

Assessing Abnormal Illness Behavior in Post-Stroke Patients: A Preliminary Report

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ABSTRACT

Background: Abnormal illness behavior (AIB) can contribute poor functioning in an individual along with significant increase in health care utilization. It has been studied in various disorders. This study examined the feasibility of assessing abnormal illness behavior in individuals with stroke who were undergoing treatment in a psychiatric and neurological rehabilitation center. **Materials and Methods:** Subjects who were admitted to the department of psychiatric and neurological rehabilitation ward for post-stroke rehabilitation treatment were assessed using screening version of Illness Behavior Questionnaire (SIBQ). **Results:** The total number of subjects who were screened was eight. The mean score of SIBQ was 6.125 ± 1.35 . With the cut off score of 7, five subjects had abnormal illness behavior. **Conclusions:** The above study highlights that it is feasible to screen individuals with stroke undergoing rehabilitation for possibility of abnormal illness behavior.

Key words: *Abnormal illness behavior, post-stroke, rehabilitation*

INTRODUCTION

The concept of illness behavior was introduced by Mechanic in 1962^[1] who defined it as ‘the ways in which given symptoms may be differentially perceived, evaluated, and acted (or not acted) upon.’ In 1964, Parsons^[2] described the concept of sick role, which has some overlap with the concept of illness behavior. The sick role is characterized by features, such as recognition that the individual is not held responsible for the primary illness, normal social functioning is modified proportionate to the severity of the illness, the ill person is obligated to strive to return to a healthy

state, and for the above, the person has to seek help and cooperate in the process of getting well. Sick roles are dynamic, changing with severity and phase of illness. The person may move in and out or between various phases. Also, what may be acceptable at one stage may be abnormal in another.

On the other hand, in ‘normal’ illness behavior, the type of sick role accepted or sought by the patient is proportionate to the clinician’s assessment of objective pathology and congruent with the sick role assumed. However, if the patient’s illness behavior is disproportionate to the clinician’s assessment of objective pathology and patient persists in the sick role, then this is a form of abnormal illness behavior. The concept of abnormal illness behavior (AIB) was introduced in 1969 by Issy Pilowsky.^[3] AIB was described as “The persistence of a maladaptive mode of experiencing, perceiving, evaluating, and responding to one’s own health status despite the fact that a doctor has provided a lucid and accurate appraisal of the situation and management to be followed (if any) with opportunities for discussion,

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negotiation, and clarification and based on adequate assessment of all relevant biological, psychological, social, and cultural factors. AIB has been studied in various conditions and situations, which include chronic pain, somatoform disorders, and certain medical conditions like rheumatoid arthritis, infection, myocardial infarction and others, and the findings are varied.^[4-10] Presence of depression and anxiety often co-exist with abnormal illness behavior and interfere with recovery of the person from an illness and result in significant disability to the individuals with illnesses. In a study on illness behavior in subjects with stroke, a longitudinal design study was undertaken, with assessments on admission to and discharge from rehabilitation, and six and 12 months after discharge. Ninety-four 12-month stroke survivors who had undergone an inpatient rehabilitation program were recruited. AIB was assessed using the Illness Behavior Questionnaire. AIB was apparent in nearly 30% of patients at discharge and persisted for 12 months. Patients with AIB scored more poorly than non-AIB patients on functional, social, and psychological indicators.^[11] The authors also conducted a study to look at the relative effects of depression and AIB in long-term rehabilitation outcome for stroke and concluded that depression and AIB appeared to have quite distinct effects on outcome. AIB emerged as a key determinant of long-term functional disability, while depression was associated with poorer social functioning.^[12] The authors have re-established that AIB does determine long-term rehabilitation outcome for stroke in further study.^[13] The concept of AIB has not been revisited in patients with stroke following the above studies. The current study describes the feasibility of assessment of AIB in post-stroke patients who are admitted to a rehabilitation ward. Such a study has not been reported from our country.

MATERIALS AND METHODS

The study was conducted at National Institute of Mental health neurosciences, Bangalore, India, which

is a tertiary care for specialties in mental health, neurology, and neurosurgery and specializes in rehabilitation for both individuals with neurological and mental health problems. Subjects who were admitted to the department of psychiatric and neuro rehabilitation ward for post-stroke rehabilitation treatment were approached for the study. Informed consent was sought from the participants. The assessment was done by a qualified psychiatrist using screening version of Illness Behavior Questionnaire (SIBQ).^[14] This screening version of the Illness Behavior Questionnaire (SIBQ) is derived from two subscales of the Illness Behavior Questionnaire and has 11 items disease conviction and psychological versus somatic focusing. The responses are rated as yes or no. A semi-structured form was used to collect the demographic details and other psychiatric diagnosis. The study was approved by the Institutional ethics committee.

RESULTS

The total number of subjects who were screened was eight. The details of the subject are provided below. There were two women and six men in the sample. The mean age of the sample was 37 ± 15.8 years. The details of the diagnosis, neurological findings at the time of assessment are given in Table 1. Four of the subjects had alcohol dependence syndrome and nicotine dependence syndrome before the onset of the stroke. Two subjects had a diagnosis of depression.

The mean score of SIBQ was 6.125 ± 1.35 . The maximum score was 10, and the minimum was 2. With the cut off score of 7, five subjects had abnormal illness behavior. The details of the items of SIBQ are given in Table 2. The mean score of disease conviction was 5 ± 1.26 in patients who had abnormal illness behavior and 3 ± 1.26 in patients who did not have abnormal illness behavior. The mean score for psychological versus somatic focusing in patients who had AIB was 4.6 ± 0.89 and 3.4 ± 0.89 .

Table 1: Clinical and demographic details of the subjects

Gender	Age	Diagnosis	Neurological Status	Psychiatric diagnosis	SIBQ Score
Male	48	Left MCA territory stroke	Reduced arm swing, global deficits on neuropsychological Assessment	Severe depression	10
Male	18	Right side hemorrhagic stroke	Power- Lt. side power 3/5,	Nil	5
Male	45	Chronic right MCA infarct	Spastic paraparesis of Lt. UL power- 3/5 and Lt. LL power 3/5	Nil	6
Female	65	Left temporo-parietal ICH	Power- Rt. UL 3/5 and Rt. LL 2/5	Nil	7
Female	25	Right ICH temporal lobe, right hemorrhagic infarct and CVT	No neurological deficits	Bipolar disorder recovering from depression	2
Male	38	Left basal ganglia ICH (post-craniotomy and evacuation)	Spasticity in Rt UL and LL and power- 2-3/5	Alcohol dependence syndrome currently abstinent	7
Male	35	Right basal ganglia infarct	Power Lt. UL- 0/5 and Lt. LL- 2-3/5	Alcohol dependence syndrome currently sleep disturbances	8
Male	25	Rt. frontal hemorrhagic infarct	Lt side- 3-/5	Alcohol dependence syndrome	8

Table 2: Frequency distribution of SIBQ items

SIBQ Items	AIB present	AIB absent
Do you think there is something wrong with your body?	5	3
Does your illness interfere with your life a great deal?	6	2
If the doctor told you that he could find nothing wrong with you, would you believe him?	6*	3
Do you find that you are often aware of various things happening in your body?	6	3
Do you ever think of your illness as a punishment for something you have done wrong in the past?	4*	4
Are you bothered by many aches and pains?	4	4
Are you sleeping well?	4*	4
Do you find that you are bothered by many different symptoms?	3	5
Do you think there is something the matter with your mind?	6*	2
Is your bad health the biggest difficulty of your life?	5	3
Do you think that your symptoms may be caused by worry?	4*	4

*“No” responses are scored as being present

DISCUSSION

The above study highlights that it is feasible to screen individuals with stroke undergoing rehabilitation for possibility of abnormal illness behavior. Abnormal illness behavior could be due to underlying motor deficits, emotional problems, depression, and anxiety. Presence of AIB in stroke patients could lead to poor recovery and longer duration of stay in the rehabilitation centers. The caregiver burden may be enhanced by the presence of abnormal illness behavior.

In a sample of eight subjects, half of them possibly had abnormal illness behavior; however, were not recognized. Further studies are being planned to include duration of stay, participation the activities, and long term outcomes. Since this is a cross-sectional study, we don't have details in terms of its interference in participation of the patients in the intervention that was being provided.

For health professionals, presence of AIB could be frustration and also could lead to poor doctor-patient relationship and increased utilization of services. Early identification of AIB could lead to proper management of these cases and thus reducing the disability and also improving therapeutic relationship. AIB could also result in multiple consultation and increased use of

health resources. Hence, early recognition should help the clinicians to manage better.

Prospective studies in the area of stroke rehabilitation and illness behavior are essential to establish its role in rehabilitation process in the Indian setting. It is also essential to study the care givers in the role of abnormal illness behavior in the patients.

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