

Depression and anxiety among women in an urban setting in Zimbabwe

MELANIE A. ABAS¹ AND JEREMY C. BROADHEAD

From the Institute of Psychiatry and the Maudsley Hospital, London; and Department of Psychiatry, University of Zimbabwe Medical School, Harare, Zimbabwe

SYNOPSIS One hundred and seventy-two women randomly selected from a Zimbabwean township were interviewed with a Shona screen for mental disorders and a semi-structured interview to assess symptoms suggestive of emotional distress, followed by the Present State Examination. Using criteria slightly stricter than threshold level 5 of the PSE-CATEGO-ID system, 30.8% of women had a depressive or anxiety disorder during the previous year. Nearly all disorders met Bedford College criteria for depression; 65% of these also had anxiety features. Only 0.6% of women had a 'pure' anxiety disorder not preceded by or associated with depression in the study year. Compared with London, the higher annual prevalence of disorders in Harare could mostly be accounted for by an excess of onset cases in the study year, 70% of which made a full or partial recovery within 12 months. The women's own words for these episodes included 'thinking too much', 'deep sadness' and a variety of terms describing heart discomfort, interpretation showing many of the latter to be expressions for grief, fear, or the possession of an insoluble problem, and 73% explained their symptoms as caused by a specific social stressor.

INTRODUCTION

There has been a long debate about the characteristics and prevalence of depressive disorders found in various countries in Sub-Saharan Africa (Prince, 1968; German, 1972; Rwegellera, 1981). Although psychiatrists have mostly been confident in identifying depression in such settings, (German, 1987; Odejide *et al.* 1989), some have stressed the preponderance of somatic symptoms (Jegede, 1979) and others the rarity of guilt, self-depreciation and suicidal ideation (Prince, 1968) although others have found symptom profiles similar to those of 'Western' patients (Field, 1960; Rwegellera, 1981; Majodina & Johnson, 1983). Many of these reports are confined to hospital samples. While early accounts indicated the rarity of depression, community studies have since found rates higher than those found in London, Canada or the United States (Leighton *et al.* 1963; Orley & Wing, 1979; Hollifield *et al.* 1990) and it has been suggested that this may be

explained by the accumulation of untreated chronic cases (Orley & Wing, 1979) and by the harsh environment (Hollifield *et al.* 1990). This paper is the first of a series that describes a psychiatric and social survey of women in a Zimbabwean township. We report here on the diagnosis, prevalence and features of depressive and anxiety disorders in these women. Further papers will report on the role of life events, difficulties and vulnerability factors in the aetiology.

Two-stage case finding is standard in the investigation of mental disorders in community samples. However, debate exists about the relative merits of instruments (Williams *et al.* 1980) and the problems of case definition and classification (Shepherd, 1977; Beiser, 1985). Although there may be problems in the transposition of diagnostic criteria from one setting to another (Weiss *et al.* 1992), remarkable similarities have been found in the manifestation of non-psychotic disorders across cultures (Beiser *et al.* 1994) with recent work confirming this for the Zimbabwean situation (Patel *et al.* 1995*a, b*). For the present study, a newly developed and validated first-stage screen was

* Address for correspondence: Dr Melanie A. Abas, Section of Old Age Psychiatry, Institute of Psychiatry, London SE5 8AF.

used, generated from qualitative interviews with a range of local personnel. Although diagnostic criteria employed symptoms derived from a Shona translation of the Present State Examination (PSE) (Wing *et al.* 1974), open interview techniques prior to PSE assessment allowed women to describe any symptoms in their own terms and to ascribe causal models for these. The study was prompted by primary health care workers in Harare who identified a need for more information about common mental disorders (Abas *et al.* 1994).

Setting of the present study

Zimbabwe has a population of 10 million, most of whom live and farm in the rural lands. Over the past 10 years, as a result of the pressures to move to urban areas in the search for paid employment, the population of the capital, Harare, has doubled (World Bank, 1993). Most of this increase has taken place in low-income 'high density' suburbs in the south of the city, one of which, Glen Norah (population around 35000), was the setting for the present study.

Within Glen Norah, accommodation varies from ranks of tin-roofed concrete dwellings, some only half-completed, to wooden shacks and flats. These are built on designated plots of land, called 'stands', arranged in numbered order on a grid of single track roads. Most are surrounded by dusty plots of vegetables and fruit trees. Dense overcrowding is common. All have access to cold water and some to electricity. There are government schools, a clinic, places of worship, small shops, beer halls and a sports field. Most men are employed in the manual or 'blue collar' sectors in central Harare. In 1990, most women in Glen Norah were the wives of such men, having mostly moved to the city in adulthood. Some had regular jobs, but most were unemployed or worked informally selling vegetables or handicrafts from roadside stalls. Many travelled regularly between their husband in the township and their family in the rural village, returning to a subsistence farming lifestyle for several months in the wet season.

METHOD

Construction of the sample frame

Using data from the Department of Works, City of Harare, 200 housing 'stands' were selected

from a total of 5000 using random number tables. All 200 stands were visited. Using information from at least two occupants of that and/or the adjacent stand, women who lived at the selected stand, aged 18–65, were listed and numbered from 1–6. At no selected stand were there more than six eligible women. One of the numbered women was selected for interview using the throw of a dice. In order to avoid undersampling from those living in more crowded homes (P. Bebbington, personal communication) for stands at which more than four women lived, two were selected using two throws of the dice.

Instruments

Sociodemographic questionnaire

The questionnaire was a modification of that used by Folta & Deck (1987), for a study of women in Zimbabwe, and the Bedford College Demographic devised by Brown & Harris (1978).

The Shona Screen for Mental Disorders (SSMD)

The SSMD was devised as a screening instrument to be used by non-medical personnel for the detection of symptoms of common mental disorders present for at least a 2-week period during the previous year. Local idioms of emotional distress were collected from village health workers, primary care workers, traditional healers who specialized in mental illness, psychiatric nurses, psychologists and patients attending a psychiatric unit, using a combination of in-depth interviews and focus group discussions (Khan & Manderson, 1992). As a result, 20 items were generated (see Table 1). Some of these were 'new' Zimbabwean items (e.g. 'thinking too much'; 'a sensation of things crawling through the body'; 'having problems which made you worry') but most were either identical to, or very close to, concepts common to 'international' instruments such as the Present State Examination (Wing *et al.* 1974) and the Self-Reporting Questionnaire (Harding *et al.* 1980). For the provisional validation exercise, 65 subjects were interviewed blind with the SSMD, i.e. 20 patients attending Harare and Parirenyatwa psychiatric units with a range of diagnoses (including depressive and anxiety disorders) made by two local psychiatrists; 25 patients meeting ICD-9 criteria for depression

Table 1. *The Shona Screen for Mental Disorders (SSMD)*

I would like to get an idea of how you have been feeling during the past year (12 months). Was there a time in the year when you felt any of these nearly every day for more than two weeks at a time:

Dates: from ... to ... from ... to ... recovery?

- 1 thinking too much
- 2 headaches
- 3 things crawling through the body
- 4 dizziness
- 5 crying when you were on your own
- 6 inability to put your mind on one thing
- 7 had problems which made you worry a lot
- 8 wanting to be alone and not like visiting other people
- 9 problems getting off to sleep or opening your eyes too early
- 10 your daily work was suffering due to things that kept coming into your mind
- 11 slowed down and taking longer in your way of doing things
- 12 more short tempered than usual
- 13 loss of interest in food
- 14 frightened with your heart beating fast in your chest
- 15 deep sadness
- 16 less worthy than/beneath other people
- 17 no longer enjoying the things you used to enjoy in life
- 18 exhausted and worn out even when you were not working very hard
- 19 felt like throwing down the spears, like life was hopeless
- 20 had thoughts about, or took any action to end your life?

or anxiety drawn from primary care attenders recognized to be significantly distressed by local primary care nurses, and 20 non-cases. Using a cut-off score of 6, its sensitivity and specificity, when used by non-medically qualified Shona interviewers for the detection of depression or anxiety, were 85 and 80% respectively with an overall misclassification rate of 18%. Using a cut-off score of 4 the sensitivity and specificity were 91 and 69% respectively. Further validation of the SSMD against Bedford College Criteria for depression or anxiety was carried out as part of this study (see later).

Life Events and Difficulties Schedule (LEDS)

An adaptation of the LEDS (Brown & Harris, 1978) for the Zimbabwean situation was used to collect information about life events and ongoing difficulties experienced by women in the year before interview. This will be described in detail in a companion paper.

Shona Symptoms Interview (SSI)

The SSI was derived in part from the Clinical Interview Schedule (Goldberg *et al.* 1970) (e.g. unstructured section to record all symptoms and to establish their frequency, onset, duration and intensity), in part from Kleinman's (1988)

recommended questions for eliciting explanatory models (e.g. 'What do you call your problem/the way you were feeling then?' 'What do you think caused it?', 'What have you done to help yourself?', 'Who have you been to see?', 'What problems has this brought about in terms of your work, relationships, activities etc?') and in part from a questionnaire used locally (D. Sanders, personal communication) to elicit further consequences and help-seeking (e.g. 'How many clinics/traditional healers/faith healers/private doctors have you visited with your problem?', 'What happened?', 'What advice would you have for another woman going through a similar situation?'). The SSI was piloted in 10 primary care attenders and the concept validity of questions verified by colleagues at the Harare City Health Department and the University of Zimbabwe Departments of Psychiatry and of Community Medicine. It was used to enquire about any period in the year during which the respondent has reported symptoms or life problems as identified by the SSMD and/or the LEDS. Medical history was also taken. Using the SSI, many symptoms subsequently rated using the PSE were initially enquired about in a more open fashion.

Present State Examination (PSE) (Wing *et al.* 1974)

The brief version of the 9th edition was used (WHO Study on Strategies for Extending Mental Health Care, Instrument 5). This consists of items 1 to 46 of the full version plus probes for hallucinations and delusions. Where necessary, psychotic items could be rated. Semantic and conceptual equivalence were aimed for and questions thought not to have content equivalence were omitted or modified. On this basis only one full item (item 7, muscular tension) had to be excluded but several subsidiary questions within items were adapted, e.g. the check list for autonomic symptoms of anxiety included 'the sound of snakes rumbling in the stomach' but not 'butterflies', and common stimuli provoking fear included chameleons, with one of the criteria for rating inappropriate fear of a chameleon being inability to 'touch a dead one with a stick' given that pictures of animals are not commonly seen. The process of preparing the Shona translation is described in the Appendix.

Use of the PSE was extended to cover the peak month of any symptoms in the previous year as well as the mental state at the time of interview as has been well documented by Brown & Harris (1978, 1986) (see second-stage interview).

Field work

As a preliminary, nurses from the Harare City Health Department met with representatives of local agencies, including councillors, church leaders, police, traditional healers, and women's organizations, to gain their permission and to obtain their advice about interviewing local people. Addresses from the random list of stand numbers were located with the help of local housing officials whose involvement reassured householders that the study had community approval. The field work was carried out from February 1991 to July 1992.

First-stage interviews

First-stage interviews were carried out by one of a trained team of three Zimbabwean Shona-speaking women, each with a background in psychiatric nursing or social work. Meetings were held at intervals of 3 months to maintain reliability. Selected women were visited and the study described in terms of research about women's health. If a selected woman was absent, the stand was revisited until she was found. Interviews were arranged for times when relatives, especially husbands and mothers-in-law, were away, which was usually uncomplicated as 95% of spouses of married women were employed outside the home and any in-laws either worked or regularly visited other relatives. Interviews were carried out in privacy (except for the presence of small children), often outdoors, and were tape-recorded. The sociodemographic questionnaire was completed first followed by the psychiatric screen (SSMD). The LEDS then followed, although this often required further visits to complete.

Second-stage interviews

All women who scored four or more on the psychiatric screen (plus a random 30% of those scoring less than four) were revisited by the original interviewer together with a psychiatrist (J.C.B. or M.A.A.) trained in the use of the PSE and with 1 year's prior experience in the

preparation and use of the Shona translation. The interview began with the SSI to elicit the woman's own description and explanation for any episodes of emotional distress in the previous year and to begin to identify onset, peak and time course. Then, using the PSE, the woman's mental state was assessed for the time of interview, representing the end of the study year, and, retrospectively, for the peak month of any symptoms in the study year. The trained Shona interviewer asked the obligatory questions, giving the subject's response verbatim, and then clarifying with additional probes as indicated by the psychiatrist. Following the procedure described by Brown & Harris (1978), the interviewer dated the onset, fluctuations in severity of key symptoms (change points) and any recovery within the year, i.e. to normal or to 'borderline caseness' (see below) as accurately as possible using events such as school terms as anchor points.

Where necessary, a brief physical examination was carried out and/or any medical notes were read (in Zimbabwe, patients keep their own outpatient and primary care medical cards). In order to test the possibility of the original screening interviewer interpreting in a biased way, a different trained team member acted as interpreter for a random 40% of those having a PSE interview.

Indices of disorder and classification

PSE interviews were analysed using the computer programs CATEGO and Index of Definition (ID), which have been described fully elsewhere (Wing *et al.* 1978). The ID is a 9-point scale. Definitely diagnosable disorders have an ID of 5 or above, where higher scores represent increasing severity. Use of this system allowed comparison with one month cross-sectional community surveys in Uganda, London and Canberra (Orley & Wing, 1979; Bebbington *et al.* 1981; Henderson *et al.* 1981).

Using symptoms generated by the PSE interview, 'Bedford College' criteria were applied to ascertain caseness of depression and anxiety, as described by Finlay-Jones *et al.* (1980), being slightly stricter than threshold level 5 of the PSE-CATEGO-ID system. For 'case' depression, depressed mood and a minimum of 4 of 10 core PSE symptoms of depression are required, and for 'borderline caseness', 1-3 core

symptoms. The threshold for caseness has been shown to be similar to Research Diagnostic Criteria for major depression (Dean *et al.* 1983) and thus, to those of the revised third edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-III-R) (American Psychiatric Association, 1987). The three alternative Bedford College criteria for 'case' anxiety are: (1) free-floating autonomic anxiety OR panic attacks rated '2' using the PSE; or, (2) free-floating anxiety rated '1' AND panic attacks rated '1'; or, (3) situational anxiety rated '1' AND avoidance of the feared situation rated '2'. For 'borderline' anxiety a rating of '1' is required for either free-floating anxiety, situational anxiety or panic attacks. Bedford College criteria have been used in annual prevalence studies in London (Brown & Harris, 1978) and Spain (Gaminde *et al.* 1993).

RESULTS

Response rates

Of 200 'stands' randomly selected, 16 had no occupied dwelling, 11 were inhabited only by men and 8 had more than 4 women resident aged 18–65 (hence 2 were selected from each of these 8). Thus, 181 women were identified for interview: five of these women were never found (despite up to 10 revisits over 12 months); two completely refused and two interviews were discarded because the women were later uncooperative. The take-up rate for completed first-stage interviews was, therefore, 95%.

Of 70 women who scored four or more on the first-stage screen (SSMD), and a random 30% (31) of the total sample scoring fewer, 92 agreed to take part in second-stage SSI and PSE

interviews (92% take-up for completed second-stage interviews). Of these 92 women, 51 were confirmed to have had an episode of depression or anxiety in the study year. Two additional women who scored highly on the first-stage screen, and whom the screening interviewer felt to be definite cases of depression, refused second-stage PSE interviewing. In these two cases the symptoms from the SSMD were used for ID-CATEGO analysis and for determining caseness by Bedford College criteria.

One-month prevalence of depression and anxiety

Using threshold 5 or above of the PSE-CATEGO-ID system, the cross-sectional prevalence of depressive and anxiety disorders occurring in the month before interview was 15.7%: 12.2% (21/172) had a depressive disorder (ICD-9 296.2 or 300.4); and 3.5% (6/172) an anxiety disorder (ICD-9 300.0, 300.2 or 300.3). For anxiety disorders, this is almost identical to rates reported using the PSE-CATEGO-ID system from Camberwell, Canberra and Uganda (Table 2). For depressive disorders, the prevalence in Harare is 1.4 times higher than that in Camberwell, nearly double that in Canberra and half that from Uganda (Table 2).

Using the slightly stricter Bedford College caseness criteria, 12.2% had a depressive or anxiety disorder in the month before interview. This compares with 11.4% in London.

One-year prevalence of depression and anxiety

Using Bedford College caseness criteria, the 1-year period prevalence of depressive and anxiety disorders was 30.8% (53/172), 1.8 times the

Table 2. One month prevalence (%) for PSE-CATEGO diagnoses in different community surveys of women

| PSE-CATEGO classes and ICD-9 equivalents | | Canberra* | Camberwell† | Uganda‡ | Harare |
|--|-------|-----------|-------------|---------|--------|
| A+(AN+) | 300.0 | | | | |
| B+ | 300.3 | 3.0 | 4.5 | 4.3 | 3.5 |
| A+(PN+) | 300.2 | | | | |
| D+ | | | | | |
| R+ | 296.2 | 6.7 | 9.0 | 22.6 | 12.2 |
| N+ | 300.4 | | | | |

* From Henderson *et al.* (1981).

† From Bebbington *et al.* (1981).

‡ From Orley & Wing (1979).

Table 3. One-year period prevalence of depressive and anxiety disorders in three populations

| | Harare, Zimbabwe (urban) (<i>N</i> = 172) % | London, UK* (urban) (<i>N</i> = 458) % | Ayala Spain† (rural) (<i>N</i> = 169) % |
|--|--|---|--|
| Total prevalence | 30.8 | 17.0 | 10.6 |
| Cases with onset in study year | 18.0 | 8.0 | 6.6 |
| Cases with onset before study year lasting less than 12 months | 4.1 | 2.0 | — |
| Cases lasting more than 12 months | 8.7 | 7.0 | 4.0 |

* Data from Brown & Harris (1978).

† Data from Gaminde *et al.* (1993).

highest reported European prevalence using the same criteria (Camberwell, London; Brown & Harris, 1978) and three times that seen in a rural Spanish-speaking area of the Basque country (Gaminde *et al.* 1993) (Table 3). Eighteen women (10.5%) had 'pure' case depression, i.e. without significant anxiety, 12 (7.0%) had mixed case depression/case anxiety (three of these remained cases of anxiety only at interview, i.e. depressive symptoms had resolved), 22 (12.8%) had mixed case depression/borderline anxiety and 1 woman (0.6%) had an episode of anxiety not preceded by or associated with depression in the study year.

The retrospective cross-sectional prevalence of depressive and anxiety disorders, meeting Bedford College criteria, was 15.7% at 6 months before interview and 12.8% at 1 year before interview.

Detailed results of the 53 women who met Bedford College criteria for depressive or anxiety disorder during the study year

Duration and severity of depressive disorders

There were significantly more onset cases in the study year (31/172) in Harare than in London (37/458) (OR 2.50, CI 1.45–4.31; $P = 0.0003$) but the prevalence of chronic cases, i.e. those lasting more than 12 months, was very similar (Harare, 8.7%; London, 7.0%). Twenty-two

Table 4. Proportion of cases of depression and anxiety by CATEGO-ID level in Harare and London

| CATEGO-ID level | Percentage of all cases of depression | | <i>P</i> |
|-----------------|---------------------------------------|--------------------------------------|----------|
| | Harare (<i>N</i> = 53) % | Camberwell* (<i>N</i> = 38) % | |
| 5 | 46 | 74 | < 0.01† |
| 6 | 31 | 26 | NS |
| 7 | 17 | 0 | < 0.01‡ |
| 8 | 6 | 0 | NS |

* Data from Brown & Harris, personal communication on 2nd Camberwell series.

† $\chi^2 = 6.82$, *df* + 1.

‡ Fisher's exact 2-tailed test.

women in Harare (12.8%) had an onset in the study year and improved or recovered (mean duration 4.4 months; *s.d.* ± 2.6), 9 (5.2%) had an onset in the study year and remained cases, 7 (4.1%) had an onset beginning outside the study year with caseness lasting less than 12 months in the study year and 15 (8.7%) were chronic. As shown in Table 4, compared with London, a significantly higher proportion of cases in Harare were at higher levels of severity with 23% reaching ID 7 or 8. Forty per cent (6/15) of cases that had lasted over 12 months reached an ID of 7 or 8 whereas only 16% (6/38) of cases lasting less than 12 months reached those levels of severity (OR 3.6, CI 0.8–17.0, $P = 0.06$).

Sensitivity and specificity of the Shona Screen for Mental Disorders (SSMD)

The sensitivity and specificity of the SSMD using a cut-off score of 4 were 96% and 83%, which is slightly better than the original validation exercise. For 40% of women, the PSE interpreter was different from the interviewer who had given the screen. Separate analysis of this subsample revealed no difference in specificity or sensitivity.

Present State Examination symptom profiles of women with depressive disorders

Table 5 compares the PSE symptom profiles of 51/53 women with depressive disorders in Harare (two refused a PSE, see Response Rates) with those of 38/39 women with depression or anxiety from a London community series (Brown & Harris, 1978). Self-depreciation,

Table 5. Comparison between Harare and London of the frequency of Present State Examination symptoms in women with depressive and anxiety disorders

| | Percentage of all cases with each symptom | | |
|--|---|-----------------------------|------------|
| | Harare (<i>N</i> = 51) | London† (<i>N</i> = 38) | <i>P</i> |
| Self-depreciation | 87 | 36 | *** |
| Pathological guilt | 33 | 0 | *** |
| Weight loss due to poor appetite | 83 | 31 | *** |
| Loss of interest | 81 | 44 | *** |
| Situational autonomic anxiety | 22 | 67 | *** |
| Hopelessness | 80 | 50 | ** |
| Subjective physical ill-health (Objectively physically ill) | 95 (37) | 72 (49) | ** (NS) |
| Social withdrawal | 64 | 41 | * |
| Tension pains | 78 | 56 | * |
| Ideas of reference | 20 | 13 | NS |
| Early morning wakening | 56 | 44 | NS |
| Suicidal plans or attempt | 25 | 15 | NS |
| Diurnal mood variation | 19 | 10 | NS |
| Worrying | 67 | 67 | NS |
| Free-floating autonomic anxiety | 65 | 46 | NS |
| Panic attacks | 18 | 21 | NS |

* $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$.

† Personal communication Tirril Harris, taken from Camberwell 2nd series (Brown & Harris, 1978).

pathological guilt, weight loss and loss of interest were significantly commoner among the Harare sample ($P < 0.001$). Passive social withdrawal and subjective physical ill health were also commoner at lower levels of significance ($P < 0.05$). Situational anxiety was significantly commoner in London ($P < 0.001$), although the prevalence of generalized anxiety and panic attacks was similar in both settings. There was no significant difference in early morning wakening or diurnal mood variation between Harare and London.

Sociodemographic associations with depression and anxiety

Low income, poor educational achievement, lack of formal employment and overcrowding (but not overall housing quality) were all associated with caseness of depression and/or anxiety (Table 6). However, each of these four factors was related to at least two others out of the four and, after adjustment, none of them remained independently associated (Table 6). (Most houses comprised four small rooms with one WC, accommodating a mean of 8.5 people,

including children and infants, range 2 to 22. A woman was categorized as 'overcrowded' if she normally shared with more than 8.)

Age and number of children were not associated with depression or anxiety but there was a non-significant trend for a 'U-shaped' association with number of children in that those with four or more children, or with one or no children, were more likely to be a case than those with two or three children (OR 2.80, CI 0.99–8.03, $P = 0.03$; OR 1.89, CI 0.73–4.98, $P = 0.15$). Marital status was only associated with chronic severe depression in that women who were divorced, separated or widowed ($N = 17$) were significantly more likely to have been a case for over a year, at ID 6 or above, than were women who were married ($P = 0.01$) or who had never married ($P = 0.04$).

Language for emotional distress, explanatory models and help-seeking behaviour among women with depressive and anxiety disorders

A total of 51 women (out of 53) who met the criteria for a depressive or anxiety disorder were interviewed with the SSI before the PSE.

Language for emotional distress

Fifty-two different terms were volunteered to describe the way they currently or had previously felt. Sixty per cent (31/52) of these terms were physical (e.g. weakness, pain moving through the body, headaches, stomachaches, a hot body, having 'high blood pressure'). However, the 21 psychological and behavioural terms mentioned were used more frequently. Two-thirds of cases described 'thinking too much' or 'thinking a lot' (*kufungisisa*), which has negative connotations conveying worrying and dwelling on troubled thoughts and decreasing one's normal activities. Forty-nine per cent volunteered deep sadness (*kusuwisisa*), and 31% crying. The 'normal' crying and grieving associated with mourning was called *kuchema*. Although 57% offered symptoms related to the heart, these fell into different categories e.g. 42% of cases described *hana kurova zvakanyanya*, literally that their heart was beating too fast, but commonly used to convey fright, fear or worry. A quarter described a painful heart (*mwoyo unorwadza*), or a heavy lump sitting on the heart. This communicated the carrying of grief or of a deep-seated insoluble problem and was

Table 6. Prevalence of depression and anxiety among women in Harare by sociodemographic factors

| Factors | Depressed % (N) | Odds ratio (95% CI) and P value | Adjusted odds ratio (95% CI) and P value |
|--|-----------------|-------------------------------------|--|
| Employment | | | |
| No formal employment | 35 (46/132) | OR 2.94 (1.06–8.33) P = 0.02 | Adj* OR 1.84 (0.67–5.00) P = 0.23 |
| Formal employment | 15 (6/39) | | |
| Income | | | |
| Below the average | 40 (30/77) | OR 2.22 (1.06–4.67) P = 0.02 | Adj† OR 1.80 (0.88–3.7) P = 0.11 |
| Above the average (10 unknown values) | 22 (19/85) | | |
| Overcrowding | | | |
| ≥ 8 persons per dwelling | 40 (30/77) | OR 2.19 (1.06–4.54) P = 0.02 | Adj† OR 1.66 (0.83–3.30) P = 0.15 |
| < 8 persons per dwelling | 23 (21/93) | | |
| Certificates of secondary education passed | | | |
| None | 39 (44/114) | OR 3.45 (1.23–10.00) P = 0.01 | Adj‡ OR 1.54 (0.55–4.28) P = 0.41 |
| 1 or more (7 unknown values) | 16 (8/51) | | |

* Adjusted for income, overcrowding and certificates of education passed.

† Adjusted for employment and certificates of education passed.

‡ Adjusted for employment, income and overcrowding.

distinct from physical heart pain. It was seen with bereavement, but also followed rejection or being let down. Others spoke of 'my heart is aching' (*mwoyo wangu uri kurwadza*), which is understood as 'I am sad'. Poor sleep was mentioned by 36% and for 34% headaches, which were constant 'as though I am carrying a stone on my head', or 'as though my head is full of water'.

Explanatory models

Seventy-three per cent (37/51) gave one or more specific 'social' stressors, such as a severe marital dispute, a bereavement (of a child, sibling, husband or parent), a child's illness, profound economic hardship or infertility, as the direct cause of their symptoms and 47% (24/51) said the cause of their symptoms, such as lack of sleep, sadness and headaches was 'thinking too much', although 17 of these 24 (71%) also said they had been 'thinking too much' about one or more of the specific stressors mentioned above. Sixteen per cent (8/51) thought their symptoms were due to a physical illness such as, high blood pressure, heart disease, or 'womb' disease (although nearly all of these (7/8) had also given 'thinking too much' or a social stressor as a cause of symptoms). Of 37 women who

attributed their symptoms to social stressors, 12 ascribed the underlying cause of these to spiritual problems (e.g. misfortune brought about by angry ancestor spirits) or witchcraft. Hence, 12/51 (24%) women believed that supernatural factors were implicated in causation and many women gave more than one reason for their symptoms. Twelve per cent (6/51) did not know the cause of their symptoms.

Help-seeking behaviour

Help was sought mainly from family, friends or church members by 65% (33/51) with 29% (15/51) using only these sources. Fifty-five per cent (28/51) had consulted a traditional healer (i.e. spirit medium or herbalist) or a faith healer, although over half of these said they had been coerced into doing so by relatives. Nine of these 28 (32%) had consulted for their symptoms of distress e.g. rapid heart beat or lack of sleep and 19/28 (68%) consulted seeking an explanation for the causes of distress such as infertility, or a child's death. Twenty-nine per cent (15/51) had asked for help at a primary care clinic, mainly for symptoms of distress (11/15) and/or for physical conditions underlying their distress, e.g. for a child's illness, or a sexually transmitted disease. Eighty-two per cent (9/11) of those

attending for symptoms of emotional distress were prescribed paracetamol and 18% (2/11) diazepam. Fourteen per cent (7/51) consulted a private GP, three of these (43%) were prescribed diazepam and one received 'tablets for appetite'. None of the 51 women had received an antidepressant.

DISCUSSION

Using the PSE-CATEGO-ID system, the cross-sectional prevalence of depressive disorders, at or above ID level 5, among a random sample of women living in Harare, was 1.4 times higher than that in Camberwell (Bebbington *et al.* 1981), double that in Canberra (Henderson *et al.* 1981) and half that in Uganda (Orley & Wing, 1979) (Table 2). The prevalence of anxiety disorders in Harare was very similar to that in the other three settings. Using Bedford College caseness criteria, the latter being slightly stricter than threshold level 5 of the PSE-CATEGO-ID system, the cross-sectional prevalence of depressive and anxiety disorders in Harare was only slightly higher than that in London but the 1-year prevalence was nearly double (Brown & Harris, 1978) (Table 3). Nearly all the Zimbabwean cases met Bedford College criteria for depression, 65% of these also having anxiety features. Only 0.6% of the total sample had a 'pure' anxiety disorder not preceded by or associated with depression in the study year. Compared with London, the excess 1-year period prevalence in Harare can mostly be explained by the high inception of depressive disorders (with or without anxiety) in the study year (Table 3), 70% of which fully, or partly, recovered within 12 months.

The diagnostic psychiatric interview was carried out once women had been asked about stressors experienced during the year. It is, thus, possible that we have overrated what in fact were non-pathological 'distress reactions' or that women exaggerated their symptoms in the light of recalling disagreeable life situations. Another problem may have been poor translation of the Present State Examination (PSE), compounded by the difficulties of examining through an 'interpreter' (Giel & Van Luijk, 1969) and women may have had trouble in accurately recalling symptoms over the previous

12 months. However, we think these unlikely sources of invalidity. PSE caseness correlated highly with scores above cut-off on the screen, developed from terms generated by local psychiatric and non-psychiatric personnel, including traditional healers specializing in mental illness, and carried out by one of three Shona interviewers before information was collected about life events. The point prevalence at 1 year before interview was not significantly different from the prevalence found at the time of interview suggesting there had not been retrospective over-reporting. Before the PSE, the SSI elicited rich accounts of numerous symptoms, giving little doubt that those subsequently rated using the PSE had actually been present and were not just a result of women agreeing with questions that they failed to understand. The PSE was translated along recommended guidelines (see Appendix) and administered by one of two psychiatrists, trained in its use, with a year of prior experience of working through interpreters in Harare. The possibility that symptoms, such as weight loss, were related to physical illness was excluded as far as possible by consulting the women's medical records and by carrying out a physical examination. The three trained interpreters, with the study throughout its duration, were selected and trained for, among other skills, their readiness to report subject's responses verbatim and the study design allowed for women to be seen several times if there was any doubt about the clinical material collected.

The criteria for caseness of depressive and anxiety disorders were those recognized by 'international' systems of classification. Although there may be problems in the transposition of such criteria (Weiss *et al.* 1992), recent work illustrates their relevance for the Zimbabwean situation. Having collected idioms of distress from ethnographic and qualitative studies, Patel *et al.* (1995a) have generated a 14-item indigenous measure of common mental disorder, validated by diagnoses made by local care providers as well as by Western criteria. All of the concepts of Patel *et al.*'s instrument, except two concerning enquiry about disturbing dreams and stomach-ache, are included in the PSE and 10/14 (79%) were in the first-stage screen developed and used for the present study. Of the 11 symptoms that constitute Bedford

College criteria for depression, all except two (weight loss and self-depreciation) were either identical to, or closely linked to, concepts in Patel's 'indigenous' screen. The majority of disorders selected by Patel *et al.*'s (1995b) instrument in Harare were classified as cases of depression or anxiety meeting Western criteria. This suggests that we are highly likely to have appropriately established cases of locally relevant common mental illness.

Why might women in Harare experience such a high annual prevalence of depressive disorders, half of which also occurred at a significantly greater level of severity than that seen in a comparable sample in London? Depression was commoner in women with low income and low educational achievement, in unemployed women and in those living in severely overcrowded conditions. These demographic associations and their relationship to life events and to vulnerability will be explored elsewhere. Only 12% of the women did not identify a reason for their symptoms, with most giving one or more specific stressors such as a marital crisis, the death of a young child, infertility or economic hardship. As will be reported in full in the next paper in this series, the rate of severely adverse life events was higher in Harare than has been reported in London and 94% of depressive onsets were preceded by a severely threatening event (Broadhead & Abas, 1997). Conditions in Harare at the time of the study may also have contributed to the high onset rate. Not only were the number of confirmed cases of the Acquired Immune Deficiency Syndrome rising rapidly, leading to an increase in bereavements and to the loss of wage-earning capacity for those affected, but a highly effective public health campaign, launched in 1990, had increased community awareness, raising the threat of life events associated with husbands' infidelities. Economic hardship was also exacerbated by Zimbabwe's recent Structural Re-adjustment Programme (Wakhweya, 1995) and by the drought, which in 1992 was leading to a shortage of food in both urban and rural areas.

However, although the onset rate of depression in Harare was more than double that in London, making the major contribution to the excess 1-year period prevalence, 70% of cases recovered, or improved to borderline caseness,

within 12 months, despite the degree of adversity (which is similar to recovery rates reported by Brown & Moran (1994) and by Tennant *et al.* (1981) in the UK). Recovery in Harare may have been influenced by women's seeming ability to tolerate established severe difficulties, responding with such comments as 'life is like that' and 'you shouldn't think too much', often reflecting suggestions women had received from older female relatives. Dwelling on problems was not encouraged, neither was it acceptable for a depressed woman to take to her bed or to give up caring for her family. Such cognitive and behavioural responses may have been implicated in the process of normalization. Women with an onset case were less likely than chronically depressed women to have reached levels of severity above PSE-ID 6 and more likely to receive support from their family of origin, as will be described in future papers. It is possible that the higher 1-month prevalence in Uganda in 1979 compared to Harare may be related to even higher levels of social adversity there at that time, and, as suggested by Orley & Wing (1979), to a greater tendency to chronicity.

The high prevalence among women in Harare of self-depreciation, guilt and hopelessness, has also been described in Ghana (Field, 1960) and in Uganda (Orley & Wing, 1979) and is in keeping with views of Weiss & Kleinman (1988) and El-Islam (1982) that earlier misconceptions of limited symptom profiles among depressed African people may be due to colonial inability to admit the range of feelings and emotions experienced and to lack of enquiry beyond the 'somatic facade'. In Harare, the high level of such symptoms among women may be linked to their position in society, where ways of achieving status and of facilitating change are limited. Significant free-floating anxiety was a feature of 65% of 'depressive' disorders in Harare, raising more doubt about the validity of the unitary diagnosis of depression (Goldberg & Huxley, 1992). Less common in Harare than in London was situational autonomic anxiety leading to avoidance. This may be related to lack of exposure to situations commonly associated with phobic anxiety, such as small enclosed spaces or heights, and to the rarity of women having to, for example, shop or travel alone. Suicidal plans or attempts, previously described to be rare in Western African settings (Binitie, 1975), were

found in 25% of cases in Harare, which is not significantly different from the proportion found in London. In addition, a recent survey has shown that suicide is the second major cause of deaths due to injury in Zimbabwe (Zwi *et al.* 1993).

Much has been written of the tendency, in non-Western settings, for neurotic patients to 'somatize' (Marsella *et al.* 1973; Tseng, 1975). Although physical symptoms were volunteered by Zimbabwean women with depression and anxiety, psychological symptoms were commoner and it is clear that many 'somatic' symptoms directly conveyed the physical experience of emotion, for example; 'when I heard I might lose my job I heard snakes churning in my belly'; 'I worried so much it was like a lump was stuck so I couldn't swallow for days'; and, 'when my husband left I had a heavy stone sitting on my heart'. Several of the terms used for 'heart' discomfort proved to be metaphors for grief, disappointment, fear or the possession of an insoluble problem. We agree with Cheng (1989) that one reason previous authors may have erroneously emphasized somatization in developing countries is through 'misinterpretation of patients' discomfort reporting'. Cases were sought by interviewing in the community hence there was no pressure on women to emphasize physical symptoms in order to receive attention. Also, Shona culture embraces 'moral and spiritual health' as fundamental to bodily well-being (Mutambirwa, 1989), hence people may be more orientated to discuss psychological, social and spiritual problems than in some other settings.

APPENDIX TRANSLATION OF THE PRESENT STATE EXAMINATION (PSE)

The translation of the PSE was carried out following previous recommendations (WHO, 1973; Flaherty *et al.* 1988). The translation of probes for psychotic symptoms was straightforward in comparison with that for neurotic items. After the pilot work it was found that the first two attempts were too literal in translation of the English and could not be understood by patients. For the third version, the translation team comprised bilingual Shona psychologists and Community Psychiatric Nurses together with PSE trained English psychiatrists and a psychologist. The glossary was used to discuss each symptom as were

the criticisms of the first two translation attempts. Back-translation was carried out by non-medical public service professionals.

Shona people speak descriptively, hence it was necessary to prepare appropriate examples to illustrate questions. For example, the question for nervous tension had to read: 'Do you know the fear that you get when you are waiting for something important?' A common example suggested to the subject was waiting for a child's exam results. The second portion of the question reads: 'Have you had this fear in the past four weeks even if there is nothing important that you are waiting for?' Item 7 (muscular tension) had to be left out as there was no clear local concept of this. To eliminate error, a greater proportion of questions were made obligatory and obligatory probes were added to many questions in order that every aspect of the symptom, its frequency and any understandable precipitants had been thoroughly explored before a rating took place.

The final version was piloted in a rural and an urban primary care clinic. Thirty interviews were carried out with a trained Shona interviewer asking the obligatory questions, giving the response verbatim to the PSE trained psychiatrist and then clarifying with additional probes as indicated by the psychiatrist. Subjects gave every indication of being able to understand the questions and to answer appropriately. Between clinical judgement of caseness and caseness defined by CATEGO-ID level of 5 or above there was concordance of over 95%.

Six PSE items are considered here to illustrate problems in translation and how they were dealt with. Obligatory questions are marked by two asterisks, additional probes are in parentheses. Further PSE items are available from the authors.

Items 11. Free-floating autonomic anxiety

- ** Are there times when you felt very frightened? Was your heart beating very fast?
- ** Ask for other autonomic symptoms.
- ** What was happening at that time?
- ** How often did this happen in the past four weeks?
- ** How long did it last for?

There are three well recognized expressions of fear (*kutya*). One is 'to palpitate' (*hana kurova zvakanyanya*), commonly used to convey 'something is frightening/worrying me'. Another is 'the sound of snakes churning in the tummy' (*kurira nyoka mudumbu*), understood as saying 'something doom-laden is coming', and the feeling of a lump in the throat (*bundu pahuro*). People would say 'I felt so frightened it was like a lump was stuck so I couldn't swallow'. Hence, although the concept is expressed in physical terms, the meaning conveyed is clearly emotional. Other autonomic symptoms included a dry mouth, difficulty breathing (also associated with

anger, hence that would have to be enquired about) and mild sweating (not profuse sweating, which was associated with fever).

Item 15. Situational anxiety

** Are there any special places or things which make you frightened with your heart beating and unsettled? (What places? e.g. on buses, cars, high places, lifts, crowds, being alone.)

'Hana', one of several terms meaning 'the heart beating' implies that 'the self' is unsettled and fearful, again illustrating how heart discomfort is used to denote an emotional state. People often described fear if they had to walk near to where a crime had been committed. This was not rated. Most people in Harare had been in a lift or had climbed the roof of a hut to help with thatching and the concept of fear in these situations was understood although not commonly experienced. One person clearly described autonomic anxiety when travelling on buses.

Item 21. Neglect due to brooding

** Are there things which keep coming into your mind all the time?

** Does this stop you from doing your daily work?

The word for thoughts (*pfungwa*) also means 'mind'. Although emotional thoughts were associated with the heart, the heart and the mind were seen as closely linked in the activity of thinking. Women commonly acknowledged the experience of brooding but were strongly conditioned against neglecting their responsibilities and it was only severely depressed women who commonly rated on this symptom.

Item 22. Loss of interest

** Are you no longer happy with the things you used to be happy with in life? (Do you feel as if you can't be bothered about your personal appearance?)

The use of not being 'happy with' (*farira*) equates with lack of enjoyment and interest stemming from the person. The question would not be misunderstood if, for example, dressing to go to church was no longer enjoyable because the person could not afford respectable clothes.

Item 23. Depressed mood

** Having you been happy or have you been very sad in the past four weeks?

** When you were feeling sad was there anything which could make you feel happy?

** When was the last time you enjoyed...?

** Have you cried on your own?

The verb 'to be sad' (*suwa*), is extended here to *kusuruwara* which is well recognized to mean more than normal sadness. Depressed people also used the term *kusuwisisa* (deep sadness) and described deep

pain in the heart (*mwoyo unorwadza*). Crying alone was chosen as an additional question rather than crying in front of others which could be part of a ritual – e.g. at a funeral.

Item (28). Social withdrawal

** Have you felt like you do not wish to visit other people?

** Why? (How did you feel when people visited you? Did you enjoy their company?)

Socializing is a major feature of Shona life. Passive withdrawal, i.e. failure to seek company but not refusing it if offered, emerged as an important symptom in depression. Active social withdrawal was rarely seen, but, if present, was highly indicative of an abnormal mental state.

We would like to thank the University of Zimbabwe Department of Psychiatry, especially Professor S. W. Acuda, Dr Jane Mutambirwa, Mr Tony Reeler, Mrs Pat Maramba and Mr Dominic O'Ryan, and the Harare City Health Department, especially Dr O. L. Mbengeranwa and Sr Priscilla Mbape. We particularly thank Gertrude Khumalo-Sakatukwa, Margaret Chigwanda and Eunice Garura for interviewing women and Martha Mandaba for piloting. We are indebted to Professor George Brown and to Dr Tirril Harris for their considerable guidance and help at all stages of this study. We also thank Dr Graham Thornicroft, and the three anonymous referees, for their comments on this paper and Dr Glyn Lewis for statistical advice. Sponsorship was by the Norwegian Agency for Development Co-operation (NORAD), the John D. and Catherine T. MacArthur Foundation, the German Agency for Technical Co-operation (GTZ) and the University of Zimbabwe.

REFERENCES

- Abas, M. A., Broadhead, J. C., Mbape, P. & Khumalo-Sakatukwa, G. (1994). Defeating depression in the developing world: a Zimbabwean model. *British Journal of Psychiatry* **164**, 293–296.
- American Psychiatric Association (1987). *Diagnostic and Statistical Manual of Mental Disorders* (3rd edn, revised). American Psychiatric Association: Washington, DC.
- Bebbington, P., Hurry, J., Tennant, C., Sturt, E. & Wing, J. K. (1981). Epidemiology of mental disorders in Camberwell. *Psychological Medicine* **11**, 561–579.
- Beiser, M. (1985). A study of depression among traditional Africans, urban North Americans and Southeast Asian refugees. In *Culture and Depression: Studies in the Anthropology and Cross-Culture Psychiatry of Affect and Disorder* (ed A. Kleinman and B. Good), pp. 272–298. University of California Press: Berkeley.
- Beiser, M., Cargo, M. & Woodbury, M. A. (1994). A comparison of psychiatric disorder in different cultures: depressive typologies in Southeast Asian refugees and resident Canadians. *International Journal of Methods in Psychiatric Research* **4**, 157–172.
- Binitie, A. (1975). A factor-analytical study of depression across cultures (African and European). *British Journal of Psychiatry* **127**, 559–563.

- Broadhead, J. C. & Abas, M. (1997). Life events and difficulties and the onset of depression among women in an urban setting in Zimbabwe. *Psychological Medicine* (in the press).
- Brown, G. W. & Harris, T. O. (1978). *Social Origins of Depression: A Study of Psychiatric Disorder in Women*. Tavistock Publications: London.
- Brown, G. W. & Harris, T. O. (1986). Establishing causal links: the Bedford College studies of depression. In *Life Events and Psychiatric Disorders: Controversial Issues*, (ed. H. Katschnig), pp. 107–187. Cambridge University Press: Cambridge.
- Brown, G. W. & Moran, P. (1994). Clinical and psycho-social origin of chronic depressive episodes: a community survey. *British Journal of Psychiatry* **165**, 447–454.
- Cheng, T. A. (1989). Symptomatology of minor psychiatric morbidity: a cross cultural comparison. *Psychological Medicine* **19**, 697–708.
- Dean, C., Surtees, B. G. & Sashidharan, S. D. (1983). Comparison of research diagnostic systems in an Edinburgh community sample. *British Journal of Psychiatry* **142**, 247–256.
- El-Islam, M. F. (1982). Overview: Arabic cultural psychiatry. *Transcultural Psychiatric Research Review* **19**, 5–23.
- Field, M. J. (1960). *Search for Security. An Ethno-psychiatric Study of Rural Ghana*. London: Faber & Faber.
- Finlay-Jones, R., Brown, G. W., Duncan-Jones, P., Harris, T. O., Murphy, E. & Prudo, R. (1980). Depression and anxiety in the community: replicating the diagnosis of a case. *Psychological Medicine* **10**, 445–454.
- Flaherty, J. A., Gaviria, F. M., Pathak, M. D., Mitchell, T., Wintrob, R., Richman, J. A. & Birz, S. (1988). Developing instruments for cross-cultural psychiatric research. *Journal of Nervous and Mental Disease* **176**, 257–263.
- Folta, J. & Deck, E. (1987). Elderly black widows in rural Zimbabwe. *Journal of Cross-cultural Gerontology* **2**, 321–342.
- Gaminde, I., Uria, M., Padro, D., Querejeta, I. & Ozamiz, A. (1993). Depression in three populations in the Basque country – a comparison with Britain. *Social Psychiatry and Psychiatric Epidemiology* **28**, 243–251.
- German, A. G. (1972). Aspects of clinical psychiatry in sub-Saharan Africa. *British Journal of Psychiatry* **121**, 461–479.
- German, G. A. (1987). Mental health in Africa. II. The nature of mental disorders in Africa today. *British Journal of Psychiatry* **151**, 440–446.
- Giel, R. & Van Luijk, J. N. (1969). Psychiatric morbidity in a small Ethiopian town. *British Journal of Psychiatry* **115**, 149–162.
- Goldberg, D. G. & Huxley, P. (1992). *Common Mental Disorders: A Bio-Social Model*. Tavistock/Routledge: London.
- Goldberg, D. G., Cooper, B., Eastwood, M. R., Kedward, H. B. & Shepherd, M. (1970). A standardised psychiatric interview for use in community surveys. *British Journal of Preventive and Social Medicine* **24**, 18–23.
- Harding, T. W., De Arango, M. V., Baltazar, J., Climent, C. E., Ibrahim, H. H. A., Ladrigo-Ignacio, L., Srinivasa Murthy, R. & Wig, N. N. (1980). Mental disorders in primary health care: a study of their frequency and diagnosis in four developing countries. *Psychological Medicine* **10**, 231–241.
- Henderson, A. S., Byrne, D. G. & Duncan-Jones, P. (1981). *Neurosis and the Social Environment*. Academic Press: London.
- Hollifield, M., Katon, W., Spain, D. & Pule, L. (1990). Anxiety and depression in a village in Lesotho, Africa: a comparison with the United States. *British Journal of Psychiatry* **156**, 343–350.
- Jegede, R. O. (1979). Depression in Africans revisited: a critical review of the literature. *African Journal of Medicine and Medical Science* **8**, 125–132.
- Khan, M. E. & Manderson, L. (1992). Focus groups in tropical diseases research. *Health Policy and Planning* **7**, 56–66.
- Kleinman, A. M. (1988). *Rethinking Psychiatry*. The Free Press: London.
- Leighton, A. H., Lambo, T. A., Hughes, C. C., Leighton, D. C., Murphy, J. M. & Macklin, D. B. (1963). *Psychiatric Disorder Amongst the Yoruba*. Cornell University Press: Ithaca.
- Majodina, M. Z. & Johnson, F. Y. A. (1983). Standardised assessment of depressive disorders in Ghana. *British Journal of Psychiatry*, **143**, 442–446.
- Marsella, A. J., Kinzie, D. & Gorson, T. (1973). Ethnic variation in the expression of depression. *Journal of Cross-Cultural Psychology* **4**, 435–458.
- Mutambirwa, J. (1989). Health problems in rural communities, Zimbabwe. *Social Science & Medicine* **29**, 927–932.
- Odejide, A. O., Oyewunmi, M. D. & Ohaeri, J. U. (1989). Psychiatry in Africa: an overview. *American Journal of Psychiatry* **146**, 708–716.
- Orley, J. & Wing, J. K. (1979). Psychiatric disorders in two African villages. *Archives of General Psychiatry* **36**, 513–520.
- Patel, V., Mann, A., Gwanzura, F., Simunyu, E. & Mukandatsama, I. (1995a). The Shona symptom questionnaire: the development of an indigenous measure of common mental disorder. *Acta Psychiatrica Scandinavica* (in the press).
- Patel, V., Gwanzura, F., Simunyu, E., Lloyd, K. & Mann, A. (1995b). The phenomenology and explanatory models of common mental disorder: a study in primary care in Harare, Zimbabwe. *Psychological Medicine* **25**, 1191–1199.
- Prince, R. (1968). The changing picture of depressive syndromes in Africa. Is it fact or diagnostic fashion? *Canadian Journal of African Studies* **1**, 177–192.
- Rwegellera, G. G. C. (1981). Cultural aspects of depressive illness: clinical aspects and psychopathology. *Psychopathologie Africaine* **17**, 41–63.
- Shepherd, M. (1977). Beyond the layman's madness: the extent of psychiatric disease. In *Developments in Psychiatric Research* (ed. J. Tanner), pp. 178–198. Hodder & Stoughton: London.
- Tennant, C., Bebbington, P. & Hurry, J. (1981). The short-term outcome of neurotic disorders in the community: the relationship of remission to clinical factors and to 'neutralising' life events. *British Journal of Psychiatry* **139**, 213–220.
- Tseng, W. S. (1975). The nature of somatic complaints among psychiatric patients: the Chinese case. *Comprehensive Psychiatry* **16**, 237–245.
- Wakhweya, A. M. (1995). Structural adjustment and health. *British Medical Journal* **311**, 71–72.
- Weiss, M. G. & Kleinman, A. (1988). Depression in cross-cultural perspective: developing a culturally informed model. In *Health and Cross-cultural Psychology* (ed. P. R. Dasen, J. W. Berry and N. Sartorius), pp. 179–206. Sage Publications: Newbury Park, California.
- Weiss, M., Doongaji, D., Sidartha, S., Wypij, D., Pathare, S., Bhatwadekar, M., Bhawe, A., Sheth, A. & Fernandes, R. (1992). The explanatory model interview catalogue (EMIC): contribution to cross-cultural research methods from a study of leprosy and mental health. *British Journal of Psychiatry* **160**, 819–830.
- Williams, P., Tarnopolsky, A. & Hand, D. (1980). Case definition and case identification in psychiatric epidemiology: review and assessment. *Psychological Medicine* **10**, 101–114.
- Wing, J. K., Cooper, J. E. & Sartorius, N. (1974). *Measurement and Classification of Psychiatric Symptoms*. Cambridge University Press: London.
- Wing, J. K., Mann, S., Leff, J. & Nixon, J. (1978). The concept of a 'case' in psychiatric population surveys. *Psychological Medicine* **8**, 203–217.
- World Bank (1993). *World Development Report 1993: Investing in Health*. Oxford University Press: New York.
- World Health Organization (1973). *The International Pilot Study of Schizophrenia, Volume 1*. WHO: Geneva.
- Zwi, A., Murugasampillay, M. & Msika, B. (1993). *Injury Surveillance in Zimbabwe. A Situation Analysis*. Ministry of Health and Child Welfare: Harare and London School of Hygiene and Tropical Medicine: London.