

# Psychosocial Assessment Tool (PAT-5): A Measure of Psychosocial Problems in Haemodialysis Patients

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**A**ny chronic illness is a potential life crisis for patients and their family. Chronic renal failure is no different, in-fact it is a psychosocial as well as economic burden to the family (Jha, 2004). Proper medical care requires not only optimal biomedical outcomes, but also careful attention to psychological outcomes (Barendse et al, 2005). Psychosocial aspect has been shown to be an independent predictor of survival (Kimmel, 2000). Early identification of psychosocial problems can prevent the development of depression in these patients. Therefore, it is important to have an accurate estimate of frequency and nature of psychosocial problems faced by these patients.

Despite the long treatment regimes and costly treatment, only few psychological measure have been designed for renal patients. Most of the assessment tools available so far are from the developed world and the treatment is either state-sponsored or covered under insurance. These tools do not take into account the living conditions, social structure, and personal values of patients from the Indian subcontinent and therefore are difficult to apply in Indian patients.

We undertook this study to develop an assessment tool to estimate the extent of various

psychosocial problems in patients of chronic renal failure undergoing haemodialysis, in Indian population, which we have called psychosocial assessment tool-5 (PAT-5).

## Objectives

This study sought to construct a tool for assessment and quantification of psychosocial status of renal patients in developing countries, who are on haemodialysis, waiting for renal transplantation,

## Methods

Patients in age group of 18 to 60 years, undergoing haemo-dialysis and registered for renal transplantation, who were free from pre-existing depression, were included in the study. Patients with co-morbidities like primary cardiac disease and primary vascular disease and those with failed previous transplantation were excluded. Initial qualitative work and the drafting of PAT-5 included visits to haemodialysis, renal clinic and renal transplant counselling clinic of our hospital.

Patients were allowed to elaborate their problems by a single question- "What problems you face due to this illness?" Investigator acted as listener and gave direction where needed.

Major areas / themes were extracted out after writing their statements. Extensive review of literature, expert's opinion and investigator's own experience in

haemodialysis unit as practicing nurse and interview findings provided the foundation for the construction of the tool. Preliminary questionnaire was prepared based on the guidelines of Maslow's Hierarchy of Human Needs (Maslow, 1943) but incorporated social and economic issues pertaining to Indian society. The preliminary questionnaire was applied to another 10 patients and their ease of understanding and response patterns were observed. Items were extended, modified taking into account the views and expressions of interviewees. Findings were analysed for the spectrum of problems faced by the patients and they were classified into five domains, including health awareness, occupation, family and social environment, financial and psychological. Tool items were constructed and compiled.

The study was approved by the ethical committee of our institute and written informed consent was taken from all patients participating in the study.

**Validity of the tool:** The tool was thus drafted and its content validity was determined by five experts' opinion on relevance of the items. Experts were from different specialties including Medical and Surgical Nursing, Psychiatric Nursing, Nephrologists and Clinical Psychologist. Items were modified and refrained and content validity

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index of 100 percent was achieved.

**Reliability of the tool:** Reliability of the tool was checked with test-retest method for each item and total items. Reliability was also established for different sections individually. It was tested on 30 patients. Pearson coefficient of correlation, r-value was 0.91 for the whole tool.

### Results

PAT-5 was developed to estimate the psychosocial problems of chronic renal failure patients in Indian subcontinent. The tool was divided into 2 parts. Part A, which deals with personal data (Demographic Profile) has 18 items. It included personal bio-data of respondent such as age, sex, marital status, education, occupation, family income, financial support system, type of family, number of support persons, and place of residence, duration of dialysis, registration for renal transplantation, waiting period, erythropoietin therapy, vascular access, availability of donor, clinical parameters. Part B included psychosocial data, which comprised 37 items divided into 5 domains (Table 1). Each item has 4 responses, scored as 1 to 4. Therefore, minimum score is 37 and a maximum score of 148 could be awarded to a patient. Psychosocial status is more appropriate with lower score. Higher score indicate more problems. Out of 37 items 15 are positive and 22 are negative. Positive and negative items are scored differently (Table 2). Range obtained in the scoring system was calculated and divided into three levels of psychosocial

problems; mild, moderate and severe (Table 3). Time to administer this tool was recorded and it averaged  $12.5 \pm 1.8$  minutes.

### Discussion

Instruments developed to assess the psychosocial functioning of various psychiatric patients range from highly structured interviews taking upto 2 hours to administer to simpler tools. For medical patients, however, few assessment techniques are available. Few investigation tools are available to assess psychosocial functioning and related problems. Most of them are non-specific for any particular illness or are specific for a non-renal illness. The Psychosocial Adjustment to Illness Scale (PAIS) was designed to assess the quality of a patient's psychosocial adjustment to current medical illness or the residual effects of previous illness (Derogatis, 1986). St. George's Respiratory Disease Questionnaire (SGRQ) measures unpaired health in chronic obstructive pulmonary disease and asthma. The Inflammatory Bowel Disease Questionnaire (IBDQ) was designed to measure the impact of interventions on the quality of life of inflammatory bowel disease patients. The Alzheimer's Disease Assessment Scale was designed to assess the severity of dysfunction in cognitive and non-cognitive behaviours characteristic of persons with this disease. The Four-Dimensional Symptom Questionnaire (4DSQ) is a self-report questionnaire developed in primary care to distinguish non-specific general distress from depression, anxiety

and somatization (Terluin et al, 2006).

Despite the invasiveness of treatments for chronic kidney disease, very few psychological measures have been designed specifically for renal patients. The Kidney Disease Quality of Life Instrument (KDQOL) and Kidney Disease Quality of Life Short Form (KDQOL-SF) were designed to provide an assessment of quality of life for kidney disease and targeted areas as well as life in general for individuals on dialysis (Hays et al, 1994). It takes about 30 minutes to complete the long form and 16 minutes to complete the short form. The long form consists of 134 items rated on a 5-point scale. The short form has 80 items, 43 targeted to kidney disease. Subscales include: sleep, quality of social interaction, sexual function, work status, cognitive function and burden of kidney disease, effects of kidney disease on daily life, symptoms/problems, and patient satisfaction. The Kidney Disease Questionnaire (KDQ) is able to discriminate individuals well informed about kidney disease and its treatment from those who are not so well informed (Devins et al, 1990).

The Renal Treatment Satisfaction / Questionnaire (RTSQ) was designed to be suitable for people using any of the various treatment modalities for CKF. Items measure satisfaction with respect to treatment, convenience, flexibility, freedom, and satisfaction to continue with present form of treatment (Barendse et al, 2005).

PAT-5 includes contributions from 5 domains which may influence patients' psychosocial well being. Health awareness domain covers the area of

knowledge about treatment, satisfaction from treatment, information available and compliance. Occupational domain covers problems with co-workers and seniors, leave due to illness. Family and social domain assess the areas of relation with spouse, sexual activity, relations with distant family members, role fulfilment and role changes. Importantly, financial domain has been included in this tool. With medical insurance still in its infancy in India,

cost of treatment is mostly borne by the patients themselves. The financial domain identifies stress caused by financial problems, financial support system, and utilisation of financial help. Psychological domain covers the area related to anger, guilt, and frustration (Daul et al, 2004). The division of score into various levels of psychosocial stress quantifies the prob-

**Table 2. Scoring pattern of tool items in PAT-5**

Response	Score for positive item	Score for negative item
Always	1	4
Most of the times	2	3
Sometimes	3	2
Never	4	1

lems and helps in monitoring improvements in these problems by re-administration of the tool at fixed intervals. Despite its extensive coverage of data, PAT-5 is easy to understand and administer to the patients. It takes very less time as com-

**Table 1 : Items of PAT-5**

<i>Health Awareness</i>	
1. Do you take care of special health needs due to your illness?	6. Do you have social contact with friends, cousins and colleagues?
2. Are you satisfied with the quality of medical care available to you?	7. Has illness caused any conflict in marital relations?
3. Are you worried whether you will be able to undergo transplant?	8. Do you make contact to members of extended family?
4. Do you have positive attitude towards illness that you will overcome this illness?	9. Have you experienced any physical disability with your illness?
5. Are you worried about result of transplant i.e whether successful or rejection?	10. Has illness caused a decrease in sexual activity?
6. How frequently you missed your medicines?	
7. How frequently you landed with emergency in casualty?	<i>Financial Domain</i>
8. Are you well informed about your treatment by medical staff?	1. An illness such as yours can affect family finances, are you feeling some difficulties meeting the financial demands of your illness?
	2. Does any social, political or insurance establishment is helping in meeting the expenditure?
<i>Occupational</i>	3. If anybody is helping financially, do you have feeling of dependence?
1. Has your illness interfered with ability to do your job?	4. Some times there can be constant arguments between family members due to financial constraints. Have you experienced such situations?
2. Are you able to perform your job physically well (studies)?	5. Do you get financial support from extended family members unconditionally?
3. Have you lost job (working days) due to illness?	6. Are you able to meet the finances yourself?
4. Do you give importance to your job as before illness?	
5. Your illness is a block to your success in your job (education).	<i>Psychological Distress</i>
6. Have you noticed an increase in problems with your co- workers since your illness?	1. Have you felt afraid, tense, nervous, or anxious?
	2. Have you felt sad, depressed, lost interest in things, or felt hopeless?
<i>Family and Social Environment</i>	3. Have you felt angry, irritable, or having difficulty in controlling temper?
1. Do you have good relations with your wife since your illness?	4. Have you blamed yourself for things, felt guilty, or felt like you have let the people down?
2. Do you enjoy going out with people?	5. Have you worried much about your illness and other matters?
3. Have your illness interfered with your work and duties around the house?	6. Have you been feeling down on yourself or less valuable as a person?
4. In those areas where your illness has caused problems with your household activities, how family is helping you?	7. Do you feel that your illness has caused changes in the way you look that make you less attractive?
5. Do you discuss your problems with family members?	

**Table 3. Criteria for classification of severity of psychosocial problems in PAT-5**

Severity of problem	Total Psychosocial score	Health awareness domain	Occupational domain	Family & social domain	Financial domain	Psychological domain
Mild	Below 76	below 13	below 12	below 17	below 12	below M
Moderate	77 to 93	14 to 18	13 to 17	18 to 23	13 to 15	15 to 20
Severe	Above 94	above 19	above 18	above 24	above 16	above 21

pared to other tools available.

Further, this tool is an easily accessible, reliable and specific for obtaining and monitoring information about psychosocial problems of chronic kidney disease patients. It can be used as interview or as self report method. It can be administered in 10 to 15 minutes and its reliability proven translation is available in Hindi language. We recommend its use in routine clinical care and clinical trials.

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### JK Grewal appointed as Addl DG, Military Nursing Service

Maj Gen JK Grewal, VSM, an alumnus of School of Nursing, Military Hospital, Secunderabad, has been appointed as Addl DG, Military Nursing Service from 1 June 2010.



She joined Military Nursing Service on 25 November 1972. She had her Post Basic BSc (N) from Institute of Nursing Education, JJ Group of Hospitals, Mumbai, and was awarded President Gold Medal for standing first in Mumbai University. During her distinguished career of 38 years, she held several clinical, teaching and administrative positions including CI Ops areas like 160 MH and 166 MH. She was awarded Visisht Seva Medal on 26 January 1985. She presented papers on nursing at national and international conferences. During her tenure as Principal Tutor, School of Nursing, Army Hospital, Delhi Cantt, she was actively associated with revision of syllabi of GNM, BSc (N) and Post Basic BSc (N) courses at Indian Nursing Council. Recipient of GOC-in-C Commendation Card, she was Principal Matron of Army Hospital (R&R) and BrigsMNS HQ (WC) and Dy DGMNS prior to assuming her present post.

Maj Gen Grewal is life member of TNAI and ex-officio member of Indian Nursing Council.

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