

Research report

# The explanatory models of depression in low income countries: Listening to women in India

Bernadette Pereira<sup>b</sup>, Gracy Andrew<sup>b</sup>, Sulochana Pednekar<sup>b</sup>,  
Reshma Pai<sup>b</sup>, Pertti Peltö<sup>c</sup>, Vikram Patel<sup>a,b,\*</sup>

<sup>a</sup> London School of Hygiene and Tropical Medicine, Keppel Street, London, UK

<sup>b</sup> Sangath, 831/1 Porvorim, Goa, India

<sup>c</sup> University of Connecticut, USA

Available online 30 October 2006

## Abstract

**Introduction:** Women, and persons facing social and economic disadvantage, are at greater risk for depressive disorders. Our objective was to describe the explanatory models of illness in depressed women, in particular, their idioms of distress, and their views of their social circumstances and how this related to their illness.

**Method:** We carried out a qualitative investigation nested in a population based cohort study of women's mental and reproductive health in Goa, India. We purposively sampled women who were ever-married and who had been found to be suffering from a depressive disorder on the basis of a structured diagnostic interview. In-depth interviews were carried out about six months apart exploring stressors in women's lives, a typical day in their recent lives, and their illness narratives (idioms of distress, causal models, impact of illness, help-seeking).

**Results:** 35 women consented to participate in the study, 28 completing both interviews. Women gave expression to their problems primarily through somatic complaints, typically a variety of body aches, autonomic symptoms, gynecological symptoms and sleep problems. There was frequent mention of overall "weakness" and tiredness. Economic difficulties and difficulties with interpersonal relationships (particularly related to marital relationships) were the most common causal models. However, women rarely considered biomedical concepts, for example, the notion that they may suffer from an illness or that their complaints were due to a biochemical disturbance in the brain. Despite the lack of a biomedical concept, most of the participants had sought medical help, typically for reproductive and somatic complaints.

**Conclusions:** We recommend the use of somatic idioms as the defining clinical features, and a broader, psychosocial model for understanding the aetiology and conceptualization of the clinical syndrome of depression for public health interventions and mental health promotion in the Indian context.

© 2006 Elsevier B.V. All rights reserved.

**Keywords:** Depression; Women; India; Qualitative

## 1. Introduction

Depression is one of the most common disorders affecting women in low income countries. The World Health Reports show that depression is a leading cause of disability in women of the reproductive age group (World Health Organization, 2001). Depression is more

\* Corresponding author. Sangath, Porvorim, Goa, India. Fax: +91 832 2411709.

E-mail address: [Vikram.patel@lshtm.ac.uk](mailto:Vikram.patel@lshtm.ac.uk) (V. Patel).

common in women than men, an increased risk which has been demonstrated consistently in both high and low income countries (Piccinelli and Wilkinson, 2000). However, the higher risk of depression in women cannot be explained by biological differences (Piccinelli and Wilkinson, 2000) and a growing body of epidemiological evidence is demonstrating the association of social determinants, such as poverty and gender disadvantage, as a major contributor to the risk for depression (Patel and Kleinman, 2003; Patel et al., 2006).

The aim of the qualitative study described in this paper was to explore the experiences of depression in women participating in a population based cohort study of mental and reproductive health in Goa, India. Quantitative findings from this study, which involved the participation of 2494 randomly selected women, have been published elsewhere (Patel et al., 2005a,b, 2006). Findings from the quantitative phase of the study showed that factors indicative of economic deprivation, gender disadvantage and reproductive health are major determinants of women's health, and the risk for depressive disorder (Patel et al., 2006). Findings from the longitudinal component, describing the risk factors for new episodes of depressive disorder have replicated these associations, emphasizing the role of poverty and reproductive health (Patel et al., in press). The qualitative investigation was nested within this cohort study. We sought to explore women's narratives of their personal lives and health with two key goals: first, to examine whether the quantitative associations were reflected in the narratives; and second, to elucidate the mechanisms through which these associations were mediated. Our objective was to describe the explanatory models of illness in women who were found to be depressed on the basis of a locally validated clinical psychiatric interview. In particular, we wished to describe the idioms of distress expressed by women who were depressed, and their views of their social circumstances and how this related to their symptoms and illness.

## 2. Method

### 2.1. Setting

The study was located in the state of Goa on India's west coast. Goa has a population of 1.4 million. The main language is Konkani. The 1998–99 National Family Health Survey reported that Goa ranked highly on some indicators of reproductive health: for example, fertility was low in Goa with an average of 1.8 children per woman (national average of 2.9): this was largely attributed to the relatively later age of first marriage, and

first childbirth. On the other hand, current use of modern contraception was low (36%) with female sterilization being the most prevalent form of contraception (International Institute for Population Sciences, 2001). The NFHS data showed that more than 1 in 10 women reported physical violence from their spouse.

### 2.2. Sample

Our sampling frame for the epidemiological study consisted of 3000 women randomly selected from the population of women aged 18–45 years living in the catchment area of the Aldona Primary Health Centre (PHC) in Goa. Details of the sampling strategy have been published elsewhere (Patel et al., 2006). The qualitative study was nested in the cohort of 2494 women who consented to participate. 35 women were purposively selected on the basis of the two eligibility criteria: that they were ever-married, and that they were found to be suffering from a depressive disorder (with or without anxiety) on the basis of their responses to the Revised Clinical Interview Schedule (CISR). The CISR is a structured interview for the measurement and diagnosis of common mental disorders in community and primary care settings (Lewis et al., 1992). The CISR has been widely used in developing countries, including India; the Konkani version used in the present study was earlier field tested for use in Goa (Patel et al., 1998). The CISR consists of 14 domains such as anxiety, depression, irritability, obsessions, compulsions and panic. The sum of the scores from the 14 domains generates a total score (range 0–57) which is a measure of non-psychotic psychiatric morbidity. Scores of 12 or more indicate case-level morbidity. The Programmable Questionnaire System (PROQSY) generates ICD10 diagnoses of specific common mental disorders from the CISR data. In addition to the main selection criteria, we purposively sampled women with and without the complaint of abnormal vaginal discharge, one of the most common gynecological complaints in south Asia, and one which has been found to be strongly associated with poor mental health (Patel et al., 2005b; Prasad et al., 2003).

### 2.3. Data collection

The method of data collection was through serial in-depth interviews. The qualitative interviewers (BP, RP) were trained by authors who have extensive experience in qualitative research in India (VP, PP, GA) (Andrew et al., 2003; Gittelsohn et al., 1994; Patel and Prince, 2001; Rodrigues et al., 2003). The first interview was carried out within two months of recruitment into the cohort study;

the second was carried out approximately six months later. The interviewer had access to the quantitative data which provided systematic information on the participant's socio-demographic characteristics, reproductive health and mental health (see Patel et al., 2005b for details of these interviews). Interviews were tape recorded. Most interviews were carried out in women's homes after making an appointment for a convenient time. Privacy was mandatory during the interview; when there was a problem of privacy, the qualitative interview was carried out in the study field center, which was located in the Primary Health Center. Each interview was conducted in one sitting and lasted between one to two hours. The interview theme (see below) was developed iteratively, starting with a set of research questions followed by piloting and role-play. Initial interviews were examined by the experts to monitor the quality and completeness of the data and feedback provided to the interviewers accordingly.

#### 2.4. Interview themes

The primary purpose of the in-depth interview was to elicit an illness narrative for depression and to explore its relationship to the stressors in women's lives. Specific qualitative research techniques such as free listing and ranking were used to facilitate data collection during the first interview. The interview guide for the first interview included:

- Stressors in women's lives: interviewers presented a set of illustrated cards, derived from free-lists carried out in the earlier pilot phase, which showed various problem situations such as domestic violence, financial difficulties, and others. Each woman was asked to rate these problem situations in terms of their importance in their life situations.
- 24 hour time line: we aimed to describe each participant's daily schedule by eliciting a detailed narrative of activities using a 24 hour time line of activities performed by asking the question "Could you tell us how you spent a typical day in the last week? For example, how did you spend yesterday?" (Probes: What part of the day you like the most/you look forward to? Why? What part of the day you like the least? Why?)
- Illness narratives: Women were asked open-ended questions about their idioms of distress, causal models and help seeking behaviour. Treatment seeking details, including home remedies and lifestyle changes, were probed. One technique which was used was that of a time line of the woman's life from menarche to date on

which important events which she could remember were marked. The onset of symptoms and the progress of the illness were then traced on the time line. When was it severe? What did she do at various intervals? What impact did this have on her relationships? Did she try any treatment, what happened?

The second interview explored gaps in information from the first interview, changes in symptoms since the first interview and the relationship with life experiences, and the woman's views about interventions for her health problems.

#### 2.5. Data analysis

The socio-demographic and clinical characteristics of the sample were extracted from the master database of the main cohort study. The tape-recorded in-depth interviews were transcribed *verbatim* into the language of the interview (Konkani or English); Konkani interviews were then translated to English. ATLAS-ti software was used for organizing and coding the data. Codes from the data were identified and defined in an iterative manner. First, 4 interviews were coded independently by two interviewers to generate a preliminary coding system. A consensus coding system was evolved and this was then tested in a reliability exercise by carrying out blinded double coding of 4 interviews. The 24-hour time line was coded separately to calculate the duration of time spent in household and other activities. Data from both interviews were analyzed in relation to the broad themes of illness experiences.

#### 2.6. Ethical issues

All respondents selected were assured that participation was voluntary and that no information identifying the individuals would appear in the reports. Written consent was obtained from the participants for the qualitative research (this was separate from the consent obtained for the main cohort study). Since some of the researchers lived in the study community, issues of confidentiality were considered as of paramount importance. We ensured that researchers did not interview subjects whom they knew personally.

### 3. Results

35 women were recruited to participate; 28 completed both interviews. Their demographic and clinical characteristics are shown in Table 1. Most women were suffering from mild depressive or mixed anxiety–depressive disorders. Economic difficulties were commonly experienced

and a significant proportion of currently married women described marital difficulties, in particular experiencing spousal abuse and violence.

### 3.1. Idioms of distress

Symptoms reported by participants are shown in Table 2. The commonest category of symptoms reported were aches and pains, most commonly pain in the limbs and joints and headache. The next common category of symptoms was autonomic symptoms. More than half the participants complained of palpitations. More than a quarter reported giddiness and fainting and numbness. Tiredness and weakness, and sleep and appetite disturbances were reported by two-thirds of these informants. Over half the participants reported reproductive health symptoms, most commonly vaginal discharge. Other reproductive complaints reported were genital itching, menstrual pain, “wound in the

Table 1

Sample characteristics ( $n=35$ , except for the items marked \* for currently married women, in which  $n=30$ )

Characteristic	N
Age (years)	
21 to 30	8
31 to 40	18
41 to 50	9
Education	
Primary school or less	11
Secondary school	12
Higher education	11
Illiterate	8
Religion	
Hindu	26
Christian	9
Own home	29
Toilet facility in home	14
Tap water in home	15
Family has debts	18
Hunger in past 3 months	5
Difficulty making ends meet	22
Marital Status	
Married	30
Widowed	4
Separated	1
Ever pregnant	32
Spousal verbal violence*	12
Spousal physical violence*	10
Spousal sexual violence*	4
Concern about husband's habits*	10
Concern about husband's extramarital affairs*	4
Complaint of vaginal discharge	18
ICD-10 diagnoses	
Mild depression	13
Moderate or severe depression	2
Mixed anxiety–depression	20

Table 2

Idioms of distress of participants with depression ( $n=35$ )

Categories	N	Narratives
<i>Aches and pains</i>	32	“I have taken a lot of debts and I cannot sleep in the nights. I often get headaches ( <i>tokli foddta</i> ), body aches ( <i>ang dukta</i> ), and giddiness when I think about all this.”
Limbs/joints	28	
Head	24	
Abdominal	13	“I have my own tensions with my family and then I have to take tension of these people also.”
Generalized	8	
Chest	7	I am fed up. I am not feeling well. My back is paining and in my stomach too.”
<i>Autonomic symptoms</i>	25	“If I don't get sleep, next day I get palpitation problem ( <i>kalliz kalkalta</i> ). I get this palpitation after getting up from sleep or when I see someone sick. Even after fights this things happened to me and then headache starts.”
Palpitations	19	
Giddiness and fainting	12	
Numbness	9	“When I go to someone and I don't know that person, or if I want some work somewhere, go somewhere, my heart starts beating. I wasn't always like this”
“Blood pressure”	8	
Difficulty breathing	2	
Trembling	2	
<i>Weakness/tiredness</i>	23	“I used to feel weak and I was not able to do any work. Weakness means “ <i>ashaktai</i> ”. I don't feel like doing anything, no interest in doing any work; feel like just lying on a bed for a while. I don't have strength”
<i>Behavioral symptoms</i>	23	“Sleep problem started after husband's death. It's due to tension that I don't get sleep. Tension about our future. It takes almost 3–4 hours for me to get sleep. Then I go on thinking, I get tension, I don't get sleep at night.”
Lack of sleep	21	
Lack of appetite	5	
<i>Gynecological symptoms</i>	18	“I feel that my physical complaints such as headache, tiredness, numbness etc are due to tension and vaginal discharge. I even feel weak which might be due to low hemoglobin and vaginal discharge because I heard people saying that when you get vaginal discharge you tend to become weak. It's like a vicious cycle, as when I have tension I get vaginal discharge and when I get vaginal discharge I suffer from all the physical symptoms, which I have mentioned earlier.”
Vaginal discharge	17	
Genital itching	6	
Menstrual pain	4	
“Wound in uterus”	3	
Burning sensation	1	
<i>Mental symptoms</i>	7	“When there is any tension I can't concentrate on my work. I get headache, I can't get sleep.”
Poor concentration	5	“I keep forgetting. Like supposing I have locked the door and gone, I feel like I have not locked it so I come back and check and I will find it locked. Many times this happens to me.”
Forgetfulness	1	
Nightmares	1	

uterus” (an idiom to describe cervical erosions) and burning sensation while passing urine. Apart from suicidal behaviour (reported below), than a quarter of

participants reported mental symptoms, most commonly poor concentration, forgetfulness and nightmares.

Nearly half of the women (14) reported having suicidal thoughts and six said they had attempted suicide (either by jumping in a well, consuming tablets or hanging), due to harassment by the husband and the in-laws. One participant described:

“I had thoughts of committing suicide. I had even gone to jump in the well. This was last year. And then my husband came and pulled me. He used to always abuse and lift his hands (to slap) and kick me. If I said anything he used to beat me. I don’t know what happened to me that day. I would have jumped in the well that day”.

Another participant commented:

“My mother-in-law and two sisters-in-law started cursing me for that, they started saying that it’s because of me he started staying at home and not going to work, and due to this there were fights in the family. I got fed up with this and one day I jumped in the well. My neighbors saved my life. Everyone around came to see me whether I am alive but my mother-in-law and sisters-in-law didn’t bother to come.”

### 3.2. Causal models

A majority of the women (22) reported that the onset for their distress related back to reproductive events such as pregnancies and sterilization.

“When I got my third child I started getting vaginal discharge. Now it is 12 years since it started. All my tensions started then only, when I started having only girls and when the third daughter was born I was thinking what to do with all the girls? How will I manage? I think during that time only I started getting white discharge.”

Five informants reported that the onset was linked to physical health problems, two of whom mentioned surgical operations and one being overweight. Five women mentioned bereavement (such as death of spouse, daughter and parents) and too much of household work each as reasons for the onset. Other reasons for onset of their distress were accidents (3) financial problems (3), abuse by in-laws (2), worry about children (1) and marital conflict (1).

“If I have trouble what can I do? I had lots of “tension” in the past six months lots of fights were taking place. Every time my mother-in-law would

look at me and say bad words to me. Because of that I had lots of tension and I could not get sleep during the night neither during the day.”

Women attributed their health problems to a range of causes (Table 3). The commonest cause was economic difficulties such as meeting day to day expenses and payment of debts. Another common reason for distress was worry about their children’s behavior and their future, about their personal health and about problems faced by their family members. More than half of the women associated their distress with reproductive health problems due to sterilization, vaginal discharge and infertility. Abuse and violence both from the spouse and in-laws were another major cause for physical symptoms and emotional difficulties.

Excessive domestic work responsibilities were also commonly cited as a cause for their illness. Analysis of the activities performed on 24 hour time line indicated that, on an average, participants begin their day at 6:16 a.m. and end their day at 22:04 h and they spent, on average, nearly 8 h in household activities. In addition, almost all the women described other activities (such as gardening, taking children studies, doing religious observances), in which they spent between three and four hours each day. Almost all the women (30) reported that they took rest or slept in the daytime; the average period was 68 min. Practically all engaged in some leisure activities, mainly watching television (75 min on average).

### 3.3. Impact and course of illness

The illness had an adverse impact on the lives of most participants; the commonest themes were difficulties in carrying out daily activities, impaired relationships with family members, difficulty with walking and impaired sexual relationships. A majority of the participants (22) described an adverse impact of their symptoms on their ability to carry out house hold responsibilities.

“I cannot wash clothes. But even then I have to do (this work). Then my back starts painning. My hands ache when I sweep or when I cut vegetables then I feel very weak.”

Thirteen women reported strained relationships with significant others resulting from their distress.

“Mostly since there is no peace in the house, then my temper I remove on my children and they get beating. Sometimes I bang things when I am completely irritated. I bang utensils or bang something.”



Table 3  
Causal explanations of mental distress ( $n=35$ )

Categories	N	Narrations
Economic difficulties	24	“The main cause of my tension is financial problems and I owe it all to my husband’s unemployment. Because of his unemployment I had to do three abortions otherwise I would have had another child right now with me. I know there is a communication gap. We needed more money. I had to ask my parents for it. With my son came in more responsibilities on me.”
Worries about children, family and health	27	“I don’t get sleep. Then in the morning at around 5:30 I sleep. When I am awake I only think about what will happen of our future. I have four children what will be their future. I think only about that and I often get headache.”
Reproductive and Gynecological problems	21	“After the birth of my third child I have backache I think it is due to sterilization. I get backache may be due to weakness ( <i>weakneasak lagun</i> ). My hands and legs tingle ( <i>hatt ani paie muieta</i> ). I think it may be due to sterilization.”
Excessive work loads	14	“As I keep doing my work I keep thinking. So I feel mentally tired. I have no time other than my house work. All that takes time and I don’t get time for myself. I told my husband to take me somewhere but he has no time. When you don’t have time for yourself you get irritated and angry. I could have been so relaxed if I had help. I need help. I tell my husband to go late for work and help me with the cleaning. But he says no.”
Trouble with in-laws	13	“When I became pregnant I could not do the housework and from that time my in-laws started troubling me. Continuously mother-in-law used to keep giving me bad words. My mother-in-law troubles me a lot and therefore I feel that I am become mental these days because she is troubling me. Now I am suffering a lot. I beat my child and get irritated with them. If I tell husband something he does not listen to me”
Marital conflict	13	“When my husband comes home drunk he says a lot of things. He gives me bad words. I don’t have any affair with other man. He is simply giving me bad words. If I have done something wrong then I can bear his bad words but I have not done anything and yet he is saying all these things for me. So I get worried. Sometimes I think about all this and cry. Whenever he beats me I don’t shout or utter a single word. I keep quiet. He beats with a belt and gives slaps. His hands are very strong”
Housing problems	10	“This house that we are staying now is my husbands and he has 7 brothers who are sharing this place. So each one of us has got one room each which we can call our own. I have 3 sons and I want them to have a room each for their future.”
Trouble with neighbors	6	“All the things that has happened throughout the day comes to my mind. Things about the neighbor telling me not to park my scooter, over and over again. Then that neighbor destroying my banana plant and also damaging my plants. These neighbors are cause of my tension”.

Six informants reported difficulty in engaging in activities which involved walking (for example shopping). Three participants had problems in maintaining sexual relationships with their spouse.

“My husband troubles me a lot. I don’t have any interest in sex now. I have even told your doctor about that. When my husband forces me my stomach pains. He is very much interested in all this but I am not. But I don’t tell anyone.”

Change in mental health at review was attributed mainly to coping strategies or changes in the social factors which were perceived as being causal. For example, one participant said:

“I am fine now. Last time I did not want to live. But now I am fine. A friend of mine made me understand and now everything is changed for me. She is telling me to do something then only everything will be fine for me. That friend told me to forget everything and do something. Government gives some scheme. I have to find out about it”.

One woman who had experienced improvement attributed this to a reduction in her experience of abuse, saying “No. now I am much better. My husband drinks but he does not beat me. I have lot of peace now”. Another participant, however, described a persistence of her mental health problems due to the lack of change in her circumstances:

“It is the same now. But he beats me more now. And if there is some other person in the house then he comes to beat me more because he knows that someone or the other will come to save me. Even the bangles in my hands are broken when he came to beat me. He kicks me. He does this when he comes home heavily drunk. If I tell him not to drink alcohol he comes to beat me more”.

### 3.4. Help-seeking

Help-seeking behaviors were categorized as allopathic (biomedical) help, home remedies, traditional help and religious help, and coping strategies. Most of

the women (30) had sought allopathic help, particularly for their reproductive health complaints (such as vaginal discharge and menstrual problems) and somatic symptoms (mostly for limbs and joints pains, headache, weakness and sleep difficulties). Women reported that allopathic doctors had prescribed tablets, tonics, vitamins and injections for their illnesses. Most participants were not satisfied with the treatment.

“I had gone to the doctor because I was not feeling well and the doctor told me that I am weak. My body aches when I lift something heavy or when I do too much of house work. If I am sitting down then I cannot get up and vice versa. I faint too many times. Doctor says that it is happening because I have less blood. If I don’t get sleep in the night then my body aches more. Now I cannot do my work fast. When I get a headache I take a Crocin (branded paracetamol) tablet. I had taken the tablets still I did not feel better.”

19 participants had tried home remedies, again mostly for reproductive health complaints and somatic symptoms (for headache, limbs and joints pains, and sleep problems).

“I took a lot of home medicines for white discharge like juice of the root of white hibiscus plant in milk, falooda seeds in milk but it didn’t help me much”.

“I think. Then I get a headache. If I go in the sun then also I get a headache and then whatever I eat, I vomit. Then I just apply Vicks and go to bed on an empty stomach. I don’t get sleep. I did not take any (allopathic) treatment for the lack of sleep. I put oil on my head and my sleep is better”

Ten women reported that they took traditional medicines, mostly for reproductive complaints.

“When I got white (vaginal) discharge two years back my husband had brought “*gauti vokot*” (local herbs) which are ground together and made into a powder. Pills of the powdered medicine had to be made and those pills had to be taken with milk. Since I don’t like milk I had taken it with water. I took that treatment only for four days. I felt better with it.”

Religious help was also sought by 15 participants for somatic symptoms and for mental unease. The religious practices included offerings to God in the temple (Hindu), participating in a church mass (Christian), prayers or saying *mantra* in a temple/church or at home, and reading holy and spiritual books.

“I was very sick and was on my death bed. I was not eating anything. I went to the doctor and he asked for the x-rays to be done. My Christian friend took me for a retreat (religious) at Parra. I prayed for my health. At the end of it, priest blessed me by keeping his hand on my head and at that particular moment I felt as if I am healed from my sickness. After many sleepless nights, that particular night I slept well. From that day on, I started praying regularly at home. Now I am feeling better as I pray every day. I get strength when I pray. I get peace of mind when I pray. I feel all my pain disappear when I pray”.

### 3.5. Coping strategies

Only a few of the women reported that they shared their tensions and worries with neighbours (6) and/or with their family members (5) (such as husband, mother, and children).

“I get scared when I get nervous, even if I am doing some work I just leave the work there and sit for a while or I go to my mother and speak to her. When I speak to my mother I feel good. She tells me good things, she tells me not to take things to the heart, listen from one ear and throw it out from another ear”

A few women said they coped with their problems by engaging in activities (such as watching television, going for a stroll and gardening).

“I like gardening too. So I have bought some flowerpots and now planted them. In the morning, I go to the garden and try to forget my worries by thinking, which plants need more water? Which manure to put? Which plant needs a stick for support? When I give my attention to the plants my mind is diverted and I don’t think about my worries.”

Other coping strategies reported by small numbers of women included sleeping or resting and “internal dialogue” or reasoning with one’s self.

“When I think too much I get palpitation of the heart. I say to myself, let it be, I should not think, by thinking I am spoiling my health. If I think too much no one will give me something nor will I get something”

One woman used alcohol and cigarettes and another said she has joined a Mahila Mandal Group (self help group of women) on the advice of the *anganwadi* worker (village health worker).

#### 4. Discussion

We have recently published findings from a population based study of risk factors for depressive disorder in women in Goa, India, demonstrating the strong association of poverty and gender disadvantage with depressive disorder (Patel et al., 2006). This paper describes the findings of a qualitative study nested in the cohort study, aimed at examining whether the quantitative associations were reflected in the narratives and to elucidate the mechanisms through which these associations were mediated. The salient findings of this research are that the women, who were identified as suffering from depressive disorder, give expression to their mental health problems primarily through an array of somatic complaints, that they locate their distress in the social disadvantages they experience in their daily lives, that the complaints often have cultural and symbolic significance, and that women often seek medical help, typically for their somatic complaints.

Almost all the women complained of a variety of body aches (limbs, joints, head) along with autonomic symptoms of palpitations, giddiness, numbness and others. Those bodily complaints are frequently accompanied by gynecological symptoms (particularly vaginal discharge), and sleep problems. This same constellation of somatic complaints has been found in a number of other studies of mental health in various parts of India (Patel et al., 1998; Raguram et al., 1996), as well as in other developing countries (Aidoo and Harpham, 2001; Goldberg and Bridges, 1988; Patel et al., 1995). Along with these physical problems there is frequent mention of overall “weakness” (*ashaktai*) and tiredness (*thokta*) “Weakness” is an extremely common idiom of psychosocial distress in India, as described for example by Nichter (1989), Patel et al. (2005a) and others. In north and west India the term, *kamjori* (weakness) is a common illness complaint (Kanani et al., 1994; Patel et al., 1994); in Bangladesh the corresponding term for weakness (*durbolata*) is similarly frequent, often associated with gynecological symptoms and other somatic problems (Ross et al., 2002). Nichter’s discussion of “idioms of distress” based on research in rural south Karnataka (India), noted that the term *nare nitrana* (nerve weakness), is often used to “refer to general feelings of instability, lack of well being and lassitude. Physical weakness is often used as an expression of mental weakness” (Nichter 1989: 95). A corresponding term, and common complaint, in Tamil populations is “*Shakti illai*” (“strength is lacking”). The importance of this concept is manifested throughout India in the widespread use of tonics, which are purchased even by poor families in attempts to counter “weakness” (Nichter 1989: 246–251).

It was not surprising, given that our sampling had purposively selected women with reproductive complaints, that a large proportion of women reported such complaints. What was notable was that many women perceived a strong linkage between their reproductive complaints and their other somatic complaints, and with stress in their daily lives. Thus, the strong association between reproductive complaints and mental health which we have reported in our quantitative study findings (Patel et al., 2006, 2005b) are echoed in these narratives. These linkages are best understood within the cultural context of South Asia. Other qualitative studies have also reported that women attribute or associate vaginal discharge with mental stress and other symptoms of depression such as weakness and worries (Bang and Bang, 1996; Oomman, 1998; Ramasubban and Singh, 1997). The mechanisms in this relationship may be similar to the somatization that is well-described in Western literature (Katon and Walker, 1998). Thus, somatic symptoms related to the reproductive tract may be experienced in women with depression due to reasons such as physiological changes associated with depression, heightened awareness of normal bodily functions and illness attributions (Chaturvedi et al., 1993; van Vliet et al., 1994). Cultural factors play an important role; thus, vaginal discharge may represent the female equivalent of the well-defined condition in men in South Asia called the *Dhat Syndrome* (Sumathipala et al., 2004). This condition in men is characterized by concern over sexual symptoms of seminal discharge associated with tiredness and depression. The reproductive somatic idiom may be adopted to seek help from medical professionals and to escape, albeit temporarily, from stressful situations. In extreme situations, women may adopt the sick role which legitimizes a range of otherwise unacceptable behaviours such as refusal of sex and inability to perform household chores (Nichter, 1981).

It may be argued that the diagnostic significance of somatic complaints (including weakness) for identification of mental disorders will vary according to the relative burden of disease in different societies; for example, the specificity of fatigue for the diagnosis of depression in settings where nutritional disorders are high. However, our work in this setting has shown that, despite a high prevalence of anemia and infectious diseases, depression is the most important risk factor for the complaint of “weakness” or chronic fatigue (Patel et al., 2005a). Thus, the most consistent and cross-culturally universal feature of depressive disorders are not the emotional or cognitive symptoms, but the somatic symptoms. The narratives we have elicited demonstrate that somatic complaints are central to the



conceptualization of depressive disorders. This is at odds with the diagnostic criteria for these disorders in modern classifications and calls into question the emphasis given to the emotional and cognitive features.

We noted the accuracy with which women's own views regarding causation match those of the quantitative component of the study. Both approaches found that economic difficulties and difficulties with interpersonal relationships (particularly related to marital relationships) were key risk factors. Thus, women's narratives conceptualized their distressing symptoms as a direct consequence of their socio-economic and interpersonal difficulties. There was no use of biomedical concepts, for example the notion that they may suffer from an illness or that their complaints were due to a biochemical disturbance in the brain. Thus, the illness was an experience clearly located within the social worlds of the participants and impossible to understand or describe outside this context. The idioms of distress were also closely linked to these social worlds. Despite the underlying mental health (stigmatized) implications of their problems, many of the participants had sought medical help, typically for reproductive complaints and somatic complaints of weakness and aches and pains. However, the majority of women described unsatisfactory consequences of help-seeking. A substantial proportion had also sought religious or traditional remedies (and other home treatment) for their complaints. Thus, the distress had a significant impact on women's lives, affecting their daily functioning as well as leading to help-seeking.

The personal experience of depression in our sample, the causal models and life circumstances described by women, and the patterns of help-seeking clearly demonstrate that depression is best understood and described from within the social worlds that women inhabit. For example, tiredness and general "weakness" is perceived as being the result of excess work and being unhappy with one's life. These complaints, in turn, could provide the necessary justification to seek medical help (while the primary determinants would not) where, as is typical for such complaints, women would receive vitamins or nutritional supplements and be advised better diet and rest. Similarly, vaginal discharge may be a complaint which is perceived, at least in part, as the result of unhappiness stemming from a violent spousal relationship. This complaint, in turn, may provide justification for help-seeking, and the diagnosis, often incorrect, of an infection supports the women's desire to avoid sexual intercourse. This has important implications for the cultural validation of the biomedical construct of depressive disorder: symptoms of depressive disorder may serve an important function, both for

women to make sense of their social circumstances and, for some at least, to find ways of escaping these even if only to see a doctor or be allowed to rest. Using biomedical mental illness labels would be unlikely to achieve either of these goals due to the stigma attached to such labels. Use of the idiom of mental illness carries the implication that the woman needs to see a mental health specialist, and she would risk further blame and stigmatization.

In this study we selected women who had been found to be suffering from depression as identified through use of a structured interview based on biomedical concepts. Thus, there is a risk that in using this definition of depressive disorder, we are committing a "category fallacy" (Kleinman, 1987). However, our research team has carried out ethnographic studies of depression in this population and found that the syndrome characterized by the clinical features of depression is recognized in local (Goan) cultural perceptions (Patel et al., 1997; Rodrigues et al., 2003). In conclusion, our study supports the findings of other ethnographic studies which emphasize the importance of social contexts for understanding depression, particularly in non-European populations (Bhui et al., 2002; Karasz, 2005; Aidoo and Harpham, 2001; Chowdhury et al., 2001; Patel et al., 1995). Our study, which was nested in a large population based cohort study, shows that social contexts are not simply an 'emic' view of unsophisticated people; instead, they perfectly match epidemiological findings of our study and those reported by other investigators in developing countries. We recommend the use of somatic idioms as the defining clinical features, and a broader, psychosocial model for understanding the aetiology and conceptualization of the clinical syndrome of depression for public health interventions and mental health promotion in the Indian context, as well as the culturally related other parts of the south Asian region.

### Acknowledgements

This study was funded by a Wellcome Trust Career Development Fellowship in Clinical Tropical Medicine to VP. We are grateful to the Directorate of Health Services, Government of Goa, which has collaborated with the project from its inception. We are grateful to Dr Suhas Lavanis and Dr Arvind Salelkar for their support to the study in the DHS; and Tamara Hurst and Fiona Marquet in London, and Anil Pandey in India for their administrative support to the project. Finally, we acknowledge the contribution of the research team of the Stree Arogya Shodh Project and the women who participated in this research.

## References

- Aidoo, M., Harpham, T., 2001. The exploratory models of mental health amongst low-income women and health care practitioners in Lusaka, Zambia. *Health Policy and Planning* 16, 206–213.
- Andrew, G., Patel, V., Ramakrishna, J., 2003. Sex, studies or strife? What to integrate in adolescent health services. *Reproductive Health Matters* 11, 120–129.
- Bang, R., Bang, A., 1996. Women's perceptions of white vaginal discharge: ethnographic data from rural Maharashtra. In: Gittelsohn, J., Bentley, M.E., Peltó, P.J., et al. (Eds.), *Listening to Women Talk about their Health: Issues and Evidence from India*. Ford Foundation, New Delhi, pp. 79–94.
- Bhui, K., Bhugra, D., Goldberg, D., 2002. Causal explanations of distress and general practitioners' assessments of common mental disorder among punjabi and English attendees. *Social Psychiatry and Psychiatric Epidemiology* 37, 38–45.
- Chaturvedi, S., Chandra, P., Isaac, M.K., et al., 1993. Somatization misattributed to non-pathological vaginal discharge. *Journal of Psychosomatic Research* 17, 575–579.
- Chowdhury, A.N., Sanyal, D., Bhattacharya, A., et al., 2001. Prominence of symptoms and level of stigma among depressed patients in Calcutta. *Journal of the Indian Medical Association* 99, 20–23.
- Gittelsohn, J., Bentley, M.E., Peltó, P.J., et al., 1994. *Listening to Women Talk about their Health: Issues and Evidence from India*. Ford Foundation, New Delhi.
- Goldberg, D., Bridges, K., 1988. Somatic presentations of psychiatric illness in primary care settings. *Journal of Psychosomatic Research* 32, 137–144.
- International Institute for Population Sciences, 2001. *National Family Health Survey-2, 1998–99: India*. IIPS, Mumbai.
- Kanani, S., Latha, K., Shah, M., 1994. Application of qualitative methodologies to investigate perceptions of women and health practitioners regarding women's health disorders in Baroda slums. In: Gittelsohn, J., Bentley, M.E., Peltó, P.J., et al. (Eds.), *Listening to Women Talk about their Health*. Har-Anand Publishers, New Delhi, pp. 116–130.
- Karasz, A., 2005. Cultural differences in conceptual models of depression. *Social Science & Medicine* 60, 1625–1635.
- Katon, W., Walker, E.A., 1998. Medically unexplained symptoms in primary care. *Journal of Clinical Psychiatry* 59 (suppl 20), 15–21.
- Kleinman, A., 1987. Anthropology and Psychiatry: the role of culture in cross-cultural research on illness. *British Journal of Psychiatry* 151, 447–454.
- Lewis, G., Pelosi, A., Araya, R., et al., 1992. Measuring psychiatric disorder in the community: a standardized assessment for use by lay interviewers. *Psychological Medicine* 22, 465–486.
- Nichter, M., 1981. Idioms of distress: alternatives in the expression of psychosocial distress in south India. *Culture, Medicine and Psychiatry* 5, 379–408.
- Nichter, M., 1989. *Anthropology and International Health*. South Asian Case Studies. Kluwer Academic Publishers, London.
- Oomman, N.M., 1998. *Poverty and Pathology: Comparing Rural Rajasthan Women's Ethnomedical Models with Biomedical Models of Reproductive Behaviour*. Johns Hopkins University.
- Patel, V., Kleinman, A., 2003. Poverty and common mental disorders in developing countries. *Bulletin of the World Health Organization* 81, 609–615.
- Patel, V., Prince, M., 2001. Ageing and mental health in developing countries: who cares? Qualitative studies from Goa, India. *Psychological Medicine* 31, 29–38.
- Patel, B.C., Barge, S., Kolhe, R., et al., 1994. Listening to women talk about their reproductive health problems in the urban slums and rural areas of Baroda. In: Gittelsohn, J., Bentley, M.E., Peltó, P.J., et al. (Eds.), *Listening to Women Talk about their Health*. The Ford Foundation, New Delhi, pp. 131–144.
- Patel, V., Gwanzura, F., Simunyu, E., et al., 1995. The explanatory models and phenomenology of common mental disorder in Harare, Zimbabwe. *Psychological Medicine* 25, 1191–1199.
- Patel, V., Pereira, J., Coutinho, L., et al., 1997. Is the labelling of common mental disorders as psychiatric illness useful in primary care? *Indian Journal of Psychiatry* 39, 239–246.
- Patel, V., Pereira, J., Mann, A., 1998. Somatic and psychological models of common mental disorders in India. *Psychological Medicine* 28, 135–143.
- Patel, V., Kirkwood, B.R., Weiss, H., et al., 2005a. Chronic fatigue in developing countries: population based survey of women in India. *BMJ* 330, 1190–1193.
- Patel, V., Pednekar, S., Weiss, H., et al., 2005b. Why do women complain of vaginal discharge? A population survey of infectious and psychosocial risk factors in a South Asian community. *International Journal of Epidemiology* 34, 853–862.
- Patel, V., Kirkwood, B.R., Pednekar, S., et al., 2006. Gender disadvantage and reproductive health risk factors for common mental disorder in women: a community survey in India. *Archives of General Psychiatry* 63, 404–413.
- Patel, V., Kirkwood, B., Pednekar, S., et al., in press. Why women suffer common mental disorders: a population based longitudinal study. *British Journal of Psychiatry*.
- Piccinelli, M., Wilkinson, G., 2000. Gender differences in depression. Critical review. *British Journal of Psychiatry* 177, 486–492.
- Prasad, J., Abraham, S., Akila, B., et al., 2003. Symptoms related to the reproductive tract and mental health among women in rural Southern India. *National Medical Journal of India* 16, 303–308.
- Raguram, R., Weiss, M.G., Channabasavanna, S.M., et al., 1996. Stigma, depression, and somatization in South India. *American Journal of Psychiatry* 153, 1043–1049.
- Ramasubban, R., Singh, B., 1997. *Gender, Reproductive Health and Weakness: experiences of Slum Dwelling Women in Bombay, India*. IUSSP Committee on Reproductive Health and University of Witswaterand, Rustenburg, South Africa.
- Rodrigues, M., Patel, V., Jaswal, S., et al., 2003. Listening to mothers: qualitative studies on motherhood and depression from Goa, India. *Social Science & Medicine* 57, 1797–1806.
- Ross, J., Laston, S., Peltó, P.J., Muna, L., 2002. Exploring explanatory models of women's reproductive health in rural Bangladesh. *Culture, Health and Sexuality* 4, 173–190.
- Sumathipala, A., Siribaddana, S.H., Bhugra, D., 2004. Culture-bound syndromes: the story of Dhat syndrome. *British Journal of Psychiatry* 184, 200–209.
- van Vliet, K.P., Everaerd, W., van Zuuren, F.J., et al., 1994. Symptom perception: psychological correlates of symptom reporting and illness behaviour of women with medically unexplained gynecological symptoms. *Journal of Psychosomatic Obstetrics and Gynaecology* 15, 171–181.
- World Health Organization, 2001. *The World Health Report 2001: Mental Health: New Understanding, New Hope*. WHO, Geneva.