot on behalf of researchers, who have simply not acknowledged a longitudinal dimension to affective illness as biological formulations of schizophrenia have done (Jones 1999). Unfortunately, most studies of premorbid functioning in psychoses have lacked a healthy comparison group and have not been able to examine the distribution of childhood and adolescent social impairment among groups of patients compared with normal population. In addition, few studies have controlled for possible confounding factors, such as sex, social class and ethnicity in the relation between

premorbid social difficulties and psychoses (Cannon et al, 1997). Overall there has been a dearth of Indian studies in this domain which has necessitated for such a study in Indian perspective.

In assessment of the premorbid adjustment the date of onset of the psychotic illness must be established before one can determine when the premorbid period ended. There is much debate about determining the date of onset. The goal is to attempt to find a point in time when the individual had no experience of symptoms and then work towards the time when symptom began. This is often difficult to determine accurately and for many individuals, there is a lengthy prodromal period (Mastrigt & Addington, 2002). Andreason & Colleagues (1992) at the University of Iowa redefined the period of end of premorbid period from 6 months to 1 year preferring to underestimate the length of premorbid period than to over estimate it. Earlier studies (Offord & Cross, 1969) on the individuals were done before the break of the psychoses, with the intent of measuring true premorbid functioning where premorbid was defined as the period 1 year before first hospitalization to psychiatric centers, or 1 year before florid psychotic symptomatology, such as delusions, hallucination, thought disorder, inappropriate or bizarre behavior, or gross psychomotor behavior in what the symptoms are not apparently due to organic causes (Cannon-Spoor et al, 1982). The best possible way, therefore, is to first estimate a date when the symptoms first appeared such as were noticeable and of concern and impair functioning in some way. At least 1 positive symptom should be rated 4 or more on the PANSS.

The affective disorders were felt to be due to object loss, real or imagined, and the detail about childhood concentrated on parental losses and separations (Angst & Clayton, 1986). Several cohort studies have been done, some focusing on childhood cognitive abilities, some on premorbid motor abnormalities, and some linking premorbid personality traits to the later vulnerability to affective episodes (Chodoff, 1972; Crow et al, 1995; Van Os et al, 1997). Unfortunately, without appropriate comparison groups, their conclusion that manic-depressives come from families who are minority groups because of their social, economic, ethnic, or religious status and that the manic-depressive is frequently burdened with the family's expectation of success can not be substantiated.

Foerester et al (1991) found that schizophrenic men had more premorbid schizoid and schizotypal features than both schizophrenic women and men with affective disorder. Schizophrenic men had a significantly higher PAS2 (5-11yrs) (Premorbid adjustment scale) score than schizophrenic

women or men with affective disorder. The measures of social adjustment, PAS1 (12-16yrs) and PAS 2 scores were stronger predictors of early admission in affective disorder than they were in schizophrenia. Social adjustment at primary school age was the strongest predictor of earlier age of onset. Unexpectedly, these correlations were stronger for affective disorder than for schizophrenia. Late childhood impairment in adjustment (PAS2) were more predictive of schizophrenia than were early impairments (PAS1), a finding which accords with evidence that, although schizoid-schizotypal traits can be detected in early childhood (Hanson et al, 1976; John et al, 1982), their impact on broader social adjustment emerges most strongly in later childhood (Watt, 1972). The high correlation noted between early childhood social adjustment (PAS1) and age at first admission to hospital for psychosis suggests that where deficits are severe enough to impair social adjustment at an early stage, these are powerful predictors of early onset.

Larsen et al (2004) in their study found that while the duration of untreated psychosis (DUP) was significantly longer in males, correlations between DUP and premorbid functioning within gender were largely non significant, as were the analyses of premorbid functioning and age at onset.

Gureje et al (1994) compared the premorbid social adjustment of 38 schizophrenic patients with that of 20 manic patients and revealed that schizophrenic patients consistently showed evidence of poorer premorbid functioning than manics at various stages of social development, Schizophrenic men also tended to have functioned more poorly than women. Poor premorbid functioning was associated with negative syndrome, but not with positive or disorganization syndromes.

Many authors agree that as both in affective disorder and schizophrenia premorbid abnormalities are associated with poor outcome as there is reason to believe that in both disorders a (possibly similar) type of developmental abnormality is associated with chronic illness course (Stoffelmayr et al, 1983; Duggan et al, 1990; Roger, 1990; Done et al, 1994). This has implications in the neuro-developmental hypothesis (Murray & Lewis, 1987; Murray et al, 1992; Pogue-Gelie, 1997). However, neuro-developmental theory remains a vague hypothesis that does not specify the exact mechanisms explaining the links between predisposing risk factors, premorbid impairments, and the clinical symptoms of psychosis (Guerra et al, 2002).

The present study has been done from a large treatment group of psychotic patients and tries to answer the following

questions (1) Do patients with schizophrenia and bipolar disorder show poor social adjustment in childhood and adolescence compared with healthy subjects (2) How large are there effects and which domains of functioning are impaired.

## METHOD

This study was conducted at the Central Institute of Psychiatry (CIP), Ranchi. The study was cross-sectional hospital based and every consecutive patient consenting for the study and meeting the diagnostic criteria for Bipolar Affective Disorder and Schizophrenia according to ICD -10 DCR (WHO, 1993) attending CIP were recruited in the study. A total of 120 subjects of both the sexes (Bipolar affective disorder n=60, Schizophrenia n=30 and Healthy Controls n=30) within the age group of 18-60 years entered the study and the patients with schizophrenia and the healthy controls were matched with bipolar group with respect to age, sex and socio-economic status. In all the three groups, patients with past history of major medical conditions, mental retardation, personality disorders and other co-morbid psychiatric condition or co-morbid substance dependence and organic or neurological disorder were excluded from the study. Healthy subjects scoring less than 1 on General Health Questionnaire-5 (GHQ-5) (Shyamsundar et al, 1986) were taken as control subjects.

In order to assess the premorbid adjustment of the subjects the Premorbid Adjustment Scale was administered to the key relatives of patients. A key relative was defined as someone who remained with the patient, preferably either of the patients, or an elder who is a first degree relative or the spouse or someone spending the maximum amount of time with the patient. The Premorbid Adjustment Scale with modifications is a revised scale of original Premorbid Adjustment Scale (Cannon-Spoor, 1982). The rating scale is designed to evaluate the level of functioning in four major areas at each of several periods of the subject's life: social accessibility-isolation, peer relationships, ability to function outside the nuclear family, and capacity to form intimate socio-sexual ties. The four life period sections are as follows: Childhood, up to 11 years, Early Adolescence, 12- 15 years, Late Adolescence, 16- 18 years, and Adulthood, 19 years and beyond. The scale is intended to measure only "premorbid" functioning with "premorbid" being defined as the period ending 12 months before the first psychiatric hospital admission or psychiatric contact, or 12 months before evidence of characteristic florid psychotic symptomatology. Scale items are made up of a combination of original, adopted, and modified items from

the Phillips Scale (Phillips, 1953), the Premorbid Social adjustment Scale, and the Elgin Scale (Kokes et al, 1977). The advantage of the scale lies in its simplicity and its adaptability to a variety of information sources. All the ratings are based on interviews with parents, their family members or both and each item is scored on a Likert-type scale of 0-6, where lower numbers indicate normal, healthy functioning and higher numbers suggest pathologic development. Phrased anchor points are given for each item to aid in scoring. In situations where, for any reason, there is insufficient information to complete an item, it is not scored and the item is excluded in the calculation of the overall score. Scores for each of the subscales are calculated by dividing the obtained score by the total possible score for that section. Ratings for the scale are expressed as decimal point numbers ranging from 0.0 to 1.0 where lower numbers represent the healthier level of functioning. Based on scores on Premorbid Adjustment Scale the subjects were categorized on different domains of adjustment.

Statistical analysis was done using Statistical Package for Social Sciences (SPSS) 10.0 of Windows 98 version. Frequency analysis was done as part of descriptive statistics, to describe the sample in terms of socio-demographic and clinical characteristics. Chi-square ( $\chi^2$ ) test was used to compare between groups on discrete variables e.g. sex. Independent sample t test was applied to derive group differences on continuous variables e.g. age, duration of illness. To find out the group differences Analysis Of Variance followed by Post Hoc Test was employed.

## RESULTS

Mean age of bipolar patients was  $30 \pm 7.63$  years and mean years of education was  $9.78 \pm 5.13$  years. Majority of the bipolar patients were married Hindu males belonging to lower and middle socio economic status of rural background and were employed. Majority of the healthy controls lived in semi-urban region and bipolar and schizophrenic patients were alike in their domicile status. In terms of religion, bipolar and schizophrenics differed significantly ( $p < .05$ ) from healthy controls in that a good proportion of healthy controls were Muslims. Mean age of onset was 23.00 ( $\pm 5.84$ ) yrs. in bipolar patients compared to 23.86 ( $\pm 6.62$ ) yrs in schizophrenics. Duration of illness was 7.80 ( $\pm 5.97$ ) yrs in bipolar patients and 6.23 ( $\pm 4.99$ ) yrs in schizophrenics Significant differences ( $p < 0.001$ ) in terms of mode of onset was seen with 98.3% of bipolar patients (n=59) having an abrupt or acute onset of illness in comparison to schizophrenics of which 60% had an insidious onset (n=18). Significant differences were also

found ( $p < 0.05$ ) in terms past history of psychiatry illness. No significant difference was found between the two groups in terms of family history of psychiatric illness or history of previous hospitalization.

Table 1 shows comparison of scores of premorbid adjustment scale among bipolar, schizophrenics and healthy controls. ANOVA revealed significant differences within the groups on all the subscales i.e. childhood, ( $p < 0.01$ ) early adolescence, ( $p < 0.05$ ) late adolescence ( $p < 0.001$ ) and adulthood ( $p < 0.001$ ).

**Table 1: Scores on the premorbid adjustment scale**

	Bipolar	Schiz.	Normal	F-value	p-value
<b>Total A Score</b>	.09±.10	.18±.14	.12±.11	05.37	.006**
<b>Total B Score</b>	.11±.11	.17±.13	.12±.11	03.40	.036*
<b>Total C Score</b>	.11±.13	.23±.19	.10±.11	07.57	.001***
<b>Total D Score</b>	.08±.16	.23±.24	.04±.08	10.90	.000***
<b>Avg. Score</b>	.09±.11	.22±.14	.10±.10	11.55	.000***

\* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

A-Childhood upto age 11, B-Early adolescence (12-15 yrs. of age), C-Late adolescence (16-18 yrs.), D-Adulthood (age 19 yrs. & above)

**Table 2: Post hoc analysis for group comparison of scores of premorbid adjustment among bipolar, schizophrenic and normal control**

Variables	Group	Score (Mean±SD)	p
<b>Childhood up to age (11 years)</b>	Bipolar	.09±.10	<0.001***
	Schizo.	.18±.14	
	Bipolar	.09±.10	NS
	Normal	.12±.12	
	Schizophrenia	.18±.14	<0.05*
	Normal	.12±.12	
<b>Early adolescence (12-15 years of age)</b>	Bipolar	.11±.11	<0.05*
	Schizophrenia	.17±.13	
	Bipolar	.11±.11	NS
	Normal	.12±.11	
	Schizophrenia	.17±.13	NS
	Normal	.12±.11	
<b>Late adolescence (16-18 years)</b>	Bipolar	.11±.13	<0.001***
	Schizophrenia	.23±.19	
	Bipolar	.11±.13	NS
	Normal	.10±.11	
	Schizophrenia	.23±.19	<0.01**
	Normal	.10±.11	
<b>Adulthood (age 19 &amp; above)</b>	Bipolar	.08±.16	<0.001***
	Schizophrenia	.23±.24	
	Bipolar	.08±.16	NS
	Normal	.04±.08	
	Schizophrenia	.23±.24	<0.001***
	Normal	.04±.08	
<b>Average Score</b>	Bipolar	.09±.11	<0.001***
	Schizophrenia	.22±.14	
	Bipolar	.09±.11	NS
	Normal	.10±.10	
	Schizophrenia	.22±.14	<0.001***
	Normal	.10±.10	

NS= Non significant, \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

A post-hoc analysis of scores of subscales on premorbid adjustment scale was done (Table 2.) which revealed that in the childhood scale significant differences ( $p < .001$ ) were found between bipolar and schizophrenic and schizophrenics and normal ( $p = < .05$ ). No significant difference was found between the bipolar and normal group. In the early adolescence group, significant differences ( $p = < .05$ ) were found only between bipolar and schizophrenic group. In the late adolescence period significant differences were found between bipolar and schizophrenic ( $p = < .001$ ) and schizophrenic and normal ( $p = < .001$ ). Significant differences were also found in the adulthood scale between bipolar and schizophrenia ( $p = < .001$ ) and schizophrenia and normal ( $p = < .001$ ). No significant difference was found between the bipolar and normal controls in adolescence and adulthood scale. Based on scores the subjects were categorized on different domains of adjustment such as

- (1) Sociability categorized as sociable and withdrawn (2 or <2; and >2)
- (2) Peer relationship categorized as friendly and isolated (2 or <2; and >2)
- (3) Scholastic performance categorized as average student and poor student (3 or <3; and >3)
- (4) Adaptation to school categorized as good and poor (3 or <3; and >3)
- (5) Social sexual aspects categorized into healthy and poor (3 or <3; and >3).

**Table 3: Comparison of distribution of domains of adjustment on Premorbid adjustment scale across the bipolar & schizophrenia groups**

Variables		Bipolar n(%)	Schiz. n(%)	$\chi^2$	P
<b>Childhood upto age 11 yrs.</b>					
Adaptation to school	Good adaptation	52 (100)	26 (92.9)	3.810	.051
	Poor adaptation	0(0)	2 (7.1)		
<b>Late adolescence (16-18 yrs.)</b>					
Sociability	Sociable	51 (98.1)	23 (85.2)	4.982	.026*
	Withdrawn	1 (1.9)	4 (14.8)		
Peer relationship	Friendly	49 (94.2)	22 (81.5)	3.174	.075
	Isolated	3 (5.8)	5 (18.5)		
Scholastic performance	Average student	25 (92.6)	7 (70.0)	3.187	.074
	Poor student	2 (7.4)	3 (30)		
<b>Adulthood (age 19 yrs. &amp; above)</b>					
Social sexual aspects	Healthy sex life	39 (95.1)	20 (80)	3.746	.053
	Poor sex life	2 (4.9)	5 (20)		

\* $p < 0.05$

On the childhood scale (Table 3) no significant differences were found between bipolar and schizophrenics group on sociability, peer relationship and scholastic performance. A trend was seen in terms of adaptation to school ( $p < .051$ ) in which 7.1% ( $n = 2$ ) of schizophrenia were poorly adapted to school in comparison to 100% ( $n = 52$ ) of bipolar patients who had a good adaptation. In the early adolescence group no significant differences were found among the two groups in all the above mentioned subscales as well as in sexual adaptation scale. In the late adolescence scale (Table 3) significant differences ( $p < .05$ ) were found on the sociability scale in which 98.1% of bipolar ( $n = 51$ ) were sociable in comparison to 85.2% of schizophrenia ( $n = 23$ ). A trend was seen ( $p = .075$ ) in term of peer relationship. A trend was also seen in scholastic performance ( $p = .074$ ). No significant differences were found in term of adaptation to school and sexual adaptation. In the adulthood scale no significant differences were found in the sociability and peer relationship sub scale. A trend ( $p = .053$ ) was seen in the sexual adaptation (Table 3).

## DISCUSSION

Our results show that significant differences were found between the bipolar and schizophrenic groups and schizophrenics and normal but no significant differences were found between the bipolar and normal on all the four periods of functioning that is childhood, early adolescence, late adolescence and adulthood and highest level of functioning.

The findings are consistent with the findings of Gureje et al (1994) who found that manics showed evidence of better premorbid functioning at various stages of premorbid functioning. It was also interesting that such a pattern of premorbid deficit was seen in patients seen in a social environment that has been suggested by a more favorable outcome of the illness. The results also provide tentative support for the notion that impaired premorbid adjustment may be an early sign of a type of schizophrenia or a vulnerability factor for some individuals who may develop such type of illness unlike that of mania. The results of the study are in line with the data reported earlier (Jones et al, 1993; Van Os et al, 1995; Reichenberg et al, 2002; Chris Hollis, 2003).

Cannon et al (1997) found that patients with bipolar affective disorder exhibited poorer social impairments in adolescence than normal comparison subjects, though to a lesser degree than the schizophrenic subjects but performed well at school. The patients with schizophrenia had significantly poorer premorbid adjustment in childhood and adolescence than

the comparison subjects and were impaired in both sociability and school adjustment. They proposed that poor social adjustment in adolescence is an early manifestation of vulnerability to adult psychotic illness. Other studies (Van Os et al, 1992; McClellan et al, 2003) lend support to these findings.

In the childhood scale a trend was seen in term of adaptation to schooling which future schizophrenics were poorly adapted to school in comparison to bipolar patients. No difference was found among the two groups in other parameters like sociability, peer relationship and academic achievement.

A pattern of poor adjustment at secondary school levels have been reported by Foerster et al (1991) in males with schizophrenia as compared to the with affective disorder. Social adjustment at primary school age was the strongest predictor of earlier age of onset. Study by Friedlander (1945) have reported poorer academic achievement and increased incidence of school difficulty among pre-schizophrenics. Late childhood impairments in adjustment were more predicative of schizophrenia than were early impairments, as has been reported by Foerester et al (1991). The high correlation noted between early childhood social adjustment and age at first admission suggest these to be powerful predictors of early onset (Watt, 1977).

We found significant differences in sociability and a trend in terms of peer relationship and scholastic performance in the late adolescence group between the two groups. No significant difference was found in adaptation to school and other aspects of life. In the early adolescence period no significant differences were found on any of the parameters between the two groups.

There is evidence that that social and academic functioning may form a fairly independent dimension of premorbid functioning (Done et al, 1994; Crow et al, 1995; Larsen et al, 2004). Malmberg et al (1998) & David et al (1997) in the Swedish conscript study found significant relationship between problem in interpersonal relationship and later schizophrenia with a similar, though less marked effect for affective disorder. They also reported that people who were more sensitive at age '18' along with having fewer than 2 close friends and preferring to socialize in small groups and not having a steady girl friend were 30 items more likely to develop schizophrenia.

In the adulthood scale a trend was seen in the sexual scale with no difference between bipolar and schizophrenic patients

on the sociability and peer relationship scale. This shows that more number of schizophrenic than patients with bipolar affective disorder were either not married or their sexual relationship were poor.

Van Os et al (1995) found that compared to mania, the odds of being unemployed, single or having left school without examination tended to increase with illness chronicity. One confounding factor in the observations regarding marriage may be the socio-cultural norms prevalent in our society which regard marriage as a treatment of psychiatry illness. Also as divorce is not such a common entity in our society as compared to western society and talks of differences in the marriage are also considered a taboo our findings, may have been colored by these facts.

Our results are further strengthened by the findings of Reichenberg et al (2002) who found that non psychotic bipolar patients showed better per-morbid social functioning in comparison to patients with schizophrenia during adulthood. Mc Clellan et al (2003) also found that patients with bipolar fared better premorbidly than youth with schizophrenia who had higher rates of premorbid social withdrawal & impairment & tended to have fewer friends. Jones et al (1993) found no social underachievement in the affective psychoses group in comparison to schizophrenics who were also found to have lower educational qualification.

Our findings suggest that the premorbid precursors for schizophrenia and affective psychoses differ and do not simply reflect non-specific psychiatric disturbance in adolescence. There appears to be separate tracks leading to both disorders. An interesting question is whether these childhood problems are markers of the neurocognitive substrate of the disorder or are independent risk factors for the disorder. These observations have given rise to neurodevelopment formulations of schizophrenia which propose the existence of a non progressive brain lesion of genetic or early environmental origin. The cognitive and behavioral effects of such a lesion are postulated to change over time as the nervous system around it continues to develop. In the immature brain, the functional effects are subtle, with relatively minor deficits in characteristics such as responsiveness and sociality. Only as the brain reaches functional maturity in adolescence do the psychotic symptoms become manifest (Weinberger, 1987).

The index study has improvised upon many methodological limitations of the data reported earlier. The study attempts to examine the disturbances of childhood and adolescent social

impairment among groups of patients with the normal population controlling for possible confounding factors such as sex, social class and ethnicity. In order to overcome the bias healthy subjects were chosen from the same catchments area as that of the psychiatric population and were assessed with the same instruments with which the patients were assessed. Use of key relatives as the source of information was an additional strength in contrast to the chart revisions or interview with patients employed by the studies done earlier. The use of the premorbid adjustment scale with modification was used for the first time in bipolar affective patients and offered further advantage since the general scale which is a measure of the higher level of functioning contaminates the overall findings as majority of the developmental subscales are not marked. Both homosexual and heterosexual relationships are scored equally and the duration of the premorbid period taken as 1 year before the onset of psychiatric symptoms allowed better assessment of the premorbid adjustment of the subjects.

The study had its limitations characterized by a selection bias due to assessment of mainly severely ill patients in a tertiary level institute. The sample size was small and problem of recall bias could not be overcome. The rater was not blind to the diagnosis of the patient and another confounding factor was the "halo effect" in which the rater's knowledge of the scores of previous development periods influences the current ratings. Finally, the scale which was developed in a different socio-cultural settings, may lack items relevant for rating certain functional areas which may be pertinent to our setting in which the study was conducted.

The study results indicate that poor social adjustment premorbidly is an early manifestation of vulnerability to adult psychotic illness with the possible explanation of neurodevelopmental origin. But the reasons for the early premorbid impairment in schizophrenia compared to bipolar affective disorder are not yet understood properly and would warrant further study, using a retrospective as well as a prospective design with raters being blind to the diagnosis to get a wider and a more reliable picture of the premorbid functioning.

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1. **Dr. Amrit Pattajoshi**, D.P.M., Senior Resident, Central Institute of Psychiatry, Kanke, Ranchi-834006, Jharkhand
  2. **Dr. D. Ram**, M.D., (Corresponding author), Professor of Psychiatry, Central Institute of Psychiatry, Kanke, Ranchi-834006, Jharkhand  
Email: cipranchi@hotmail.com
  3. **Dr. Sachin Gandotra**, D.P.M., Junior Resident, Central Institute of Psychiatry, Kanke, Ranchi-834006, Jharkhand
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## EXECUTIVE DYSFUNCTION IN THE SIBLINGS OF CHILDREN WITH AUTISM: A PEER CONTROL STUDY

Sreemoyee Tarafder<sup>1</sup>, Pritha Mukhopadhyay<sup>2</sup>, Prasanta Kumar Roy<sup>3</sup>

### ABSTRACT

**Background:** The genetic study and concordance rates suggest the possibility of inheritance in autism. This observation delineates a possibility of deficit in some basic functions in the family members, even in a subtle manner. There exists ample evidence of executive dysfunction in autism but information concerning the status of executive functions in siblings of autistic children is scarce. **Method:** The present study aims to investigate executive functions in ten healthy, intellectually superior siblings of children with autism as compared to ten siblings of normally developing children on Wisconsin Card Sorting Test (WCST). **Results:** Though no statistical difference was noticed but profile analysis of the matched pairs, revealed a greater percentage of errors (in 80% cases), perseverative responses (60%), perseverative errors (60%), non-perseverative errors (70%) and poorer conceptual level responses (70%) among the siblings of autistic children. **Conclusion:** The qualitative deficit in executive function in high functioning siblings of children with autism corroborate with the prevailing concept of cognitive phenotype of executive dysfunction in this population.

**Key words:** *Autism, executive function, wisconsin card sorting test.*

### INTRODUCTION

The attempt to diagnose autism that has been initiated in 1943 by Leo Kanner (Kanner, 1943) being characterized by lack of responsiveness, extreme aloofness, lack of interest in others, language and communication problems and so on, finally gets recognition as a separate diagnostic category with more precise diagnostic features in DSM III (APA, 1980) and ICD since 1993. It is now reported that 1 per 500 individuals in India suffer from autism (Action for Autism, 2003) and 6.7% per 1000 individuals in the world suffer from autism spectrum disorder (Bertrand et al, 2001). The genetic study and concordance rates also suggests the possibility of inheritance in autism. This observation delineates a possibility of deficit in some basic functions in the family members, even in a subtle manner, if not manifested. Mind blindness (Baron-Cohen, 1995) and deficit in executive function (Hill, 2004), are also two major underlying deficits, and is reported to be present in autism.

Executive Functions include many prefrontal lobe functions like planning, impulse control, set shifting, initiation and monitoring of action, working memory etc. (Stuss & Knight,

2002). Although executive functions were traditionally viewed as emerging only in later childhood (Golden, 1981), there is now a growing body of research claiming the development of executive control processes during infancy and the preschool years (Diamond & Doar, 1989; Hughes, 1998a; 1998b). Damasio & Maurer (1978) hypothesized that the many shared symptoms of autism and frontal lobe injury might arise from analogous neuropsychological deficits in both the conditions. This assumption gets confirmed from the observation of significant impairment in executive function on a widely used neuropsychological test for cognitive flexibility named Wisconsin Card Sorting Test (WCST) task in high functioning autistic individuals as compared to the controls on all of its key dependent measures, including number of sorts completed, total errors, and percentage of perseverative errors (Rumsey, 1985). Rumsey (1985) explained the potential causal relevance of dysexecution to autistic social deficits, observing that successful social functioning, like the card sort test, requires "integration and weighing of multiple contextual variables, selective attention to relevant aspects of the environment, and inductive logic". Thus, it explains not only the inflexible and rigid behaviour of autistic children, but also their impaired ability to engage in reciprocal social-

communicative interactions. (Bennetto et al, 1996; Baron-Cohen, 1995). Now there exists ample evidence of executive dysfunction in autism (McEvoy et al, 1993; Hughes et al, 1994; Ruble & Scott, 2002) which is manifested through their cognitive deficit to engage in goal directed tasks and inability to adjust their behaviour according to the environmental demands. WCST does not only measure flexibility but this task also requires an optimal participation of other functional unit of brain, namely, inhibition, working memory and monitoring. Thus the dysfunction observed on WCST also explains stereotyped motor act of autistic population (Hill, 2004). Considering the potency of the executive dysfunction to explain varied/ multiple deficits in autism, Hill (2004) perhaps has rightly pointed out whether executive dysfunction could be a diagnostic marker of autism which delineates the likelihood of executive dysfunction in broader autism phenotype. The assumption is in line with the research report of deficit in executive functions in autistic individuals (Hughes et al, 1994) and among probands, specifically among parents (Hughes et al, 1997) and siblings (Hughes et al 1999), which is suggestive of a phenotype of autism.

Since the present study aims to investigate the autistic phenotype and there is paucity of information in literature concerning the status of executive functions in siblings of autistic children, the study is restricted to the intellectually superior non-autistic siblings, sharing a genetic concordance with their autistic sibling, to gain an insight into the precise nature of the cognitive inflexibility by employing Wisconsin Card Sorting Test (WCST) in those with genetic disposition for autistic characteristics.

## METHODOLOGY

### Subjects:

The Study Group (SG): The study group i.e., the siblings of autistic children, were identified with the help of a Rehabilitation Council of India (RCI) recognized institute for autistic children in Kolkata where children are diagnosed by Psychiatrists and trained Psychologists. The selection criteria of the healthy siblings were as follows:

The study was restricted to subjects belonging to the age group of 12-18 years, residing in the metropolis of Kolkata, fulfilling the criteria of completing the primary education up to at least class five. Among them only those were selected for the investigation that did not have any report of psychological disorders or major medical illness or developmental delay as screened by a semi-structured interview schedule, case

history format and Mental Status Examination, and assessed as intellectually superior. A total of 10 such adolescents were considered for the study. Siblings of individuals suffering from other pervasive developmental disabilities, other than autism were not taken into consideration.

The Control Group (CG): A stringent one to one matching procedure was considered while selecting the control group. The 10 CG subjects selected were of same age group and were found to be matching in all other respects namely, mother tongue, religion, sex, educational level, ordinal position, family type, medium of instruction in schools, handedness, intellectual level of functioning (as assessed on Standard Progressive Matrices). Their siblings were ascertained to be free from any psychological disorder /developmental disability (as assessed using same procedure that of SG) and both the CG and their siblings were assessed to be of average or above average intellectual functioning on the Standard Progressive Matrices.

### Measures Used:

1. A detailed semi-structured information schedule
2. Standard Progressive Matrices (Raven, 1938) – it was used as a tool to match the groups in terms of intellectual level.
3. Wisconsin Card Sorting Test (Heaton & Chelune, 1993)-a neuropsychological instrument, considered as a measure of executive function because of its reported sensitivity to frontal lobe dysfunction (Luria, 1973; Shallice, 1982). This test is generally interpreted as a test of mental flexibility (or set-shifting). In this task an individual needs to sort cards on one of three possible dimensions (colour, number, shape). The experimenter tells the participant whether he has placed the card correctly (i.e., followed the correct rule), but does not give the details of the rule. Wide ranges of different measures are used for scoring this test including total number of errors, number of perseverative errors, perseverative response and categories completed. Here a perseverative error is viewed as a failure to shift set to the new sorting criterion. Raw scores are converted into standard and percentile score. For most of the scoring variables, lower standard or percentile scores indicate more impairment.

### Procedure:

Initially three special schools were selected to identify the

autistic children who were diagnosed as autism by trained psychiatrists and psychologists according to International Classification of Diseases-10 criterion. International Classification of Diseases-10 Diagnostic Criteria for Researches (WHO, 1993) was also used to rule out any possibility of other pervasive developmental disabilities. Only those were selected who had siblings without any history of psychiatric or major medical difficulties. After getting written consent from parents as well as from the siblings, siblings of autistic children were requested to come to the special schools and Standard Progressive Matrices (SPM) was administered. All the initially selected siblings scored above average on the test. Testing was completed with the administration of Wisconsin Card Sorting Test (WCST). Control subjects were selected from the neighbouring schools. Initially 13 students fully matched in terms of demographic and other variables as mentioned above, were selected after getting consent from both parents and themselves. 3 students scored below the above average score (i.e., 75 percentile) and thus they were excluded from the final data. WCST was also administered on them.

**Statistical Analysis:**

Statistical package for social science (SPSS) version 10.0 was employed for analysis of the data. Since Levene’s test for equality of variance reveals no significant difference between variances, the t test was computed to obtain the between group difference amongst all the variables.

**RESULTS**

Mean age of the study group (SG) was 14.30 years (SD 1.64), whereas for the control group (CG) it was 14.60 years (SD 1.65) which did not show any significant difference. Educational standard for both the groups was also similar. In both SG and CG, there were 2 males and 8 female subjects. All of them were Hindu by birth, held from upper-middle class background and were right handed.

**Table 1: The t test of variables of SPM and WCST**

Variables	Study group (N=10) Mean±SD	Control group (N=10) Mean±SD	t (df=18)
SPM	049.10±04.65	052.30±03.37	0.10 <sup>NS</sup>
ERROR*	099.40±10.13	109.40±16.51	0.12 <sup>NS</sup>
PR*	100.00±11.69	107.90±17.22	0.25 <sup>NS</sup>
PE*	099.30±11.14	107.80±17.76	0.22 <sup>NS</sup>
NPE*	099.40±10.76	109.20±18.67	0.17 <sup>NS</sup>
CLR*	097.80±10.71	102.50±13.39	0.40 <sup>NS</sup>
NOCC	005.30±01.57	005.50±00.97	0.74 <sup>NS</sup>
FIRSTCAT	013.00±03.16	0017.4±13.19	0.32 <sup>NS</sup>
FTMS	000.70±01.25	000.60±01.26	0.86 <sup>NS</sup>
CORRECT	072.20±10.73	071.20±08.89	0.82 <sup>NS</sup>

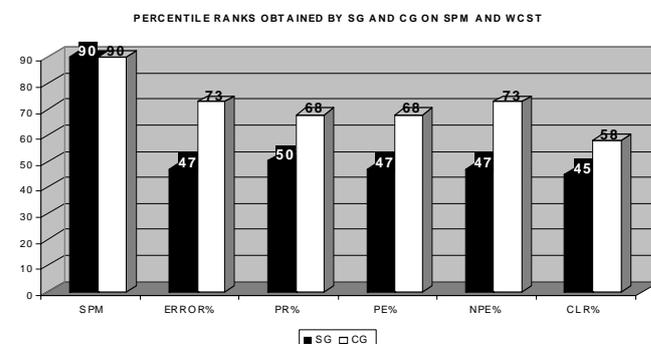
\* Standard score was used. Low standard score indicates more difficulty  
NS: Non-significant

The result of t test (as enumerated in table 1) on performance of the SG and CG on Standard Progressive Matrices (SPM), that was reserved as the selection criteria of inclusion, suggested that the two groups were matched on intelligence, both lying above the 75<sup>th</sup> percentile. No difference had been apparent between the two groups on the variables of WCST (as depicted in Table 1). But the data obtained on the WCST indicates the necessity of qualitative analysis of the same.

Subjects’ performance on WCST variables namely- Error%, Perseverative Response (PR)%, Perseverative Error (PE)%, Non Perseverative Error (NPE)%, Conceptual Level Response (CLR)%, Number of Categories Completed (NOCC), Trials to Complete First Category (FIRSTCAT) and Failure to Maintain Set (FTMS) is summarized in Table 2 along with a bar diagram. Data are represented in percentile and higher score indicates less pathology in most of the WCST variables. Shown in table-2 is the corresponding percentile ranks obtained by the two groups. The bar diagram (Figure1) reveals lower scores obtained by the SG on the dimensions of Error, PR, PE, NPE and CLR of WCST with respect to the CG who are at par with each other with respect to intellectual level. As percentile score was considered, high score indicates less dysfunction on the above mentioned variables.

**Table 2: Performance of the Study Group and Control Group on WCST**

Measures	SG Percentile rank	CG Percentile rank
Error %	47 <sup>th</sup>	73 <sup>rd</sup>
Perseverative Response (PR) %	50 <sup>th</sup>	68 <sup>th</sup>
Perseverative Error (PE) %	47 <sup>th</sup>	68 <sup>th</sup>
Non Perseverative Error (NPE) %	47 <sup>th</sup>	73 <sup>rd</sup>
Conceptual Level Response (CLR) %	45 <sup>th</sup>	58 <sup>th</sup>
Number of Categories Completed (NOCC)	>16 <sup>th</sup>	>16 <sup>th</sup>
Trials to Complete First Category	>16 <sup>th</sup>	>16 <sup>th</sup>
Failure to Maintain Set	>16 <sup>th</sup>	>16 <sup>th</sup>



**Table 3: Percentile data of performance of Study Group**

Domains of WCST	% of SG subject showing deficit performance as compared to their matched counterpart in CG
Error %	80%
Perseverative Response (PR) %	60%
Perseverative Error (PE) %	60%
Non Perseverative Error (NPE) %	70%
Conceptual Level Response (CLR) %	70%
Trials to Complete First Category	Equal status
Failure to Maintain Set	Equal status
Number of Categories Completed (NOCC)	Equal status

Percentage of SG cases who portrayed a deficit in the domains of WCST when compared one to one with their matched counterpart in CG is presented in Table 3. The Table-3 reveals that a greater percentage of the subjects in the study group (SG) showed poor performance on total error, PR, PE, NPE, CLR variables when the cases were compared one to one with their matched counterparts in the control group (CG). However, the subjects were at par with each other on the variables of NOCC, failure to maintain set along with number of trials taken to complete first category.

## DISCUSSION

Though the study does not show any significant statistical difference between the groups, but overall trend of a relative deficit in executive function in the study group requires clinical attention. In particular, the lower standard deviation in the SG compared to those of the CG also seems to have clinical significance, which implies that they have come from a more homogenous population than their normal counterparts. Since the performance on WCST requires a fluid shifting between sets utilizing the environmental feedback and making use of strategic planning in addition to organized searching, the relatively poor performance of the SG on WCST is in agreement with the reports of executive dysfunction amongst normal siblings of children with autism (Hughes et al, 1999). Observation of perseverative response along with a relatively poor category completion by the SG is indicative of their difficulty in set shifting, a measure of executive function. A relatively poor score of the SG on CLR that has the task demand of at least five consecutive unambiguous correct responses also suggest difficulty in grasping the concept. High perseverative responses in SG also corroborate with the report of a cognitive phenotype of the non-autistic relatives of autistic individuals being milder but qualitatively similar to the defining features of autism (Piven et al, 1997).

Since SPM provides a measure of 'g' (General Intelligence) and the SG being positioned above the 75<sup>th</sup> percentile on an

average, it is expected that their understanding of the basic principle of the category completion would be adequate. It is substantiated from the observation of their better achievement of the primary goal of completing the first category. However, after the completion of the first category the same task appeared to be difficult to the SG when the test also demanded shifting of set by utilizing feedback. This is attributable to their perseveration that resulted in poor executive function. Difficulty in set shifting reflects one's inability to deal with relevant and irrelevant variables efficiently and assimilate it with the ongoing problem solving strategy.

However, current study is not conclusive about whether broad autism phenotype is characterized primarily by impairments in planning and cognitive flexibility as also reported by Wong et al (2006) in one of the recent studies.

## CONCLUSION

The observation of qualitative deficit in executive function in high functioning autistic sib-ship confirms the prevailing concept of cognitive phenotype of executive dysfunction in this population. Although the SG showed a deficit in executive function consistently on all the parameters of WCST considered in the study, is clinically significant but its statistically insignificant difference from the CG in response pattern needs further exploration on a larger representative sample to discern the genetic link of executive dysfunction in autism.

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1. **Sreemoyee Tarafder**, M.Sc, M.Phil in Clinical Psychology student at Dept. of Psychology, (Corresponding author), Institute College of Science & Technology, 92 A.P.C. Road, Kolkata-700009, E-mail: sreemoyeetarafder@gmail.com
  2. **Pritha Mukhopadhyay**, M.Sc, Ph.D, Reader in Psychology at Dept. of Psychology, Institute College of Science and Technology, 92 A.P.C. Road, Kolkata- 700009
  3. **Prasanta Kumar Roy**, M.A., M.Phil. (Medical and Social Psychology), Clinical Psychologist at Dept. of Psychology, Institute College of Science and Technology, 92 A.P.C. Road, Kolkata- 700009
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## ADOLESCENT CHILDREN OF ALCOHOLICS: SELF ESTEEM AND ADJUSTMENT- IMPLICATIONS FOR THERAPY

Stanley Selwyn & Vanitha C.

### ABSTRACT

**Background:** There has been an increasing focus on children of alcoholics particularly in the West seeking to understand the impact of parental alcoholism on their psychosocial functioning. Indian literature from this perspective is scanty and there is a need for more comprehensive investigation particularly with adolescent children of alcoholics (COAs). **Objective:** This comparative study investigated the manifestation of self-esteem and adjustment in a group of fifty adolescent children of alcoholics (COAs) and a matched reference group of adolescent children of non-alcoholics (nCOAs). **Method:** The Self esteem Index (Mac Kinnon, 1981) and Adjustment Inventory (Srivatsa and Tiwari, 1972) were the instruments administered. An ex-post facto research design was used. Chi square, t-tests and Karl Pearson's correlation coefficients were computed using SPSS for analysis. **Results:** The data revealed lower self-esteem and poor adjustment in all domains studied, in the adolescent COAs than the controls. These deficits can be attributed to the increased stress and vitiated alcohol complicated domestic environment of the COAs. **Conclusion:** This study makes a strong case for psychosocial intervention with COAs who are otherwise neglected in conventional de-addiction programmes in India.

**KEY WORDS:** *Adolescent children, alcohol dependence, self-esteem, adjustment.*

### INTRODUCTION

There is a vast body of literature both in India and the West devoted to understanding the marital dynamics involved in alcoholism and ascertaining the deleterious impact that alcoholism could have on the personality and functioning of the spouse. Traits such as neuroticism, higher anxiety levels, depression, low self-esteem and communication apprehension have been reported in wives of alcoholics and attributed to the intense stress and trauma experienced by her in the vitiated domestic environment that she lives in (e.g., Stanley, 2001; Kutty & Sharma, 1988; Rao & Kuruvilla, 1991). Of late there has been an increasing focus on children of alcoholics seeking to understand the adverse impact of parental alcoholism on their growth and psychosocial functioning. Indian literature from this perspective is scanty and there is a need for more comprehensive investigation to explore the consequences of parental alcoholism particularly on adolescent children.

Adolescence has been globally accepted to be a period of turbulence and a significant developmental milestone. Parental alcoholism could further compound and create a not so conducive domestic environment significantly impacting the adjustment and personality of the adolescent

as he tries to come to grips with this tumultuous phase in his developmental career.

There is strong evidence to suggest that family dysfunction during childhood can negatively influence later life experiences and adjustment (Werner & Broida, 1991). Drinking behaviour may interrupt normal family tasks, cause conflict and demand adjustive and adaptive responses from family members who do not know how to appropriately respond. In brief, alcoholism creates a series of escalating crises in family structure and function, which may bring the family to a system crisis. As a result, the members may develop dysfunctional coping behaviours observes Ranganathan (2004). Marital conflict and a lack of coping mechanisms were more frequent in these families and children of alcoholic (COAs) fathers represent a group at risk for the early onset of psychiatric problems observe Furtado et al (2002).

Roosa et al (1990), report that COA status was related to higher levels of negative and lower levels of positive events. Hall & Webster (2002) found that adult COAs had more self-reported stress and more difficulty initiating the use of mediating factors in response to life events. More COAs than comparison offspring were experiencing serious problems in the areas of drinking, personality and psychopathology

(Casas-Gil & Navarro-Guzman, 2002) and Harter (2000), notes that adult COAs appear at increased risk for a variety of negative outcomes, including substance abuse, antisocial or under-controlled behaviors, depressive symptoms and anxiety disorders.

Sher et al (1991) found that COAs reported more alcohol and drug problems, had stronger alcohol expectancies, higher levels of behavioural under-control and neuroticism, and more psychiatric distress in relation to nCOAs. Bird & Canino (1991) also found that children of alcoholics when compared to those of non-alcoholics manifested higher levels of behavioural under control, more neuroticism and greater psychiatric distress. Hall et al (1994), report that adult COAs had lower life satisfaction scores and significantly lower levels of locus of control than nCOAs. Their academic performance is relatively poor (Miller & Krop, 1985) and Casas-Gil & Navarro-Guzman (2002) have identified five variables on which performance by children of alcoholic parents was poorer: intelligence, repeating a grade, low academic performance, skipping school days, and dropping out of school.

The dysfunctional family environment created due to the presence of parental alcoholism has been the focus of several investigations. A recent study by Kelley et al (2007) reveals that adult children of alcoholics reported more parentification, instrumental caregiving, emotional caregiving, and past unfairness in their families of origin as compared to children of alcoholics. Williams & Corrigan (1992) comment that growing up in a household with alcoholic parents is more likely to produce emotional disorders, increases the child's risk of health problems, physical abuse and neglect. The single most potent risk factor is their parent's substance-abusing behaviour and this can place children of substance abusers at biologic, psychological, and environmental risk (Johnson & Leff, 1999). Menees & Segrin (2000) observe that COAs are characterised as an at risk population because of the dysfunctional family environment that disrupts their psychosocial development. They often lack guidance and positive role modelling and live in an atmosphere of stress and family conflict. Obot & Anthony (2004) found evidence to favour the hypothesis that adolescent children living with an alcohol dependent parent have more delinquency problems than other adolescents. Mylant et al (2002) found that adolescent COAs scored significantly lower on all psychosocial factors of family/personal strengths and school bonding and significantly higher on all factors of at-risk temperament, feelings, thoughts, and behaviors than non-COAs and that they were at risk for depression, suicide, eating disorders, chemical dependency, and teen pregnancy.

Hart et al (2003) interpreted their results as providing partial and preliminary support for the contention that living in an alcoholic environment during childhood and adolescence plays a role in the manifestation of serious medical problems in adulthood. It is well established that children of problem drinkers have an increased risk of developing mental health problems, not only during childhood but also when they grow up into adolescents and adults observe Cuijpers et al (2006). Children of alcoholic fathers are at high risk for psychopathology and gender-related differences also seem to exist contend Furtado et al (2006). Depression and anxiety are recurring themes in the literature on COAs (e.g., Callan & Jackson, 1986; Williams & Corrigan, 1992; Steinhausen, 1995; Kelley, 1996; Deborah, 1997). However, Reich et al (1993), report that though children of alcoholics exhibit high rates of psychopathology and may be at risk specifically for oppositional and conduct disorders, they may be not so for depression. Behavioral problems in adolescence have been shown to be associated with the presence of a positive family history of alcoholism and negative parenting practices (Barnow et al, 2004). Jacob & Windle (2000) are of the view that risks for COAs might relate specifically to parental alcoholism and its impact on offspring development and not to the combined effects of various parental psychopathologies and/or extreme forms of family instability.

However, there is a contention within the alcoholism literature pertaining to children of alcoholics that holds that they manifest no significant differences in terms of psychopathology or other behavioural and personality deficits when compared to children of non-alcoholics. Segrin & Menees (1996), opine that children may exhibit undisturbed psychosocial functioning despite having an alcoholic parent and found no differences between adult children of alcoholic's and controls. Baker & Stephenson (1995), suggest that parental alcoholism does not necessarily result in personality differences in adult children. Morey (1999), found that COAs and nCOAs demonstrate no significant differences on measures of social support and shame while Reich et al (1993) report few differences between children of alcoholics and controls with respect to self-esteem and achievement tests. Harter (2000) observes that there is little empirical support for "adult COA syndromes" described in the clinical literature since the reported outcomes in them are neither uniformly observed nor are specific to them. He contends that co-morbid parental pathology, childhood abuse, family dysfunction, and other childhood stressors may contribute to or produce similar outcomes.

The brief review of the literature in the field reveals that while a lot of investigations have been carried out with adult children of alcoholics, those with a specific focus on adolescent children are not many. Further there is a dearth of exploration carried out on this issue in the Indian socio-cultural context. This investigation was carried out against this background primarily from the stress perspective associated with co-dependency, which hypothesizes that the heightened stress of living in an alcohol complicated family environment could have adverse consequences on the personality traits of adolescent children and manifest deficits in their psychosocial functioning.

### OBJECTIVES

- \* To study and compare the self-esteem and adjustment in adolescent children of alcoholics (COAs) and those of non-alcoholics (nCOAs).
- \* To bring out the association if any between socio-demographic factors and the subject dimensions studied.
- \* To study the relationship if any among the subject dimensions.
- \* To discuss implications for therapeutic intervention with adolescent COAs and their families in the light of the results obtained.

### MATERIAL & METHOD

#### Sample Selection Procedure

#### Study Group

The study group consisted of 50 respondents whose fathers were receiving de-addiction treatment at a private psychiatric hospital in Tiruchirappalli. Only adolescents between the age group of 13 and 18 years and who were residents of Tiruchy were included in the sample. Their father was registered for in-patient treatment after being diagnosed by the psychiatrist according to ICD-10 (WHO, 1992).

Children of relapsed or recovering alcoholics visiting the de-addiction center for follow-up services were excluded.

#### Reference Group

50 nCOAs were identified from the schools of the study group respondents through their teachers. A child was included in the reference group only if the father did not have a known

drinking habit and if the father scored less than seven (indicating non-alcoholic status) on the AUDIT (Alcohol Use Disorders Identification Test; Babor et al., 1983) and if the child had no known history of psychiatric illness. The two groups of respondents thus identified were comparable and matched on the following variables (Table I):

**Table-I : Age, birth order & family income of the respondents**

Group	nCOA(n=50) Mean±SD	COA(n=50) Mean±SD	t	p
Age	14.44±0.95	14.26±1.33	0.78	NS
Birth Order	1.74±0.85	1.94±0.84	1.18	NS
Monthly Family Income (Rs/month)	5508.00±2518.57	5368.00±2022.87	0.306	NS

NS=non-significant

The choice of same school respondents as the COAs also ensured a near homogenous socio-economic profile for both groups. Their socio-demographic profile is presented in Table -II and the chi-square values indicate that the difference between the two groups is not significant and that they are also comparable on the variables tabulated.

**Table-II: Socio demographic background of respondents**

Dimension	nCOA n(%)	COA n(%)	$\chi^2$	df	p
<b>Sex</b>					
Male	23(46)	20(40)	0.367	1	NS
Female	27(54)	30(60)			
<b>Domicile</b>					
Urban	9(18)	17(34)	3.407	2	NS
Rural	20(40)	15(30)			
Semi-urban	21(42)	18(36)			
<b>Type of Family</b>					
Nuclear	41(82)	34(68)	2.613	1	NS
Joint	9(18)	16(32)			
<b>Fathers Occupation</b>					
Govt employee	15(30)	13(26)	1.810	3	NS
Private	12(24)	18(36)			
Business	16(32)	14(28)			
Self employed	7(14)	5(10)			
<b>Medium Of Instruction</b>					
English	29(58)	20(40)	3.241	1	NS
Tamil	21(42)	30(60)			

NS=Non-significant

### RESEARCH DESIGN

This is a comparative study based on the presumption that the effect if any, of living with an alcoholic (study group) or non-alcoholic (reference group) father would have already manifested itself on both groups of respondents. The groups

being matched on key socio-demographic variables, the study is only an attempt to determine and compare the levels of self-esteem, and adjustment manifested in these children at the point of data collection. This quasi-experimental study thus uses an ex-post facto research design.

### TOOLS FOR DATA COLLECTION

1. **Self Esteem Indx** (SEI, Mac Kinnon, 1981) assesses an individual's perception of himself – his potential, worth and competence. It is a twenty-five item five point scale with responses ranging from “strongly agree” to “strongly disagree” and has been widely used for research in India in a variety of settings.
2. **Adjustment Inventory** (Srivatsa & Tiwari, 1972) Adjustment inventory is an 80 item, two point scale with yes or no responses and measures four dimensions of adjustment namely:  
  
Home adjustment, Educational adjustment, Emotional and Social adjustment.
3. **Self Prepared Interview Schedule** to elicit information pertaining to socio-demographic background and father's drinking.

### RESULTS

#### Perception of Father's Drinking

Forty per cent of the COAs reported daily drinking by their father while forty two per cent said it was on alternate days, the remaining were not sure of the frequency of drinking.

Regarding the duration of drinking, forty per cent said it was up to three years with the remaining respondents mentioning that it was between three and ten years.

With regard to the behaviour of the father when intoxicated, fifty four per cent said that he became more silent than usual, twenty six per cent said that he became boisterous and shouted at others while the remaining twenty per cent expressed that he scolds and beats up the family members.

#### Self Esteem

Data presented in Table No. III show that the two groups of respondents manifest a high statistically significant difference on the scores of this dimension with the children of alcoholics obtaining a lower mean score indicative of poorer self esteem than children of the reference group.

Further it was seen in this study that the self-esteem scores did not show any significant correlations with the age of the child ( $r = 0.15, p > 0.05$ ) or his birth order ( $r = 0.15, p > 0.05$ ). However a negative correlation was obtained between the self-esteem scores and the number of siblings of the respondent child ( $r = - 0.30, p < 0.01$ ).

**Table-III: Mean score profile of respondents on subject dimensions**

Dimensions	nCOA(n=50) Mean±SD	COA(n=50) Mean±SD	t (df=98)	p
<b>Self-esteem</b>	81.10±6.60	97.26±7.53	11.41	<0.01
<b>Overall Adjust.</b>	119.88±8.66	138.28±6.21	12.21	<0.01
<b>Home Adjust.</b>	29.36±3.38	35.26±2.24	10.29	<0.01
<b>Education</b>	17.36±1.66	19.66±2.83	4.95	<0.01
<b>Emotional Adjust.</b>	32.08±2.33	36.08±2.74	7.85	<0.01
<b>Social Adjust.</b>	40.94±4.07	47.38±3.29	8.70	<0.01

#### Adjustment Profile

The data in table III reveals that COAs have obtained lower mean scores on overall adjustment as well as all its component sub-dimensions (Home Education, Emotional and Social adjustment) than the respondents of the reference group and that the difference between them is statistically significant.

#### Self Esteem and Adjustment

The self-esteem scores showed a highly significant positive correlation with the overall adjustment score ( $r = 0.68, p < 0.01$ ) and also with all its component sub-dimensions namely, home adjustment ( $r = 0.65, p < 0.01$ ), education ( $r = 0.42, p < 0.01$ ) as well as emotional ( $r = 0.59, p < 0.001$ ) and social adjustment ( $r = 0.52, p < 0.01$ ). It is significant to observe that all the correlations are positive in nature. Though a cause-effect relationship cannot be read into this finding, each dimension studied can be expected to directly influence the other.

### DISCUSSION

The low self-esteem scores obtained by the study group respondents according to Mac Kinnon (1981), indicates feelings of unhappiness with oneself and feelings of not being competent. It reflects a sense of alienation and feelings of meaninglessness and failure.

Cole et al (1980), observe that emotional maturity manifests in high self-esteem and enhances one's interpersonal ability.

Thus the low self-esteem seen in COAs is indicative of poor emotional maturity and may diminish their interpersonal competence. This perhaps is reflected in the poor adjustment scores obtained by the COAs across several domains seen in this study.

The findings of this study do not agree with that of Churchill et al (1990), who found no significant relationship between parental alcoholism and self-esteem of their children. In contrast, the results are congruent with that of Morey (1999) who reports that self-esteem ratings for COAs were significantly lower in comparison to ratings for nCOAs. Domenico & Windle (1993) also observe that ACOAs reported higher levels of depression and lower levels of self-esteem. In a recent study Hussong & Chassin (2004), found that children of alcoholics showed a statistically significant difference in their emotional and behavioural aspects such as shyness, insecurity and low self-esteem. Williams & Corrigan (1992) observe that growing up in a household with alcoholic parents is likely to produce low self-esteem and Harter (2000) has also reported low self-esteem in ACOAs. Drucker & Greco-Vigorito (2002) observe that five separate factors related to Negative Self-concept, Acting-out, Somatic/ Disturbed Symptoms, Mood, and Hopelessness and that depressive symptoms displayed by children of substance abusers are related to self-concept and externalization.

The finding of poor adjustment across all domains studied in COAs is consistent with the literature on this issue. Harter (2000) reports that COAs faced difficulties in family relationships, and experienced generalized distress and maladjustment. Hall & Webster (2002) found that ACOA had more symptoms of personal dysfunction than the control group while Casas-Gil & Navarro-Guzman (2002) report that more COAs than comparison offspring were experiencing serious problems in the areas of educational and social functioning. Sher et al (1991) observe that COAs also evidenced lower academic achievement and less verbal ability than nCOAs. Lower quality of life scores in children of alcoholics has been reported in another study by Oravecz (2002).

Haugland (2003) also reports that children of alcohol abusing fathers were found to have more adjustment problems compared to a general population sample. His findings further suggested that child adjustment in families with paternal alcohol abuse is the result of an accumulation of risk factors rather than the effects of the paternal alcohol abuse alone. Both general environmental risk factors (psychological problems in the fathers, family climate, family health and conflicts) and environmental factors related to the parental

alcohol abuse (severity of the alcohol abuse, the child's level of exposure to the alcohol abuse, changes in routines and rituals due to drinking) were related to child adjustment. Adult children of alcoholics have reported more parentification, instrumental caregiving, emotional caregiving, and past unfairness in their families of origin as determined by Kelly et al (2006). Thus the alcohol complicated domestic environment of the COAs could account for the deficits in self-esteem and adjustment seen in them in this study and these findings are in consonance with the bulk of the western literature on these issues.

### Implications for Therapeutic Intervention

The findings of this study have definite implications for intervention in de-addiction settings. It highlights the fact that any effective de-addiction programme must acknowledge the 'need' of adolescent children to overcome and deal with various deficits in their psychosocial functioning. The involvement of children in most de-addiction programmes in India is often peripheral if not totally non-existent. De-addiction counsellors tend to concentrate more on the alcoholic in enabling him overcome his psychological problems and in preparing him to lead a life without alcohol. While the spouse is frequently involved for marital therapy, conflict resolution and antabuse compliance, the therapeutic needs of children trapped in such families are most often ignored.

It is therefore important that the therapeutic needs of these children are addressed through individual psychotherapy and other supportive therapies by providing an opportunity for ventilation of feelings and integrating elements that will boost their self-esteem and promote their psychosocial adjustment in deficient areas. Normal difficulties and dilemmas associated with adolescence in general could be worked through in these sessions besides focusing on issues pertaining to parental alcoholism. A study from Korea reports that stress management program helps children of alcoholics by enhancing self-esteem, providing information about alcohol, and improving emotional and problem focused coping abilities, eventually enhancing their mental health (Yang & Lee, 2005). Hence stress management techniques and relaxation modalities could be an important component of working with COAs.

There is evidence to indicate that children show a considerable improvement on various domains when their alcoholic fathers undergo treatment. Andreas et al (2006) have found that before their fathers' treatment, COAs exhibited greater overall and clinical-level symptomatology than children

from a demographically matched comparison sample, but they improved significantly following their fathers' treatment. An effective package to overcome alcoholism should go beyond routine pharmacotherapy and individual psychotherapy for patients. A wholistic intervention package must involve other therapeutic adjuncts such as family therapy, couples therapy for not only the spouse but also the COAs. O'Farrell & Fals-Stewart (2002) have advocated Behavioural Couples Therapy (BCT) since it has been found to reduce social costs and domestic violence and showed indirect benefits for the couple's children, and so BCT ought to be expanded to include family members other than spouses, particularly the COAs. O'Farrell & Feehan (1999) note that BCT with alcoholics and remission after individual alcoholism treatment have been associated with improved family functioning in a variety of domains, including reduced family stressors; improved marital adjustment; reduced domestic violence and verbal conflict; reduced risk of separation and divorce; improvement in important family processes related to cohesion, conflict and caring; and reduced emotional distress in spouses. These family factors have been linked with child mental health and psychosocial functioning in more general child developmental and psychopathology studies. Gains for COAs will hence accrue if they are involved in family therapy sessions. This will facilitate opening up of communication channels and resolution of conflicts within the family and thereby enhance the domestic and emotional adjustment of the children. Ranganathan, (2004), observes that it is imperative to involve family members in treatment and that family therapy ought to be specific, with attainable therapeutic goals.

Children of alcoholic fathers represent a group at risk and are deserving of more attention in prevention and early intervention (Furtado et al, 2002). Erlich et al (2001) contend that since COAs themselves are at particularly high risk for developing drinking problems, early intervention efforts among COAs need to be initiated. Some of the guidelines that they stress include emphasising the negative consequences of alcohol, developing in youth an increased sense of responsibility for their own success, helping them to identify their talents, motivating them to dedicate their lives to helping society rather than feeling their only purpose in life is to be consumers, providing realistic appraisals and feedback for youth rather than graciously building up their self-esteem, stressing multicultural competence in an ever-shrinking world, encouraging and valuing education and skills training, increasing cooperative solutions to problems rather than competitive or aggressive solutions, and increasing a sense

of responsibility for others and caring for others (Kumpfer & Hopkins, 1993). An affectionate father-child bond has a protective effect observe Brook et al (2003) and so an important focus during the course of family therapy is to strengthen the intimacy between the parent and child, particularly with the alcoholic father since it is likely that these bonds are already exacerbated due to the so called "generation gap". It is also necessary to confront parents with the effects of their behavior (intervention, therapy) to develop their possibilities to renovate their parenting functions, which is necessary for effective prevention observes Wojcieszek (2003).

Nespor (2004) holds that prevention at the family level includes appropriate family monitoring and rules, moderate and consistent family discipline and family conflict resolution. Kumpfer et al (2003), hold that since "substance abuse" is a "family disease" of lifestyle, effective family strengthening prevention programs should be included in all comprehensive substance abuse prevention activities. They advocate dissemination of five highly effective family strengthening approaches (e.g., behavioral parent training, family skills training, in-home family support, brief family therapy, and family education).

Currently, many COAs remain unidentified within schools and may not be receiving the counselling services that they deserve and require. The family dysfunctionality of such children places them at high risk for adverse academic, physiological, emotional, and social consequences observe Lambie & Sias (2005). It then becomes an important task for the school counsellor to identify such children in distress and to provide them with supportive services besides intervention with families to the extent possible. Knowledge of fathers' alcohol use and its time of onset may be used to determine children who are at added risk of problematic alcohol use later in life and so special guidance, support and treatment can be targeted to these families observe Seljamo et al (2006). In the Indian scenario where the majority of schools do not have a professional counsellor, this important task needs to be addressed by teachers who are in a position to identify such children.

While groups such as 'Alateen' function for COAs in the West, such therapeutic self help groups for COAs in the Indian setting are woefully lacking and must be initiated. The common intervention foci for such groups should according to Emshoff & Anyan (1991) include information on alcohol and alcoholism, the dynamics of alcoholic families, common social and emotional reactions (e.g., embarrassment, loneliness, guilt,

depression, anger), skill building (e.g., problem solving, communication, expression of feelings), coping strategies for living in an alcoholic home, and general social and emotional support. Kuhns (1997) observes that both group psychotherapy and self-help groups for COAs were effective in decreasing levels of depression while Kingree & Thompson (2000) found that participation in the mutual help group promoted perceived status benefits, which in turn led to reductions in depression and substance use. The need to strengthen the social support available to such children has been highlighted by Werner & Johnson (2004) who's data showed that individuals who coped effectively with the trauma of growing up in an alcoholic family and who became competent adults relied on a significantly larger number of sources of support in their childhood and youth than did the offspring of alcoholics with coping problems.

Intervention with COAs must hence involve resolution of individualised issues pertaining to adolescence as well as parental alcoholism. Elements to enhance their self esteem and adjustment across various domains need to be consciously included besides involving them in family therapy sessions. Strengthening their social support systems, fortifying familial bonds besides facilitating their participation in self help groups comprising of other COAs, could go a long way in enhancing their mental health. These efforts must be concurrently initiated along with other therapeutic procedures that focus on the alcoholic per se.

## CONCLUSION

This study has revealed that the majority of COAs manifest lower levels of self-esteem and a lesser degree of adjustment than nCOAs. The two groups of respondents were matched on key socio-demographic variables and the alcoholism of the father of the study group subjects was a major differentiating factor between the two. The author against this background is inclined to concur with the proponents of the stress perspective on co-dependents of alcoholics as the data of this study indicates that the stressful and vitiated domestic environment prevalent in alcohol complicated familial relationships is responsible for the low self-esteem and deficient adjustment seen in adolescent children of alcoholics. There is hence an imperative need for therapeutic intervention with this population. The need of the hour is to develop programmes for COAs with a strong focus on strengthening resilience in them and to inculcate desirable personality traits and enhance their psychosocial functioning through appropriate psychotherapeutic procedures. This study

underscores the point that co-dependent adolescent children of alcoholics also merit therapeutic intervention owing to the various deficits in psychosocial functioning manifested in them.

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1. **Dr. Stanley Selwyn**, Ph.D., (Corresponding Author), Reader & Head, Department of Social Work, Bishop Heber College, Tiruchirappalli-620 017, E-mail: selwynstanley@yahoo.com
  2. **Ms. Vanitha C.**, M.S.W., Psychiatric Social Worker, De-addiction Cente, NIMHANS, Bangalore: 560 029.
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## SOCIODEMOGRAPHIC FACTORS IN DELUSIONS

Rudraprosad Chakraborty<sup>1</sup>, Arunima Chatterjee<sup>2</sup>, Col. Suprakash Choudhary<sup>3</sup>

### ABSTRACT

**Background:** Role of sociodemographic factors in origin of delusion is unclear. Available research literature is inconclusive in this regard. The study examines whether different sociodemographic factors have any relation with the contents and dimensions of delusions in a group of psychotic patients. **Method:** Thirty-five drug-naïve patients with a first psychotic episode were enrolled after taking informed consent. All had at least one prominent delusion in their psychopathology. Different dimensions of delusions present in participants were examined by Scale for Assessment of Dimensions of Delusions. Sociodemographic and other clinical variables were recorded by a semi-structured proforma. **Results:** Persecutory delusion was more common in urban people and grandiose delusion was more common in rural people. Education was negatively correlated with bizarreness dimension of delusions. Persecutory delusion was the commonest delusion reported as a whole. **Conclusion:** Education and habitat may have significant role in modifying content and dimensions of delusions in psychotic disorders.

**Key words:** sociodemographic, delusion, dimensions of delusions

### INTRODUCTION:

Exact role of sociodemographic factors in origin of delusion is still unknown. Schneider (1962) postulated delusions to be direct expression of a specific cognitive dysfunction and hence sociodemographic factors had a little role. However, the 'structural- dynamic- incoherence' theory of Janzarik (1988) contradicts the view of Schneider (1962) to some extent. According to Janzarik (1988), delusions represent a faulty interaction between affectivity, drive and psychic structure. The first two components- affectivity and drive are the dynamic part of a person while psychic structure consisting of inborn recognition patterns & acquired representation depends on sociodemographic background. Structural- dynamic incoherence leads to dynamic derailment resulting in distorted reality testing. This distorted reality testing gives rise to delusions (Janzarik, 1988).

Some researchers suggest a unitary mechanism for origin of delusions. According to this hypothesis, the core feature of delusion in all psychosis is same (Nuechterlein, 1987). Whether it will be an affective or non-affective psychosis depends on the 'temperamental and structural variants' (Gutierrez-Lobos et al, 2001). If this hypothesis is true, then a pure cognitive origin of delusions may be debatable (Gutierrez-Lobos et al, 2001). Rather the role of sociodemographic

factors assumes importance. Interestingly Sims et al (2002) claimed that delusional content is determined by sociocultural background.

In a transcultural study of schizophrenic delusions among Koreans, Korean-Chinese and Chinese, many delusions were shown to be different among the three groups in their frequency and content and the differences could be explained by sociocultural and political factors (Kim et al, 1993). Gutierrez-Lobos et al (2001) found significant correlation of delusional content with gender. Delusional female patients had a significant predomination of delusions of persecution, while men presented significantly more frequently delusions of jealousy and grandiosity at first admission. Rudden et al (1983) found females having more erotic and heterosexual delusions while males had delusions with homosexual content. Unfortunately we do not know whether these findings hold good in Indian context also because as a whole, epidemiological data examining sociodemographic variables modifying delusion is sparse (Gutierrez-Lobos et al, 2001).

Hence, we felt the need of such a study examining the role of sociodemographic variables in delusional content and dimension in a group of drug naïve first episode psychosis patients.

So we took up the study with the specific aim of examining whether different sociodemographic variables have any relation with the contents and dimensions of delusions in a group of psychotic patients.

## METHOD

This study was done in Ranchi Institute of Neuro Psychiatry & Allied Sciences (RINPAS), Ranchi. Consecutive patients in the age group of 18-50 years attending the out patient department (O.P.D.) suffering from the first psychotic episode were approached for inclusion of the study. All of them were drug-naïve and had at least one prominent delusion in psychopathology. Senior residents/ consultants in charge of respective O.P.D. days who were blind to the purpose of the study made the diagnosis.

None of the patients had any comorbid organicity, personality disorder, substance use or mental retardation. They were explained about the purpose and the method of the study and were asked for informed consent.

Thirty-five such persons were selected for the study after they gave informed consent.

We administered Scale for Assessment of Dimensions of Delusions (Kendler et al, 1983) on each patient to examine the different dimensions of delusions. We conducted a semi-structured interview in Hindi and on the basis of that the rating was done. After that a sociodemographic data sheet developed by us was used to record sociodemographic variables. Sociodemographic variables were recorded after the rating of delusional dimensions to avoid any observer bias. A review board of the institute consisting all the faculty members of psychiatry passed the protocol of the study.

**Statistical analysis:** Spearman's  $r$  correlation was applied to examine any correlation between different dimensions of delusions and continuous sociodemographic variables. In case of discrete variables we applied chi-square test. SPSS-10.0 was used in statistical analysis.

## RESULTS

Sample characteristics: Mean age of the sample population was 29.59 ( $\pm 8.62$ ) years. Majority of the participants were male ( $n=24$ ; 68.6%), married ( $n=28$ ; 80%) and rural residents ( $n=27$ ; 77.1%). Hindus formed the religious majority ( $n=28$ ; 80%). Most patients suffered from affective disorders ( $n=16$ ; 45.7%) followed by schizophrenia ( $n = 12$ ; 34.3%), delusional disorder

( $n= 5$ ; 14.3%) and unspecified non-organic psychosis ( $n=2$  ; 5.71%).

**Table 1: Sociodemographic and clinical characteristics of the sample**

Variable		Frequency (%)
Sex	Male	24(68.6)
	Female	11(31.4)
Occupation	Full time paid	02(06.1)
	Part time paid	05(15.2)
	Household duties	10(30.3)
	Unemployed	05(15.2)
	Student	02(06.1)
	Farmer	07(13.2)
Marital status	Self-employed	04(09.1)
	Married	28(80.0)
	Unmarried	07(20.0)
Residence	Rural	27(77.1)
	Urban	08(22.9)
Religion	Hindu	28(80.0)
	Muslim	05(14.3)
	Christian	02(05.7)
Delusions	Persecutory	23(39.0)
	Grandiose	14(24.6)
	Bizarre	03(05.3)
	Infidelity	06(08.8)
	Reference	07(12.3)
	Others	05(08.8)
Diagnosis	Affective disorder	16(45.7)
	Schizophrenia	12(34.3)
	Delusional disorder	05(14.3)
	Psychosis NOS	02(05.7)

Persecutory delusion was commonest in occurrence (no. of persons having persecutory delusions= $23$ ; 38.59%)(Table I). Chi-square test revealed a significant difference in rural and urban population in delusional subtypes ( $\chi^2= 10.306$ ;  $p= .03$ ). Persecutory delusion was more common in urban population (57.1% vs. 42.3%) while grandiose delusion was more common in rural population (42.3% vs. 14.3%). Grandiose delusions were as common as persecutory delusions in rural people (42.3% vs. 42.3%).

Spearman's correlation analysis showed significant negative correlation between education in years and bizarreness of delusion ( $r=-.35$ ;  $p=.03$ ) ( $r$ =Spearman rho). However, education was not correlated with delusional conviction ( $r=.21$ ;  $p=.22$ ), extension ( $r=.09$ ;  $p=.60$ ), systematization ( $r=.21$ ;  $p=.23$ ) and delusional pressure ( $r=.08$ ;  $p=.62$ ).

We also did not find any correlation of age with any of the delusional dimension (conviction:  $r=.26$ ;  $p=.13$ , extension:  $r=.05$ ;  $p=.77$ , systematization:  $r=.02$ ;  $p=.88$ , bizarreness:  $r=.06$ ;  $p=.70$  and delusional pressure:  $r=.02$ ;  $p=.88$ ). There

were no differences in any of the delusional dimensions across sex ( $\chi^2=2.684$ ;  $p=.61$ ) or occupation ( $\chi^2=25.282$ ;  $p=.39$ ).

There were no differences in frequencies in different types of delusions across religion ( $\chi^2=9.536$ ;  $p=.65$ ) or occupational affiliation ( $\chi^2=11.328$ ;  $p=.18$ ). Religion did not have any differential effect on delusion conviction ( $\chi^2=2.898$ ;  $p=.40$ ), extension ( $\chi^2=4.906$ ;  $p=.17$ ), systematization ( $\chi^2=2.189$ ;  $p=.53$ ), bizarreness ( $\chi^2=1.218$ ;  $p=.74$ ) or delusional pressure ( $\chi^2=1.472$ ;  $p=.68$ ). Similarly different occupational status did not have any difference between delusion conviction ( $\chi^2=.779$ ;  $p=.67$ ), extension ( $\chi^2=1.664$ ;  $p=.43$ ), systematization ( $\chi^2=3.388$ ;  $p=.18$ ), bizarreness ( $\chi^2=4.032$ ;  $p=.13$ ) or delusional pressure ( $\chi^2=1.911$ ;  $p=.38$ ).

## DISCUSSION

The present study indicated some interesting relationship of delusional contents and dimensions with some of the sociodemographic variables examined. Persecutory delusion was found to be the commonest delusion, which is supported by research literature (Gutierrez-Lobos et al, 2001). Persecutory delusion was more common in urban people while grandiose delusion was commoner in rural people. Prevalence of grandiose delusion was same as the prevalence of persecutory delusion in rural people. The importance of this finding is unclear. There is evidence of an environmental risk factor associated with urbanicity for psychotic symptoms irrespective of psychiatric diagnosis (van Os et al, 2002). It will be interesting to know if this risk factor is more for particular psychotic symptoms. Similarly more grandiose delusions in rural people may be indicative of a wish fulfillment of unfulfilled dreams of rural life. These possibilities, if true, may have interesting implications for social psychiatry research. However the hypotheses need confirmation in a larger sample size.

Persons with higher education had less bizarre delusion. This may be due to their better knowledge of possible and impossible happenings. This is another interesting hypothesis for future social psychiatry research.

We did not find any other sociodemographic variable to be associated with the contents or the dimensions of delusions. However the possibility of a type 2 error cannot be ruled out, as sample size was small. Because of small sample size results also need to be generalized with caution.

## CONCLUSION

This study indicates that some sociodemographic variables may modify the content and dimension of the delusion in psychotic illnesses. Hence the origin of delusion appears to have a biopsychosocial basis as proposed by Freeman et al (2002) rather than a pure biological one. This study raises some interesting possibilities, which needs future research efforts.

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1. **Dr. Rudraprosad Chakraborty**, M.D., D.P.M., (Corresponding author), Senior Resident, RINPAS, Ranchi, Jharkhand -834006, Email: [rudrapc@yahoo.com](mailto:rudrapc@yahoo.com)
2. **Dr. Arunima Chatterjee**, D.P.M., Junior Resident, CIP, Ranchi, Jharkhand -834006.
3. **Dr. Col. Suprakash Choudhary** (Retd.),M.D., HOD Psychiatry, RINPAS, Ranchi, Jharkhand -834006.

## TRAIT ANGER IN SUBSTANCE DEPENDENCE: DOES IT INFLUENCE IMPULSIVE BEHAVIOR?

Prasanta Kumar Roy<sup>1</sup>, D. Ram<sup>2</sup>, Atreyee Chandra<sup>3</sup>

### ABSTRACT

**Background :** It has been proposed that measures of anger are one of the strongest predictors of substance use; on the other hand, substance has long been viewed as a releaser or stimulator of aggressive actions or impulsive behaviour. Results are inconsistent. Along with that, there are few studies that identify the various dimensions of anger as an emotional marker to substance dependence. Thus, the aim of the present study was to investigate the dimensions of anger in patient with substance dependence and its relation to impulsivity. **Method:** The subjects included 30 male substance dependents (ICD-10-DCR) and 30 male non-psychiatric controls. Dimensions of anger were assessed using State Trait Anger Expression Inventory (STAXI) and impulsivity by Barratt Impulsiveness Scale. **Results:** Substance dependence was found to be associated with various dimensions of anger and impulsivity was significantly related to anger dimensions. **Conclusions:** This study proves the hypothesis of anger as a precursor of aggressive and impulsive behavior in substance dependence.

**Key Words:** *Substance dependence, anger, impulsivity*

### INTRODUCTION

Alcohol and drug use is rising in some of the developing regions of the world (WHO, 1999) and this is likely to escalate substance related problems. Substance abuse is the third largest health care problem in India today (Murthy & Bharathi, 1995).

In the literature, two dimensions of temperament have been linked to greater liability for substance abuse. One is physical activity level, i.e., the tendency to be physically active; while the second one being negative emotionality, i.e., the tendency to be easily frustrated, irritated, and angered (Wills, 1998). In continuation, it has been also proposed that measures of anger are one of the strongest predictors of substance use in adolescence, and the temperament dimension of negative emotionality appears to be a precursor of this attribute. Irritability and anger are quite stable in the childhood and adolescence and these constructs have been shown to predict substance abuse liability over long time periods (Hawkins et al, 1992). Reviews of longitudinal studies (West & Prinz, 1987; Lewis et al, 1986) have indicated that aggression is an important precursor in the development of alcoholism.

On the other side, alcohol has long been viewed as a releaser or stimulator of aggressive actions. Some authors (Gerson & Preston, 1979; Mayfield, 1976) find substance dependents over-represented in statistics on violent behaviour, whilst others have suggested that many individuals (whether alcoholic or not) had consumed alcohol shortly before committing acts of violence. In addition, people who commit violent crimes are often found under the influence of alcohol at the time they commit crime (Gerson & Preston, 1979; Mayfield, 1976).

However, the results are fairly inconsistent. Several authors favor the hypothesis that alcohol generates aggressive tendencies (Virkkunen, 1974; Boyatzis, 1975; Evans, 1986) whilst others support the 'disinhibition theory' (McGeorge, 1963), which involves that man has latent aggressive tendencies which are generally kept in check by higher neural centers or the super-ego. Alcohol is said to impair the inhibitions, allowing the aggression to appear (Evans, 1986).

So there appears to be two different kinds of link between substance and aggression or anger. Such inconsistent results have frequently been attributed to common methodological problems.

Using personality inventories that measure anger as dispositional factor may overcome the cause and effect confusions. Along with that, if the types of anger can be identified that predispose substance related problems, then the dynamic behind such problem, the emotional marker, can be easily understood and can be included in treatment for better outcome.

On the other hand, impulsive behaviour may be reflected through aggressive behaviour or it itself may contribute to substance dependence as impulsiveness is the failure to evaluate a situation as risky, acting without thinking, inability to plan ahead (Helmers, 2000). Impulsiveness is a more or less chronic tendency to act on impulse or without reflecting upon the consequences of action (Atkinson et al, 1987). Gray et al (1983) proposed that impulsive individuals are insensitive to stimuli associated with punishment, may display an excessive sensitivity to stimuli associated with reward, and display a deficit in passive avoidance learning.

Thus, the current study aims at to identify various dimensions of trait anger in substance dependence and if it influences the impulsive behaviour.

## MATERIALS AND METHODS

The study was a hospital based study and was conducted at the in-patient department of De-addiction Center of Central Institute of Psychiatry (CIP), Kanke, Ranchi. The subjects were recruited by purposive sampling technique.

### Sample

30 male between 18 to 60 years of age diagnosed as Substance Dependence Disorder according to DCR of ICD-10 (WHO, 1993) constituted the patient group. Out of 30, 20 were diagnosed as Alcohol Dependence Disorder and 10 as Opioid Dependence Disorder. Exclusion criteria included present or past history of any psychotic disorder, chronic physical illness, organic brain disease and mental retardation. Only those patients were included who had no longer withdrawal features, with a minimum of 2 weeks following the detoxification programme.

The healthy control group consisted of 30 male healthy volunteers matched in age and education. Exclusion Criteria were same as that of study group along with history of substance dependence, family history of substance dependence, or psychiatric illness, and who scored above

the cut off on screening tools.

### Tools

1. *Socio-Demographic And Clinical Data Sheet*: Semi structured proforma, which includes various socio-demographic and clinical variables.
2. *General Health Questionnaire-5 (GHQ-5)*: It was developed by Shamsunder et al in 1986, which is a self-report instrumental questionnaire to screen psychiatric morbidity in the normal subject. GHQ-5 is the shortest version of the general health questionnaire. A score of 0 is considered as the cut off.
3. *Brief-Michigan Alcoholism Screening Test (BMAST)* (Gibbs, 1983): BMAST is a 10-item subtest of the original 25-item MAST (Michigan Alcoholism Screening Test). MAST was developed by Selzer in 1971 to detect alcohol-abusing person. A score of 5 or more is taken as diagnosis of alcohol misuse.
4. *Drug Abuse Screening Test (DAST)* (Skinner, 1982): The 28-item self-report drug abuse screening test was developed by Skinner in 1982. DAST provides a total score based on information about the negative psychological, social, job, medical and legal effects of drug use. Cut off score 8 led to correctly identifying more than 90% of substance abusers.
5. *State-Trait Anger Expression Inventory (STAXI)* (Spielberger, 1988): STAXI is a self-reporting inventory. Responses are coded in a four-point scale. It provides concise measures of the experience and expression of anger. It was developed for two primary reasons: a) to provide a method of assessing components of anger that could be used for detailed evaluations of normal and abnormal personality, and b) to provide a means of measuring the contributions of various components of anger to the development of medical conditions. STAXI consists of 44 items that form six scales and two subscales. Scales are state anger, trait anger, anger-in, anger-out, anger-control and anger-expression. Two subscales are part of trait anger; angry temperament and angry reaction. This is most widely used anger scale. On trait anger score <17 is considered as low, >24 as high, and in between moderate trait anger (Parrott & Zichner, 2002).
6. *Barratt Impulsiveness Scale (BIT)* (Patton et al, 1995): This is a 30 item self-report measure of characteristic impulsiveness of individuals. Respondents rate each

of the items on a 1-4 point scale of frequency. Studies have found a strong association between scale score and other measures of impulsivity.

### Procedure

Patients were interviewed after the end of two weeks of detoxification programme, and after getting informed consent for the study, socio-demographic and clinical data sheet was filled up. Thereafter, STAXI and BIT were administered. For normal controls GHQ-5, BMAST, DAST were used as a screening tool and STAXI & BIT were administered after filling up the demographic data sheet.

### RESULTS

Both the patient and control group were matched in age, education, marital status, occupation, and family income. Mean age of patient group was  $35.87 \pm 9.81$  years, and for control group  $38.10 \pm 11.25$  years.

Table-1 shows significant difference between substance dependent patients and normal controls on state anger, trait anger, angry temperament, angry reaction, anger-in, anger-out, and anger expression. On all the dimensions of anger, patient group scored high than the controls. Impulsiveness also was found to be significantly high in patient group.

**Table-1: Comparison between substance dependent patients and normal control subjects on anger dimensions and impulsiveness**

Variables	Substance (N=30) MEAN±SD	Control (N=30) MEAN±SD	t (df=58)	p
State anger	10.53±00.78	10.03±00.18	3.44	<0.001
Trait anger	22.73±06.95	18.97±03.91	2.59	<0.05
Angry temperament	08.83±03.34	07.03±01.97	2.54	<0.05
Angry reaction	10.60±03.49	08.87±02.50	2.21	<0.05
Anger-in	18.87±04.17	16.67±03.42	2.23	<0.05
Anger-out	20.67±06.14	17.37±04.54	2.37	<0.05
Anger-control	22.87±07.42	25.40±03.93	1.65	>0.10
Anger- expression	32.37±12.80	24.63±07.63	2.84	<0.01
Impulsiveness	62.27±12.78	53.07±10.69	3.03	<0.01

**Table-2: Comparison between substance dependent patients (N=30) and normal control subjects (N=30) on level of trait anger**

Levels of Trait Anger	Group		X <sup>2</sup>	df	p
	Substance n(%)	Control n(%)			
Low	07(23.3%)	06(20.0%)	13.91	2	<0.001
Moderate	08(26.7%)	21(70.0%)			
High	15(50.0%)	03(10.0%)			

Table-2 shows that patient group and control group differed significantly on level of trait anger. Patient group consisted of high trait anger (50%), where as control group had more individuals with moderate trait anger (70%).

**Table-3 : Comparisons of the alcohol (N=20) and opioid (N=10) dependent groups on anger dimensions and impulsiveness**

Variables	Substance Group		t (df=28)	P
	Alcohol Mean±SD	Opioid Mean±SD		
State anger	10.35±00.59	10.90±0.99	1.91	<0.066
Trait anger	19.85±06.52	28.50±3.27	3.93	<0.001
Angry temperament	07.75±03.24	11.00±2.45	2.79	<0.01
Angry reaction	09.10±03.18	13.60±1.71	4.16	<0.001
Anger-in	19.00±04.48	18.60±3.69	0.24	>0.810
Anger-out	18.55±06.19	24.90±3.25	3.02	<0.01
Anger-control	25.75±06.18	17.10±6.44	3.57	<0.001
Anger- expression	28.35±13.28	40.04±6.96	2.68	<0.05
Impulsiveness	57.05±11.42	72.70±8.31	3.84	<0.001

Patient group consisted of 20 alcoholics and 10 opioid dependents. Table-3 shows that both the patient group differed significantly on trait anger, angry temperament, angry reaction, anger-out, anger expression and anger control. Patient having opioid dependence syndrome scored high on all the above mentioned anger dimensions except in anger-control, the dimension alcohol dependence patient scored high. Opioid dependents were also high on state anger however not significant. But this group scored significantly high on impulsiveness.

**Table-4: Comparisons of the alcohol (N=20) and opioid (N=20) dependent groups on levels of trait anger**

Levels of Trait Anger	Substance Group		$\chi^2$	df	P
	Alcohol n(%)	Opioid n(%)			
Low	7(35.0%)	0(00.0%)	9.86	2	<0.01
Moderate	7(35.0%)	1(10.0%)			
High	6(30.0%)	9(90.0%)			

Table-4 shows alcohol and opioid dependent patients differed significantly on levels of trait anger. Opioid dependent patients did not have a single data with low trait anger. 90% of them had high trait anger. Kolmogorov-Smirnov Test was significant for levels of trait anger, thus indicating that scores were not normally distributed. So non-parametric test was used.

Table-5 shows low, moderate and high trait anger patients differed from each other significantly on dimensions of anger expression like anger-out, anger-control, overall expression of anger, however, not in anger-in. patients with high trait anger were high on anger-out and anger-expression, but low in anger-control. High trait anger patients were significantly more impulsive than the low trait anger patients.

**Table-5: Comparison of dimension of anger expression among low, moderate and high trait anger patients**

Dimensions of Anger -expression	Low (N=7)	Moderate (N=8)	High (N=15)	$\chi^2$ (df=2)	P
Anger-in	13.36	12.63	18.03	2.53	NS
Anger-out	7.14	10.94	21.83	16.34	<.001
Anger-Control	25.07	16.38	10.57	13.12	<.001
Anger-Expression	6.00	10.75	22.47	19.96	<.001
Impulsiveness	6.64	11.31	21.87	16.81	<.001

NS: Non-significant

Table-6 shows significant relationship of trait anger, two subgroups of trait anger namely angry temperament & angry reaction with domains of anger expression like anger-out, anger-control, total anger expression. Anger-out and total anger expression were positively related, where as anger-control was negatively related to trait anger and its subgroups. Trait anger and its subgroups were positively related to impulsiveness. Further, regression analysis was also found to be significant for all the related variables considering trait anger as independent variable and anger expression & impulsiveness as dependent variables.

**Table-6: Relationship of trait anger with dimensions of anger expression and impulsiveness in patient gp.**

	Trait anger	Angry temperament	Angry reaction
State anger	.27	.13	.31
Anger-in	.20	.18	.16
Anger-out	.72***#	.71***#	.64***#
Anger-control	-.62***#	-.62***#	-.54***#
Anger expression	.73***#	.76***#	.59***#
Impulsiveness	.77***#	.68***#	.69***#

\*\* Significant at <.01 level

\*\*\* Significant at <.001 level

# Regression analysis significant

## DISCUSSION

In this study, it was evident that patient with substance dependence syndrome expressed more state anger and trait anger. Thus, not only in a particular situation, but also in wide range of situations substance dependence patients would become frustrated and would show anger, which is a disposition (Mayne & Ambrose, 1999). In consistent with the other study findings (De Moja & Spielberger, 1997; Tivis et al, 1998; Jacobs et al, 1988) results also stated that substance dependent groups had a tendency towards angry temperament, a general propensity to experience anger and angry reaction, a disposition to express anger when criticized or treated unfairly. High trait anger in the patient population confirms such disposition.

With respect to anger-in, anger-out and anger expression, both the groups again differed, substance dependence patients being high on all the given anger dimensions. Thus, patient population tended to express their anger toward self or suppression of anger, and toward other people or objects in the environment. De Moja & Spielberger (1997) also found elevated anger-out and total anger-expression scale in drug addicts. Along with that, they found poor anger-control among drug addicts, which was not found in the current study. Tivis et al (1998) found high anger-in and anger-out in alcoholics. Violent acts and aggression had been frequently been associated with substance (Cherek, 1986; Brain, 1986), and anger-out shown by the substance group might be the one reason of aggressive acting out. Rydelius (1983) also found similar association.

With respect to impulsiveness, patient with substance dependence displayed more impulsivity in the current study, which is consistent with the study findings by the Colder & Stice, (1998); Sher & Trull, (1994); Moeller et al, (2002). Probably, poor planning, risk taking behaviour, and novelty

seeking tendency contribute to the substance dependence by the individual.

When alcohol and opioid patients were compared, opioid patients outranked the alcoholics both in state, trait anger and anger expression. Remarkably, their anger control was poor in comparison to alcoholics. Though there is no previous supported study in this respect, but Goleman (1996) found that opioid and other drug dependents had a lifelong difficulty in handling anger. Probably that's the reason why the opioid group consisted of more of high trait anger. Higher prevalence of antisocial personality among drug abusers other than alcohol (Kaplan & Sadock, 1998) might be another causal factor. Along with this, as impulsiveness is a personality trait and a model for psychopathology like personality disorder (Cloninger, 1987), it is understandable why in the current study opioid patient were high on impulsivity too.

We also wanted to see how patients with substance dependence syndrome experience or express anger, and how much they become impulsive with respect to the level of their trait anger. As we expected, patient with high trait anger expressed more anger in stressful situation in terms of anger-out with less control over their anger. As a result impulsivity also became quite evident with high trait anger patients. Still the relationship was not very clear in terms of cause and effect relationship. So we tried to see the causal relationship. And it was derived that trait anger and its two subcomponent, angry temperament and angry reaction affected the expression of anger and impulsiveness. Though no relationship was noticed with state anger and anger-in, but trait anger was found to have direct influence on anger-out, anger expression and poor anger control. It explains the concept of "disinhibition theory" stated at the beginning. And probably we can reach closer to the hypothesis of anger as a precursor of aggressive and impulsive behaviour in substance dependence. This finding is quite consistent with the findings of Colder & Stice (1998) and Roger (2002). Along with that, Reuter & Netter (2001) stated that both impulsivity and anger predicted the later substance dependence.

Current study tried to overcome some of the methodological problems in previous studies by taking diagnosed cases of substance dependence and by incorporating the matched controls. Taking two groups of patient population also helped to give some new insight to the problem. However, small sample size and cross sectional approach to the study might have limited its generalizability. After this preliminary study more researches are required to establish the emotional

marker of substance dependence and if it really influences impulsive behaviour.

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1. **Prasanta Kumar Roy**, M.Phil (M & SP), (Corresponding author), Clinical Psychologist, Dept. of Psychology, University College of Science and Technology, Kolkata-700009, E-mail:prasanta.roy@gmail.com
  2. **D. Ram**, M.D., Professor of Psychiatry, Central Institute of Psychiatry, Ranchi, Jharkhand-834006.
  3. **Atreyee Chandra**, M.Phil (M & SP), Clinical Psychologist, Dept. of Psychiatry, Tata-Motors Hospital, Jamshedpur, Jharkhand--834006.
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**Book Review...**

**Title** : IN THE SHADOW OF FAME: A MEMOIR BY DAUGHTER OF ERIK H. ERIKSON  
**Publisher** : Viking  
**Year** : 2005  
**Author** : Sue Erikson Bloland  
**Price** : \$24.95

**INTRODUCTION**

Sue Erikson Bloland, daughter of Erik H. Erikson, is a psychotherapist in private practice and a member of the faculty of the Manhattan Institute for Psychoanalysis in New York City. She did her Masters in Social Work from New York University and obtained her analytic training from the Manhattan Institute. Other works of her include: "*Fame: The Power and Cost of a Fantasy*", published in *The Atlantic Monthly*, in November 1999; "*Bill Clinton and John F. Kennedy: The Dark Side of Charisma*", published in *Psychoanalytic Dialogues*, in March/April 2000.

Erik Homberger Erikson, born in 1902 in Karlsruhe, Germany, was a child psychoanalyst, an anthropological field worker and a biographer. He is known mostly for his psychosocial theory encompassing the entire "life cycle" and in particular for his seminal concept of "identity crisis". He recognized the impact of society, history, and culture on development of personality. Some of his major works include: "*Childhood and Society*" in 1950, "*Young Man Luther*" in 1962, "*Identity: Youth and Crisis*" in 1968, "*Gandhi's Truth*" in 1969, and "*Vital Involvement in Old Age*" in 1986.

The book, "*In the Shadow of Fame*", published by Viking Penguin, New York in February 2005, is a memoir by the daughter of Erik H. Erikson, in which she explores the profound effect of her father's celebrity status on her personal growth, and undertakes an analysis of fame and celebrity.

**DISCUSSION**

The author, Sue Erikson, has graphically portrayed the inner struggle of Erik Erikson's 'real self' as a father and 'grandiose

self' as a public persona. As a father, Erikson was awkward, shy, distant, and self-absorbed. He was unpredictable and irritable at times. But he wore a shield of charisma in public and was, of course, highly appreciated for his work in the academic and intellectual society. Sue describes her father as having a delightful sense of humor, a self-deprecating style, the ability to evoke an aura of intimacy even in his briefest encounters, and an unusual capacity for empathy. These two different aspects of Erik Erikson were in sharp contrast to each other.

People idolize 'real life heroes' in the same way as they do their 'fairy tale heroes'. They see only the good things in them, which they admire and strive to identify with those attributes, whereas they reject the bad aspects and overlook them. In fact, these real life heroes, unlike the fairy tale heroes, are ordinary human beings with their own vulnerabilities. Although made a hero, Erik H. Erikson was also an ordinary human being with his own shortcomings.

Erik Erikson's youngest son, Neil, was mentally retarded and was diagnosed as having Down Syndrome. Erikson decided, after consulting his contemporaries Margaret Mead and Joseph Wheelwright but without the knowledge of his wife, to institutionalize Neil soon after birth. Although during that time institutionalization of children with mental retardation was prevalent, Erikson till the end of his life could never come to terms with this decision. He forever agonized over it and could never discuss it openly with his family. His wife, however, did not oppose his decision when she came to know about it. The author states that it was a blow to her mother's own narcissism that she had given birth to a crippled child.

Sue Erikson's analyzes the theme of fame and celebrity in

depth in her book. She, of course, draws from her experience with her celebrity father. According to her, the objects of transference are not only parental and authority figures but also anyone with a celebrity status. By projecting power and authority to the celebrity figure, an 'illusion of safety' is created. Many people use "fame" and "grandiosity" as defense strategies to cover up their shortcomings and their feelings of inferiority. In contrast, she also discusses the hidden costs of idolization of celebrity to the society. Because of devaluation of "non-heroic life," the common man tries to identify with his "heroes," which can result in an inhibition of the lifelong struggle to separate and to individuate. In her book, Sue Erikson highlights "fame", but fails to mention "power", which is another important force that determines hero worship.

During formative adolescent years, "ego ideals" are formed with which the individual tries to identify. The ego ideals are drawn from the "heroes" of fairy tales or from real life. The nature of these heroes has changed over the years. Almost ten to twenty centuries ago, "religious heroes" were idolized, such as Jesus Christ, Prophet Mohammad, Shankaracharya. A century ago, "political heroes" like Jawaharlal Nehru, Mahatma Gandhi, Abraham Lincoln were considered as ideals. In recent times, "economic heroes" such as Narayan Murthi, Bill Gates have become ideals for a large segment of our society. Still another segment idolizes film stars such as Amitabh Bacchan, Kamal Hassan, Rajkumar. This shift of ego ideals in the society at various times - from religious to political to economic heroes - mirrors the shifting of the major themes that become relevant from time to time. Perhaps, in the future, "intellectual heroes" will be idolized by a majority of the society, when the economic concern declines and "intellect" is admired as the ultimate virtue. To a large extent, this was the case in the Classical Civilization of India.

On examining Erik Erikson's own life cycle, as portrayed in the book, several aspects emerge. In the first stage, his mother was the primary caretaker, who, in spite of her deep affection, withheld emotional nourishment that he needed. Her own preoccupation with wounded pride, after Erikson's father abandoned her, prevented her from responding to her son's needs. Thus, Erikson never developed "basic trust" in his mother. His sense of betrayal by his mother was reflected in his later fantasies of imaging to be the son of much better parents.

Erikson stayed with his mother up to three years of age. When she got married to Theodor Homburger Erik was told that his father was Theodor. At age eight, he learnt the truth partially, that he was born out of the wedlock. His lack of knowledge of

his biological father was a source of shame to Erikson till the end of his life; he always imagined him to be a noble Danish gentleman from a respectable family.

Erikson identified with his mother's artistic and intellectual nature. His childhood role models included various authors such as Kierkegaard, Emerson, as well as the artist friends with whom his mother socialized. He could partially overcome his sense of inferiority by identifying with these role models. Quite ironically, 'identity's architect', Erik Erikson, seemed to have had 'identity crisis' as one of his great concerns in life. In his late adolescence, he left home and struggled to be an artist. During this period his mother supported him secretly, financially. He himself has described his "role confusion" at this period in his life as bordering on a psychosis. After coming back home as a failure, with the realization that he could never be a great painter, he suffered from depression.

Erikson's role confusion persisted till he was 25 years of age, when he met his childhood friend Peter Blos, who helped him attain a focused identity. It is, therefore, not surprising that he wrote so much about identity crisis, something that troubled him till the end of his life. It was, in fact, his sole "subjective" concern. Although "objectivity" is supposed to be the essence of academic and scientific pursuit, one often sees - especially in the so-called 'soft' sciences - that the subjective element plays a crucial part. This certainly is the case with Erik Erikson with whom the subjective became a part of his objective work. Put in another way, one can see that through the defense mechanism of sublimation Erikson's 'subjective identity crisis' became transformed into his objective work on identity crisis.

Erikson's marriage with Joan was more like a dependent relationship in which both of them tried to cover each other's feeling of inadequacy. Although they shared a genuine love for each other, their inability to talk about painful emotional issues limited their intimacy.

After the publication of "Childhood and Society" in 1950, Erikson's work began to acquire fame. By the time he was in his late forties, he had reached a celebrity status. His later works on historiography of Martin Luther and Gandhi were much admired in intellectual circles, but could not satisfy Erikson's ultimate desire for fame, the Nobel Prize. Even as Sue Erikson acknowledges her father's work, she criticizes the superficial image that he held in public, and emphasizes the fact that the fame could never heal his childhood wounds. Thus, in her view, Erikson could be seen to be "pseudoengaged" in his occupation and his work was not

reflective of true generativity. In his eighties, Erikson withdrew from society after his theories were severely criticized and his sense of identity got further bruised. Despair - rather than integrity - predominated in his late life and he developed features suggestive of depression. It is a droll irony of life to see Erikson struggling with almost all the stages of life that he himself had formulated.

It has been a popular belief that the Freuds – Sigmund Freud and his daughter Anna Freud - welcomed Erikson's ideas. The truth is otherwise. Erikson's relationship with his analyst Anna Freud deteriorated when it became apparent to her that her analysand's ideas - emphasizing the social, cultural and historical contexts of intrapsychic phenomena - were a theoretical shift from those of her father, Sigmund Freud. Anna Freud did never acknowledge Erikson's work; she to the contrary criticized them as of inferior quality. Blood proved to be thicker than the world of psychoanalytical insight! The rejection by his analyst, Anna Freud, was yet another blow to the self-image for Erikson.

Erik Erikson was an illegitimate child, born out of wedlock. He never knew who his biological father was and imagined him to be a noble Danish gentleman from a royal family. He took the name Erik Homberger after the name of his pediatrician stepfather, whom he never liked, although he was grateful to him. Moreover, his career as child psychoanalyst reflects in some measure his identification with his pediatrician stepfather. Nevertheless, his real origin haunted him all his life and he struggled with the shameful truth of his illegitimate birth.

“Legitimacy,” as an entity, is obviously desirable. It confers on an individual a proper and appropriate status within a socially constructed system of norms, values and beliefs. During formative years, these social norms and values become a part of one's internal motivational system and guide one's behavior, which occurs independent of external incentives. In the absence of legitimacy, there is lack of proper development of internal motivational system, and the individual has to depend on external incentives to a major extent. In Erik Erikson's case, since legitimacy was conspicuously missing, the external incentive of attaining a “celebrity status” seems to have become the principal driving force in his life – at least as interpreted by his daughter.

Interestingly, in her book, Sue Erikson's own struggle for celebrity status becomes apparent. Her childhood was one of turmoil, caught as she was between the two disparate facets of her father's personality, the “social” and the “real.”

She has given vivid descriptions of times her father spent with her and which she cherished. Although her mother was loving and caring, and could understand her better, she was distant perhaps because of her own narcissism. It appears that the celebrity status of her parents became a threat to Sue Erikson's own sense of worth. She struggled with feelings of inadequacy during her entire childhood. She tried to compensate and prove her worth through achieving prowess in horseback riding. The very title of her book, “In the Shadow of Fame,” is a telltale reflection of her feelings of inferiority. Her father's fame has overshadowed her assessment of her own adequacy.

After she graduated from college, Sue Erikson almost deliberately “tried to underachieve.” She took up a secretarial course and worked for a while as a secretary. She married a person, she knew, could never equal her father. She led an insignificant life till her forties, and then took up psychoanalysis. This was at a time when the aura of her parents' fame was gradually fading from intellectual and societal circles. It is perhaps not a coincidence that her realization of a need to be famous surfaced when the “threat” of her parents' fame and celebrity was minimal. She later entered into a second marriage with Bob, which is stated to be mutually satisfying. This is the way she also describes her parents' marriage also to have been. Later, with her work on the famous people, Sue Erikson achieved a measure of fame and celebrity that she seems to have much coveted, and she ultimately gained a sense of worth.

The book reveals vulnerabilities of Erik Erikson as a human being, of which most people are not cognizant. Sue Erikson is bold enough to openly discuss family secrets that her father, Erik Erikson, could himself never talk about. She has portrayed with unusual candor her reactions to having been brought up in the shadow of a famous person. Her autobiographical analysis of fame and celebrity is, of course, a highly personal narrative - agonizing at times but always engrossing.

**Samir Kumar Praharaj<sup>1</sup>**  
**Shashi. K. Pande<sup>2</sup>**

1. **Dr. Samir Kumar Praharaj**, M.D., D.P.M., Senior resident, Central Institute of Psychiatry, Ranchi-834006.

2. **Dr. Shashi. K. Pande**, M.D., (Corresponding author), Former Associate Professor Johns Hopkins University, USA, Former Director and Professor of Central Institute of Psychiatry, Ranchi-834006, Jharkhand, Email: shashi\_piret@mac.com

## 'DEVI'

Vijay Kumar Pathak<sup>1</sup>, Shashi K. Pande<sup>2</sup>

In the turbulent times we now live - when fundamentalism is rife in different shapes and sizes, religious, political, even scientific and secular – the movie “Devi” reviewed in these pages should be of particular psychological and psychiatric interest. It is a brilliant cinematic essay on faith and its excesses. It explores enigmatically and subtly the fine line between faith and superstition. Very quietly and gently, it also directs our gaze toward the coming conflict between the old religious India and the new on the horizon at the end of the 19<sup>th</sup> century, with the specter of modernity relentlessly knocking on its doors in the guise of a renascent Bengal. These themes meld into a masterpiece in the hands of Satyajit Ray - one of the four best directors that the world has thus far produced.

The movie is also an indirect tribute to the country from whose bowels – its racial unconscious – it emerges. India, alone of all civilizations, has never in its history flinched from looking boldly into the profound question of the certainty and comfort of faith as against the honesty and discomfort of doubt. Its open-ended but disquieting quest for philosophical truths – not the Truth - began with the skeptical verses of the Rig-Veda in its very remote past. And it continues. “Devi” is yet another probe into this age-old conundrum.

Two geniuses of Bengal – the Nobel-laureate Rabindranath Tagore and Satyajit Ray – were the creators of “Devi.”

It was with the guidance of Rabindranath Tagore that as a story “Devi” was originally written by Prabhat Kumar Mukherjee. It has been said that Tagore was not particularly happy with the story. However that may be, Satyajit Ray made the story into the film in 1960 with the same title “Devi”.

The film is 93 minutes long and is shot in black and white; the dialogues are in Bengali with English subtitles. One can appreciate it for a number of reasons – for the superb performances of the cast, for the excellence of the background score by the distinguished sarod maestro Ali Akbar Khan, and above all for the brilliant camera actions throughout the

film. With the skilful handling of shadows and use of the color black, Devi becomes a dark and gloomy yet a powerful movie. Sharmila Tagore gives an outstanding performance in the title role. Her facial expressions capture magnificently the shadows of doubt about the Devi-hood that is being willy-nilly grafted on her. Years later, Sharmila Tagore had the modesty to say this about her flawless performance: “Devi was what a genius got out of me, not something I did myself.”

It would be superficial to label the movie as a story of a couple's love for each other, though on surface it may appear so in one of its many aspects. Is it a portrayal of changing values and the tensions this entails? Is it at a deeper level, as stated earlier, a devastating attack on faith? Or an indictment of superstition? Or on that enigmatic border between the two? Should the movie's main theme be seen as a subtle contrast between the life of rural Bengal of the late 19<sup>th</sup> century and our lives in the modern India?

Satyajit Ray has crafted a rich but traumatic depiction of idolatry, passion, and extremism in “Devi.” Ray also sensitively explores the emergence of the idea of the “modern woman” in the upper class colonial India. With accuracy, he shows the dilemma of an individual woman's identity between what is expected in this new role of hers and that from her old traditional background. Indeed, “Devi” is a most befitting tale set in the culture of Bengal, which more than any other part of India worships lavishly the concept of “Goddess.”

The film generated considerable controversy on its release in India. It was seen as an attack on Hinduism itself. Protesters tried to prevent the film's international release. The original negative of the film was lost in a fire. However, the movie was eventually released and went on to receive President's Gold Medal in New Delhi in 1961. It was nominated for the Palme d'Or (Golden Palm) at the Venice Film Festival in 1962.

The film is set against the backdrop of rural Bengal. The action takes place in 1860 at a village, Chandipur. The movie

opens with the worship of Goddess Kali on the eve of the festival of Durga Puja. Umapasrad ("Uma") (Soumitra Chatterjee), the village zamindar's son, is shown with his shy and beautiful newly married wife, Doyamoyee ("Doya") (Sharmila Tagore). Uma will soon be leaving home to resume his university studies in Calcutta, and Doya is apprehensive about the prolonged separation. In Uma's absence, Doya passes the time by adoring her young nephew Khoka. She attends to her pampered father-in-law, Kalikinkar Roy (Chhabi Biswas), an old widower. Roy, who is a strong devotee of Goddess Kali, spends most of his time in offering prayers. He often calls Doyamoyee as "Maa" (mother), as a term of endearment. One evening, Roy receives a vision during a restless dream that Doya is the reincarnation of the mother goddess Kali. He interprets the dream as a divine message and immediately starts treating her as Goddess. He instructs his older son, Tarapasrad (Purnendu Mukherjee), to bow at her feet. Tarapasrad's wife Harasundari (Karuna Bannerjee) doesn't believe it and is shocked. Doya's sleeping quarters have to be shifted to the ground floor in order to be near his shrine to Kali. Soon, the news of Roy's dreams is spread throughout the community, and crowds begin to gather at the family estate to pay homage or seek assistance from the goddess. A hesitant Doya sits motionless for hours and receives prayers from priests. She is obliged to obey Roy's divine vision out of respect and duty. But when a young boy is apparently healed by Doya's intervention, devotion turns to fanaticism. Doyamoyee has no choice but to fall a silent victim to this religious frenzy. Meanwhile, Umapasrad comes back from Calcutta and tries in vain to convince his wife to flee but she is hesitant. Fears and doubts regarding her "divinity" cripple her and she decides to come back while he leaves for Calcutta. Young Khoka suddenly has high fever and her godly powers fail to save his life. And yet Kalikinkar Roy's faith remains unshaken. Afflicted by this tragic incident and the weight of events, Doyamoyee becomes psychotic.

## DISCUSSION

This movie was made way back in 1960, but it is still strikingly relevant. To start with, the title itself is highly significant. The term "Devi" has a number of meanings as the story moves on. Doyamoyee is a 17-year-old teenager, who has just been brought to her husband's place and is turning from 'Kumari', a word used for an unmarried girl, to 'Devi', a word for a married woman. She takes care of her old father-in-law, who acknowledges her care by calling her mother, which is used to describe a goddess too. And finally after the dream of Kalikinkar Roy, she becomes the 'reincarnation' of goddess

Kali, and has to live reluctantly as a captive of Roy's delusion? Or faith?

Jung's Analytic Psychology describes "Persona" (named after the mask worn by ancient Greek actors). The persona mediates between the ego and the real world; it covers the true personality of a person. This is the face and aspect an individual presents to the outside world. Doya, in the movie, wears different masks at different places. Ultimately the mask of goddess becomes fixed – but shakily on her. The mask is ego dystonic for her, and the dilemma is always there between her true self and the persona of the goddess Kali that she is made to wear. The subtlety of the story lies in that the wearer of this mask – Doya - begins to believe - albeit ambivalently – in her persona. This happens in real life too; we begin to identify at least partly with the role that society and culture engrafts on us.

The opening sequence illustrates the ornamentation of the Spartan alabaster statue into the image of Kali. The Hindu deity Kali, the goddess of creation and destruction, is shown as being excessively ornamented for the religious festival of Durga Puja. This symbolically portrays what is to come: the unavoidable fate of the naive Doya who also gets manipulated and transformed into the image of the reincarnated goddess.

The movie also illustrates some concepts of Erik Erikson. In his stages of the life cycle, Erikson describes the stage from age thirteen to twenty-one as that of Identity versus Role Confusion. This is when childhood roles and fantasies are no longer appropriate, and yet the adolescent is far from equipped to become an adult. Hence an identity crisis occurs, which if not negotiated properly may lead to role confusion that may manifest itself in behavioral abnormalities or even in overt psychosis.

Doya is depicted as a teenager of seventeen, who comes to a new house where she has to take up numerous new roles. On one hand she still feels like a child and loves to play with young nephew and her parrot; on the other hand she has to take care of her father in law. Her husband is out of town and she is not able to express her wishes to anyone. To add misery to her confusion, she is labeled as a goddess with immense healing powers but who ultimately could not save her most beloved nephew and becomes psychotic. Her identity becomes a victim of blind faith of others that she is too young or naïve to oppose. The scene in which she scratches the wall in agony represents very movingly her bewilderment between the destructive forces of rank superstition and extreme apprehension of losing her own identity.

The dream of Kalikinkar, the widower father-in-law, can also be interpreted along the Freudian analytic lines. Freud famously said that dreams are the royal road to the unconscious. Dreams are often disguised fulfillments of unconscious wishes that cannot be expressed in waking life. Before having the dream, the father-in-law addresses Doya as "Mother" - a term of endearment because of her honored role as a daughter-in-law entering into his family. The dream occurred after his feet had been massaged by Doya and he had fallen asleep. A Freudian interpretation may lead us to say that Kalikinkar Roy's libidinal impulses generated by massage by a young woman who is his own daughter-in-law are unacceptable to his ego, and therefore she is - unconsciously, of course - transformed into the status of a goddess. There is no guilt - and no insight.

Doya, a shy girl who can't comprehend the mantle that has been placed on her, is shown in a poignant scene when Uma, her husband, walks in and sees Doya in her new guise. Without dialogue, Ray captures a flood of emotions: the shock on Uma's face; the embarrassment and apprehension on Doya's face. Uma is ready to walk away from the superstitions that he finds his wife immersed in and tries to rescue her from his father. But Doya weakens and worries about the consequences. What if her husband will have to face the curse of Goddess? She begins to wonder: "is she or isn't she really Kali?" The repeated metaphors of window bars, of darkness and shadows, and veils and curtains reflect the overwhelming sense of captivity and domination, and of course of her helplessness. Doyamoyee's beloved nephew, the child Khoka, falls ill. He is placed in her care, but she is unable to save him. His death shatters her and she is overwhelmed by madness.

By putting together ingeniously all these incongruous ingredients in "Devi", Satyajit Ray presents the awesome powers of ignorance and faith and the vulnerability of the individual caught in their coils. Faith heals and yet even more it destroys.

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1. **Dr. Vijay Kumar Pathak**, M.B.B.S., Junior Resident, Central Institute of Psychiatry, Ranchi-834006.
  2. **Dr Shashi K. Pande**, MD, (Corresponding author), Former Associate Professor Johns Hopkins University, USA, Former Director and Professor of Central Institute of Psychiatry, Ranchi-834006, Jharkhand, Email: shashi\_piret@mac.com
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## LOVE ACTION : LOVE EXISTENCE

*The article that follows is a part of the Indian Journal of Social Psychiatry's (IJSP) Memoirs series. We hope that mental health professionals will take the opportunity to learn about the issues and difficulties confronted by the patients. In addition we hope that these accounts will give patients and families a better sense of not being alone in confronting problems that can be anticipated by persons with serious emotional problems. We welcome other contributions from patients, ex-patients or family members.*

*Clinicians who see articulate patients should encourage these patients to submit their articles to Editor, IJSP, Memoirs, Central Institute of Psychiatry, Ranchi-834006—The Editors*

### I. LOVE CONTEXT

"God is Love" is the title of the first encyclical letter by one of the world's greatest love-gurus named Pope Benedict XVI (25<sup>th</sup> December 2005). The divine Love is not a monopoly of any caste, creed, colour, culture or country. It pervades the total humanity and the totality of '*brahmand*' (Cosmos) also. At the same time it is amazing how individual love experience, love expression and love action can be so unique in the *Uuperwala* (the One Above, the Lord).

After 14 years of Jesuit Formation, in August 1992, as a M.Th. student of Vidyajyoti, New Delhi, I embarked for a Columban search of the divine worth of the Jharkhandi identity and reality. This search - research continued for a much longer time than usual. The fundamental base of this research has been the specificity of Jharkhand in India. Now in August 2006, after another 14 years, this individual is confident to share something worthwhile.

### II. LOVE STRUGGLE

Being the son of the soil I was deeply moved and affected by the criss – cross undercurrents of the Jharkhandi movements. Various factors like rapid industrialization, extensive deforestation, indiscriminate mining, massive population infiltration, blind westernization and unnatural modernization caused extensive cultural conflict and cultural confusion. The sons and daughters of the soil, the *Adivasis* and *Moolvasis* were marginalized, displaced and were condemned to disrespect and abysmal poverty. The contemporary Jharkhandi

heroes had no other option than to enter into an ongoing struggle for the preservation of the ancestral rights over *jal-jangal-jameen* and respectable existence. This obscure, humble being was one of the least of them.

Another Project that affected this person deeply was the Neterhat Field Firing Range which became more obvious in the second half of the year 1992. This planned project was going to displace hundreds of the villages of my homeland Chechari, Barwe and Banari. Alarmed by it all the villagers assembled to fight it out. Now this struggle was really a survival struggle for all of us.

### III. DIVINE LOVE MOVEMENTS

Now, in August 2006, when I comfortably sit at my table at Charhi, Hazaribag; I cannot but see, all that has gone by for last 14 years, from the faith perspective. Whatever has happened to me so far is not my action nor my achievement. Right through the Lord led me and guided me.

When I view back the whole process of the Divine love movements I notice triple precise distinguished love stations.

The first love station was at my beloved home valley, Chechari. There I spent two months (Sept.–Oct. 1992) in research and tribal *afsanic* – thinking (dream thinking). As a result there I had one night what I call a "Nakti-Cardoner Realization". In this realization I had amazing expanse of interconnectedness of the world & transcendental realities.

Another major realization I had here was what I call "Athnas' Clarion Call". One evening when I was moving towards my own village on my bicycle, Athnas, one of my childhood classmates, rushed towards me and requested earnestly, 'Do something for me ---!' Soon I found out that for some reason or other Athnas was very much disturbed mentally. This Athnas-perspective from Chechari, became my constant, concrete foundational perspective for my "theologizing from below".

The second love station was at Sameekshha, Kalady, Kerala, where together with my M.Th. companions I gathered to do a course on "Theology of Religions" under the guidance of the renowned guru Sebastian Painadath SJ. It was here I had

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first major breakthrough which others generally may call a breakdown. It was the initial process of the natural birth to a new life. It is definite that it was neither a miscarriage nor an abortion.

It was here in Sameeksha that I learnt from my guru the life 'mantra' :- "Just be Here & Now".

The third love-station was at Sacred Heart Hospital Pynkulam, Kerala, where the natural birth process was complete with an existential resurrectional experience of the "dustless tranquility". It was here Dr. Angel and Dr. Mathew just in one month put me on my own feet so that I could travel back to my homeland Jharkhand.

#### IV. LOVE RESEARCH & EXPERIMENTS

Back at home I was primarily based at Hazaribag. The medications continued. At first we consulted a Psychiatrist at Ranchi. It was that time my ordination to priesthood was accomplished in 1993, the year of the Indigenous People. Since the second half of 1994, I was taken care by a tertiary centre, under the efficient care of the consultant and his team. On the part of my confreres and doctors there was a sincere effort to stabilize me and make me all comfortable. In order to comfortably rehabilitate me efforts were made to anchor me in some places with light apostolates. Various medicines were tried upon me. These medicines caused excessive salivation, thirst, hand shaking, constipation, loose motion, multiple vision and drowsiness. Finally my sickness was identified and clozapine tablet was found most suitable for me.

Along with medical experiments my theological reflection and love research continued. Following the Jesuit FRC (1992) call to "experienced – based – pedagogy" I closely indulged in experiential search & research. To achieve the maximum of love realization I used tribal, Jesuit, Christian and Hindu (Indian) intellectual methods with which so far I was sufficiently familiar. For the same above intention gradually I developed a daily cyclic process of study, reflection, prayer, tribal and *yogic* exercises and apostolic activities. Here I notice that I consciously kept personal entertainment and rest to the minimum.

#### V. LOVE PRINCIPLES

Throughout the love–research I faithfully abode with my five foundational guiding principles:-

- 1) In all ultimate matters the truth lies not in either–or but

in both–and & even beyond. (a theologian + self).

- 2) If you want to reach the maximum possibility then you have to strike the very impossibility. (self).
- 3) Creative thoughts emerge not from the crowd, but from the individual person. (Heavy Engineering Corporation, Ranchi).
- 4) Imagination is more important than knowledge. (A. Einstein)
- 5) Today in Jharkhand we need to have a corporate, critical, creative and indigenous processual participations. (M. Amaladoss SJ & self).

I am still comfortable with these guiding principles. Only in the fifth principle I would like to make alterations due to the changed conditions, concerns and current concentrations.

To surmount the stigmatic self-defeating beliefs of the sickness, I began to assert three confidence - building basic beliefs:-

- 1) It is not an easy task to be a 'mad' person. (For me being 'mad' here means being '*Aashiq Diwana*' that is being a 'compassionate lover').
- 2) I am proud to be a 'mad' person. ( *Aashiq Diwana* )
- 3) And it is from here I will accomplish His/my Mission.

#### VI. LOVE – AFFAIRS

There is no doubt that there were a lot of love-affairs throughout these last 14 years. First and foremost the greatest love I experienced was not 'my love for God', rather it was "God's unconditional love for me". Undoubtedly this was God's initiative. Over the years it is clear that this love has been an ever transforming love.

Our beloved motherland India has not just been a multi-religious and multi-cultural country, rather this has been a bedrock of love-research and love-expression by our renowned *rishis*, *munis* and love-gurus. Konark, Khajuraho, Kamasutra, Sahasralingam, Shiv-Parwati, Ram-Sita, Radha-Krishna are some of the foundational love-symbols and love-expressions. Along with Meera, Kabir and Tulsidas there have been innumerable Indian thinkers and writers basically talking about human, divine and creational love. People like Gandhi, Vivekananda, Ambedker, Birsa expressed various other dimensions of love that we have to live with and live in.

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Right from the beginning of our human history there has been great regards for the celibate love and celibate life. *Brahmacharya* is a stage that is confined not just to the student age, rather it extends to the whole life. Thus we have the whole history of the exemplary life of the *sadhus, sanyasis, munis, sramanas*, saints and blessed. In our own Jharkhand there is an unquestionable high esteem for the *Dinda-love* and *Dinda-life*. From my own personal experience celibate life and celibate love is not only possible but undoubtedly praiseworthy in the Lord. To our own astonishment we may find that there are innumerable ways that God gives grace to live this life of celibate love. It is a great blessing for a Community, country and total cosmos itself.

In my personal pilgrimage of this life of the celibate love I have come across numerous moments of human and divine love experiences. I have no hesitation in saying that Jesus Christ is my *Ishtdeva* (particular God) as most of us have rightly others. Recent controversial presentations of Jesus in Da Vinci Code and Mel Gibson's Passion of Christ only invite me to respect various other possible perspectives on Jesus Christ my *Ishtdeva*.

To grow into an accomplished Jesuit I aspire to live an ultimate constant "Contemplation to Obtain Love" with continuous equilibrium, *Sthitprajna* and *Samdrishti*. As a Jesuit I foresee living a Mysticism that is profoundly permeating the total life in the market places.

## VII. LOVE REALIZATION

As I struggled through all these years God designed such that Jharkhand state came into being almost without any bloodshed. With concerted effort and stand of the local people (citizens), the establishment of the Neterhat Field Firing Range has been averted so far. Despite overwhelming corruption and the apparent existence of the negativities in Jharkhand, the eventual establishment of the Kingdom-Civilization is sure to come. It may take some time. People may have to struggle still longer. But love-life is sure to be established in Jharkhand. There is no dearth of people of good-will. Externally Jharkhand may seem to be a liability, but it has enormous resource of human goodness that can contribute not just to our country but to the whole humanity.

## VIII. LOVE MISSION, LOVE FULFILMENT

Today with unprecedented communication and technological progress we remain not just the citizens of Jharkhand, rather

we are called upon to be *Vishwa-nagriks* (world-citizens).

Right now Charhi-Hazaribag-Jharkhand is the foundational base of my Mission-activities. It is from here, together with all the people of good will, in a small way I participate in the building of Kingdom-civilization. I have a deep confidence that together we can evolve a Kingdom culture. Today when our globe is facing a vital environmental crisis, I have a deep conviction that our Jharkhand can make a world/cosmic contribution by gradual well planned SARNIZATION of the whole globe. Sarna (Sacred Grove) is the traditional religion of the Jharkhandi tribals. Sarnization is not an imposition but a sincere implementation of the age old experienced actualization of the Jharkhandi environment friendly tribal global perspective and values. If we follow this path, there is no doubt that, by God's grace, very soon all together we can create a "New Heaven and New Earth". Thus here on this earth itself all of us can share heavenly Kingdom-civilization of Love, Peace, Truth, Justice and Harmony that is eternally joyful and blissful.

***Name withheld on ethical ground***

## INSTRUCTION FOR AUTHORS

*The Indian Journal of Social Psychiatry* is the official publication of Indian Association for Social Psychiatry. The journal is peer-reviewed, is published quarterly and accepts original work in the fields of social and community psychiatry and related topics. **Now the journal is available online at [www.ijsp.in](http://www.ijsp.in)**

Manuscripts are accepted for consideration of publication by *The Indian Journal of Social Psychiatry* with the understanding that they represent original material, have not been published previously, are not being considered for publication elsewhere, and have been approved by each author.

### Preparation of Manuscripts

All contributions should be written in English. All manuscripts apart from "Letters to the Editor", "Book Reviews" and "Film Reviews" are reviewed by two or more assessors.

### ARTICLE TYPES

#### Review Articles

Reviews are usually invited by the Editor. However, good quality reviews on pertinent topics can be submitted for publication. The maximum length of reviews (including abstract and references) is 7500 words. Abstract may be an unstructured summary which should not exceed 250 words.

#### Research articles

Original quantitative as well as qualitative research papers are published under this section. Maximum word limit for research articles is 5000 words (including references and abstract). Abstract has to be structured and should not exceed 200 words.

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Under this section data from preliminary studies, studies done with smaller sample size, worthwhile replication studies, or negative studies of important topics are published. Single case reports do not meet the criteria for this section. Brief Communications cannot exceed 2500 words, including an abstract of no more than 150 words, text, and references). No more than one table or one figure can be included.

#### Letters to the Editor

Brief letters (maximum of 1000 words, including references; no tables or figures) will be considered if they include the notation "for publication". These limits may be exceeded in *exceptional circumstances*, but authors are advised to confer first with the Editorial Office.

Case reports or any other uncontrolled observations should be submitted as Letters to the Editor. Letters critical of an article published in the *Journal* must be received within six months of the article's

publication. Such letters must include the title and author of the article and the month and year of publication. The letters will be forwarded to the authors of the discussed article for their response. Letters that do not meet these specifications will be returned immediately.

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*The Indian Journal of Social Psychiatry* also publishes critical reviews written on recently published books or films pertinent to social psychiatry. Usually such reviews are invited by the Editor. However, authors can submit their reviews for publication. The Editor takes the final decision as to which review is suitable for publication. In no circumstances should reviews exceed 2500 words.

### Organization of Manuscripts

All parts of the manuscript must be double-spaced throughout with a minimum margin of 1 inch on all sides. The manuscript should be arranged in the following order, with each item beginning a new page: a) cover letter, b) title page, c) abstract, d) text, e) references, and f) tables and/or figures. All pages must be numbered.

#### a) Cover Letter:

Cover letters should include statements regarding Authorship, Disclosure of any potential conflict of interest, and a statement on under which section the authors want their manuscripts to be considered.

#### b) Title Page

This should contain the title of the contribution, and the name(s) and address(es) of the author(s), and position titles at their respective institutions/places of employment. Make titles concise, and as precise and specific as possible for abstracting purposes. The full postal address, telephone and facsimile numbers, and Email address (if available) of the author who will receive correspondence and check the proofs should be included, as well as the present address of any author if different from that where the work was carried out. Addresses for authors other than the correspondence author should contain the department, institution, city and country. Position titles of all authors at their respective institutions/places of employment should be included.

#### c) Abstract

A summary of the paper must be in the form of a **structured abstract** using the format below. However, abstract may be unstructured for review articles (as mentioned above). Case reports, letters, and film/book reviews do not require any abstract.

### Research articles

**Background:** need for the study with specific aim or objectives

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**Method:** design, setting, sample, interventions (if appropriate), chief outcome measures.

**Results:** provide main findings with p values.

**Conclusions:** only those related to results, both positive and negative, highlighting limitations as appropriate and clinical and research implications.

**Key words:** three to six key words that will assist indexers in cross-referencing the article should be supplied. Use of the medical subject headings (MeSH) list from Index Medicus would be suitable.

#### **d) Text**

The text should be written in grammatically correct good English. It should be typed double-spaced throughout with at least 1 inch margins on all sides.

**Pejorative Language:** Do not use pejorative labels like 'schizophrenics', 'psychotics' and 'neurotics'. Instead refer to 'patients with schizophrenia', etc.

**Abbreviations:** Abbreviations should in general be avoided. However, phrases may be abbreviated if their shortened form is widely known and they are used repeatedly (e.g. CNS, OCD etc). When first used in the text, they should be spelt out in full followed by the abbreviation in brackets.

#### **e) References:**

References should include a list of all articles and books at the end of the paper. Arrange alphabetically by the authors' names and date of publication in parentheses. Authors should follow journal style for reference list using the following examples.

Bhugra, D. & Mastrogianni, A. (2004) Globalization and mental disorder: Overview in relation to depression. *British Journal of Psychiatry*, 184, 10-20.

Rosenberg, A.A., Solarz, A.L., Bailey, W.A.(1991) Psychology and homelessness: A public policy & advocacy agenda. *American Psychologist*, 46, 1239-1244.

Woodward, D., Drager, N., Beaglehole, R., et al (2001) Globalization and health: a framework for analysis and action. *Bulletin of the World Health Organization*, 79, 875-881.

Marsella, A. (1995) Urbanization, mental health and psychosocial well-being. In: Harpham, T. & Blue, I., (Eds.), *Urbanization and Mental Health in Developing Countries*, pp.17-40, Aldershot: Avebury.

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## CORRIGENDUM

The editors would like to draw attention to errors in the authors' affiliations in the following article:

"A Passage to India" in Volume No. 22, Number 1-2, Year 2006, page nos. 69-74.

- a) Dr Shashi K. Pande, MD, Former Associate Professor Johns Hopkins University, USA, Former Director and Professor of Central Institute of Psychiatry, Ranchi-834006, Jharkhand, Email: shashi\_piret@mac.com
- b) Ms Ushri Chatterjee, MPhil (Clinical Psychology), Central Institute of Psychiatry, Ranchi-834006
- c) Ms Suchorita Paul, MPhil (Clinical Psychology), Central Institute of Psychiatry, Ranchi-834006
- d) Ms Anshu Gupta, MPhil (Clinical Psychology), Central Institute of Psychiatry, Ranchi-834006
- c) Ms Nilesh Wagh, MPhil (Clinical Psychology), Central Institute of Psychiatry, Ranchi-834006
- d) Mr Muzaffar Khan, MPhil (Clinical Psychology), Central Institute of Psychiatry, Ranchi-834006
- e) Dr Saurabh Gupta, DPM, Junior Resident, Central Institute of Psychiatry, Ranchi-834006

The editors' apologies for this omission and any inconvenience it may have caused.