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M.G. Carta · P. Coppo · B. Carpiniello
P.P. Mounkuoro

Mental disorders and health care seeking in Bandiagara: a community survey in the Dogon Plateau

Abstract A two-level community study was carried out among the Peul and Dogon populations of the Bandiagara plateau (Mali). For the purpose of the study the Questionnaire pour le depistage en santé mentale (QDSM), a 23-item screening questionnaire derived from the Self-Reporting Questionnaire (SRQ), was adapted and validated; internal consistency and accuracy were evaluated. In the first phase of the study, 466 subjects randomly selected on a residential basis were evaluated by means of the QDSM. In the second phase all subjects who were "positive" at the screening, as well as a sample who were "negative", were examined by means of a semistructured interview. When necessary, clinical and laboratory investigations were performed. The estimated prevalence of psychiatric cases was 6.4%. A significant risk was associated with age and education. Somatic diseases frequently associated with psychiatric disorders were genitourinary tract disorders, tuberculosis and disabling cardiopathies. The main factor determining the seeking of medical help either through traditional or conventional health systems was the presence of a somatic disorder. The presence of a true minor psychiatric disorder, however, was often associated with divining practices.

Introduction

The "emic" approach, which evaluates psychopathological phenomena from within a given cultural setting, has historically contrasted the "etic" approach, which advocates the universality of psychopathology across different cultures (Littlewood 1990). Although an "integrative" approach has been considered the main pathway to the cross-cultural psychiatry of the future (Leff 1990), both the "emic" and the "etic" approaches, each one with its specific methodology and instruments, continue to generate data and hypotheses.

In 1983, based on an "emic" approach one of the authors carried out a community survey on a sample population of the Dogon plateau in Mali, utilizing key informants and local nosological categories (Coppo 1983; Coppo 1984). Further analysis of data using traditional nosological criteria showed that none of the cases originally identified could be considered as "neurotic" or "depressive" according to Western psychiatric categories (Coppo 1993). On the basis of this previous experience, the present community study was conducted in the same area to verify the type and distribution of psychopathological syndromes by means of standardized interview techniques; the seeking of medical help (traditional or not), the means used to obtain the same by affected individuals and the role played by social support were also investigated. Our study was developed along "etic" lines in view of the use of criteria and categories that are foreign to the cultures dealt with (Dogon and Peul). In particular, the existence of cases considered as "neurotic" or "depressive" according to Western criteria and the patterns of care for these cases in such a completely different culture were investigated.

During a long preliminary phase preceding the study, a working group made up of psychiatrists, general practitioners, psychologists and anthropologists developed an instrument devoted to the identification of the "nuclear" aspects of symptomatology on which the diagnostic process and the psychiatric screening could be based (Koumare' et al. 1990; Koumare' et al. 1992). The present paper describes the main characteristics of the two ethnic groups studied in relation to the most relevant aspects of the research project. For a better understanding of these populations, more specific

M.G. Carta · B. Carpiniello (✉)
Institute of Clinical Psychiatry, University of Cagliari,
Via Liguria n. 13, I-09127 Cagliari, Italy

P. Coppo · P.P. Mounkuoro
Centre regional de Mèdecine Traditionelle,
Bandiagara, Mali

anthropological and psychological studies may be consulted (Coppo and Keita 1990; Coppo 1993; De Ganays 1941; Griaule 1948).

Materials and method

The study was performed in two stages; first a screening phase and then a clinical investigation, in which all subjects who were "positive" at screening and a sample of "negatives" were interviewed.

Screening instrument

The screening instrument used in the present study was the *Questionnaire pour le depistage en santé mentale* (QDSM), derived from the Self-Reporting Questionnaire (SRQ; Harding et al. 1980), initiated by W.H.O. and previously used by our research group in both developed and developing countries (Carta et al. 1990, 1993). The QDSM is a 23-item questionnaire (The English version is available on request from the authors) that has been standardized and tested by the research team of the Bamako Point G Hospital in the Bamanan language, with a specific score assigned to each item (from 1 to 3) and with a cut-off score of over 11 (Koumaré et al. 1992).

The QDSM was used for the present study in the form of a structured interview in the Donno-so version due to the high rate of illiteracy of the populations studied, which did not permit the use of a self-administered questionnaire. The QDSM was administered by two Donno-so-speaking researchers of the Bandiagara *Centre Regional de Medecine Traditionelle* (CRMT), who previously showed high inter-rater agreement in coding 30 interviews (overall K value = 0.91).

In order to verify the standardization of the QDSM in the Dogon rural setting, a high percentage (17%) of subjects who were "negative" at screening were interviewed in the second phase of the study. This subsample was obtained by randomization after stratification of all "negatives" according to sex and residence.

Screening sample

In view of difficulties encountered in obtaining reliable demographic data for a community study in the district, sampling was done on a geographical-residential basis. Two roads were randomly chosen in Bandiagara and in seven selected villages; the QDSM was administered to all inhabitants over the age of 18 years. All those who were away at the time of the interview, particularly farmers, were traced during a second investigation. In the Peul nomadic camps all inhabitants were included in the study, given the low number of subjects in this subgroup. The sample studied was made up of a total of 466 subjects (253 males, 213 females); 273 of these belonged to the Dogon ethnic group, 173 to the Peul group and the remaining 30 to other minor groups (Sonrai, Bozo, Tuareg and Bambaras). The demographic characteristics of the sample studied are reported in Table 1.

Clinical investigation

All subjects who obtained a QDSM score of over 11, as well as a sample of "negatives" (score 11 or less), were contacted by a Malian physician with psychiatric training. This doctor was blind to the results obtained at screening, and assessed subjects using a semistructured interview that consisted of: (a) collecting biographical data and information concerning the subject's physical health; (b) a description of the utilization of conventional or traditional care systems during the previous month; (c) a questionnaire

Table 1 Distribution of subjects according to literacy

	Dogon n (%)	Peul n (%)	Other n (%)
Bandiagara			
Illiterates	98 (36.3)	37 (22.7)	14 (47.7)
Literates	50 (18.5)	11 (06.7)	15 (50.0)
Not evaluated	6 (02.2)	3 (01.8)	1 (02.3)
Villages			
Illiterates	110 (40.7)	4 (02.4)	0 (00.0)
Literates	0 (00.0)	0 (00.0)	0 (00.0)
Nomadic camp			
Illiterates	6 (02.2)	108 (66.2)	0 (00.0)
Literates	0 (00.0)	0 (00.0)	0 (00.0)

regarding psychiatric status. The interviewer filled in an index-card on psychiatric symptoms based on the sequence provided by the Present State Examination (PSE; Wing et al. 1974).

During the preliminary phase of the study, the 40-item PSE had been translated into the Donno-so language and submitted to the evaluation of three different interpreters in order to verify the accuracy and comprehensibility of the translation. According to suggestions of the interpreters, a step-by-step process of adaptation was performed. When a good agreement on the translation between the interpreters was reached, this final version of the PSE was used.

The interviewer had previously been trained in the use of the PSE glossary by one of the authors (M.G.C) who had used the same in a community survey (Carta et al. 1991a) and in a psychosocial study of African immigrants in Italy (Carta et al. 1991b) with a fairly good inter-rater reliability. At the physician's discretion, laboratory examinations or other clinical tests were also prescribed; these were generally performed on subsequent days at the CRMT. After the interview, each subject was assigned to one of six categories according to their degree of need of medical care (questionable cases were included following group discussion by the entire research team). The categories were as follows:

1. Healthy subjects (needing no care)
2. "Social" cases (SOC; i.e. subjects with symptoms linked more to socio-economic than to medical or psychiatric causes)
3. "Medical" cases (SOM; i.e. subjects requiring medical intervention for a somatic disease)
4. "Psychiatric" cases (PSY; i.e. subjects needing psychiatric care for a well-defined mental disorder)
5. "Medical" and "psychiatric" cases (SOMPSY; i.e. subjects needing both medical and psychiatric care)
6. "Medical" and "social" cases (SOMSOC; i.e. subjects needing medical and social assistance).

Data analysis

The internal consistency of the QDSM was calculated by means of Cronbach's coefficient (Cronbach and Meehl 1995) on the basis of the 466 completed interviews. The questionnaire was also restandardized comparing the score obtained by each subject to the results of the clinical evaluation. For this purpose, only PSY and SOMPSY subjects were considered as "true cases". Data from all "positives" interviewed in the second phase ("possible cases") were taken into account. Moreover, the number of "cases" found among those "negative" at screening ("false-negatives") was estimated on the basis of the sample of reinterviewed "negatives" ($n = 48$; 17%) by means of a statistical projection of the probability of "false-negatives" in the whole population. Using this methodology, sensitivity, specificity and positive predictive value, as well as negative predictive value, were calculated for each possible cut-off score.

The operational definition of a PSY case was compared with the clinical definition of the same case according to the Index of Definition of the ID-CATEGO system (Wing et al. 1978) by means of Cohen's K coefficient (Cohen 1960). Considering only SOMPSY and PSY subjects, prevalence rates for psychiatric disorders were calculated on the basis of the diagnostic operational criteria using the cases identified in the second phase as the numerator and the total number of subjects considered in the first phase as the denominator (identified prevalence). Finally, an estimate of the real prevalence (estimated prevalence) was calculated by means of the formula for two-level studies (Vazquez-Barquero et al. 1986). A case-control analysis was carried out concerning use of the different care systems comparing behaviours of subjects from different operational categories with those of healthy subjects.

Results

The Cronbach coefficient of the 466 QDSMs completed was 0.80, showing a fairly good internal consistency of the instrument. A total of 282 subjects (60.5%) were classified as "negative" (score < 12) at screening and 184 (39.5%) as "positive". Two of these were not traced for the second phase, which therefore involved 230 individuals, 182 (39.1%) "positive" and 48 (17%) "negative".

Table 2 shows the distribution of cases found among subjects who were "positive" and "negative" at screening according to the operational criteria utilized in the

Table 2 Diagnostic Operational Criteria and results with the Questionnaire pour le depistage en santé mentale (QDSM)

Diagnostic operational criteria	QDSM			
	Positive		Negative	
	n	(%)	n	(%)
No need for care	63	(34.6)	33	(68.8)
Need for social care	13	(07.1)	0	
Need for somatic care	69	(37.9)	11	(22.9)
Need for psychiatric care	6	(03.3)	0	
Need for both somatic and psychiatric care	23	(12.6)	1	(02.1)
Need for both somatic and social care	8	(04.0)	3	(06.2)

second phase of the study. The sensitivity, specificity, and negative and positive predictive values of the QDSM at the different cut-off points are reported in Table 3. At the cut-off adopted for this study (11/12), the sensitivity was 0.83, the specificity was 0.64 and the positive predictive value was 0.16. Even when considering a wider range of "cases" by including all "social cases" (SOC and SOMSOC), the performance of the QDSM remained satisfactory (sensitivity, 0.89; specificity, 0.60; positive predictive value, 0.18; negative predictive value, 0.97). Thus, the instrument also identified those subjects needing both social and psychological support in the area studied.

The estimated prevalence of all cases needing care, calculated on the whole sample, was 1.5% of PSY cases; 6.0% of SOMPSY cases; 2.9% of SOC cases; 2.7% of SOMSOC cases. Inclusion of subjects in the PSY and SOMPSY categories was highly concordant with case definition according to the ID-CATEGO algorithm (K = 0.92, P < 0.01). From a total of 29 subjects considered as PSY or SOMPSY cases, only 3 were below the threshold (< 5) of the Index of Definition. In comparison, from a total of 30 cases identified according to PSE-ID-CATEGO, only two could not be considered as "cases" according to the operational criteria used.

Seventeen (3.6% of the total sample) of the cases identified according to the PSE-ID-CATEGO system were considered as "depressive" (N or D classes), while 11 (2.4% of the total sample) were considered as "anxious" disorder (AP or PN classes). Only one of the subjects (0.2%) showed psychotic symptoms and was the only PSY case who had been treated by a traditional healer; a diagnosis of "wind" (Coppo and Keita 1990) had been made. Two of the remaining five PSY cases showed a state of anxiety according to PSE-ID-CATEGO, two were considered as "depressed" and one was a drug addict. Table 4 shows a comparison of our data with the main community studies carried out in Africa by means of standardized techniques. In 20 out of 24 "SOMPSY" subjects, the onset of the somatic disease preceded the onset of psychiatric disease, while

Table 3 Accuracy of the QDSM. Cases were subjects needing psychiatric care and subjects needing somatic and psychiatric care

Cut-off	Sensitivity	Specificity	Positive predictive value	Negative predictive value
8/9	1.0	0.43	0.12	1.0
9/10	0.94	0.47	0.13	0.99
11/11	0.89	0.59	0.15	0.98
11/12	0.83	0.64	0.16	0.98
12/13	0.75	0.68	0.16	0.98
13/14	0.72	0.72	0.17	0.97
14/15	0.66	0.77	0.22	0.97
15/16	0.60	0.79	0.19	0.96
16/17	0.60	0.82	0.22	0.96
17/18	0.54	0.86	0.23	0.96
18/19	0.46	0.88	0.23	0.96
19/20	0.43	0.90	0.27	0.95

Table 4 Prevalence of psychoneurotic disorders per 1,000 inhabitants in African community surveys (*PSE* Present State Examination, *ID* Index of Definition)

Population	Sample	Females	Males	Total	Instrument
Yoruba (Probable and certain cases) Leighton 1963	362	420	390	400	Structured Interview Cornell-Aro
Coloreds of Cape Probable and certain cases Psychoneurosis Gillis 1968	500			240 54	Interview derived from Cornell-Aro
Ethiopian town Probable and certain cases Psychoneurosis	384			90 63.5[a]	Check-list and Leighton Classification
Ethiopian village Probable and certain cases Psychoneurosis Giel and Van Luijk 1969	370			90 93.1[a]	Check-list and Leighton Classification
Two Ugandan villages Cases ID > 4 Psychoneurosis Orley and Wing 1979	221	270 269	270 174		PSE ID
Bandiagara district Cases estimated Cases identified Depression Anxiety Carta et al. 1996	446	98	35	75 64 39 24	I Level: QDSM II Level: Operational Diagnostic criteria (PSE gloss.)

[a]Standardized for people over 15 years old

in the remaining 4 it was difficult to determine if the psychiatric disorder was subsequent or not.

On the basis of the estimated prevalence (7.5%), the actual cases identified according to operational criteria (i.e. PSY and SOMPSY) represented 6.4% ($n = 30$), with significantly higher rates among females ($n = 21$, 9.8%) than among males ($n = 9$; 3.5%; OR = 2.9, chi-square = 7.6, $df = 1$, $P < 0.001$). The same sex distribution was observed when the PSY (OR = 2.4) and SOMPSY (OR = 3.1) categories were considered separately, although statistical significance was reached only for the latter group (chi-square = 4.2, $df = 1$, $P < 0.05$). In contrast, there was a slight but significant majority of males among SOC and SOMSOC cases.

Distribution according to age, sex and operational categories is shown in Table 5. Only a few significant differences were found: more "cases" needing social support (SOC and SOMSOC) were observed among females in the older age group (chi-square = 3.8, $df = 1$, $P < 0.05$). As far as the distribution according to sex, education and operational categories was concerned, no significant differences were found. When considering PSY cases separately, a significant prevalence of literate subjects ($n = 4$, 4.5%) compared to illiterates ($n = 2$, 0.05%) was found (chi-square with Yate's correction = 7.8. $df = 1$, $P < 0.01$). In contrast, 3.3% ($n = 3$) of literate subjects were SOMPSY, com-

pared to 5.5% ($n = 21$) of illiterates (OR = 1.7). No statistical difference was detected in prevalence according to ethnic groups, although among Peul women cases reached 6.6% (OR = 0.5) compared to 10.5% of Dogon women (OR = 1.2) and 23.3% of the remaining ethnic groups (OR = 3.5). With regard to males, the identified prevalence was 3.3% among the Dogon, 3.4% among the Peul and 5.8% among the remaining ethnic groups. A slight, albeit not significant, higher frequency of cases was found among residents in Bandjagara compared to residents in camps and villages (7.2% vs 5.6%).

Somatic diseases more frequently associated with psychiatric disorders (Table 6) were genito-urinary tract diseases (OR = 49.9), tuberculosis (OR = 9.3) and disabling cardiopathies (OR = 7.0), while no statistically significant risk was related to acute malaria, bilharziasis and drepanocytosis. Analysis of the loss of working days (Table 7) did not show any statistical difference between the groups considered. When care-seeking behaviour was considered, a similar pattern was observed among healthy, PSY and SOC groups, which contrasted with the pattern shown by SOM, SOMSOC and SOMPSY subjects. In fact, the presence of somatic disease was the most relevant factor in the seeking of health care both within the traditional and conventional assistance networks. The homogeneity

Table 5 Prevalence rates based on Diagnostic Operational Criteria according to age and sex (*SOM* medical cases, *SOC* social cases, *PSY* psychiatric cases, *SOMSOC* medical and social cases, *SOMPSY* medical and psychiatric cases)

Age (years)	Females Operational diagnosis					
	Not II-level n (%)	Healthy n (%)	SOM n (%)	SOMSOC + SOC (%)	SOMPSY + PSY (%)	Total n (%)
18–35	60 (59.4)	26 (56.5)	23 (65.7)	7 (70)	17 (80.9) 12.8[a]	133 (62.49)
36–50	23 (22.8)	14 (30.4)	7 (20.0)	3 (30.0)	4 (19.0) 7.8[a]	51 (23.9)
> 51	18 (17.8)	6 (16.3)	5 (14.3)	0 –	0 –	29 (13.6)
Total	101 (100)	46 (100)	35 (100)	10 (100)	21 (100)	213

Age	Males Operational diagnosis					
	Not II-level n (%)	Healthy n (%)	SOM n (%)	SOMSOC + SOC (%)	SOMPSY + PSY (%)	Total n (%)
18–35	56 (41.5)	19 (41.5)	19 (42.2)	6 (42.9)	2 (22.2) 2.9*	102 (40.3)
36–50	34 (25.1)	16 (25.2)	6 (13.3)	4 (28.6)	3 (33.3) 4.7[a]	63 (24.9)
> 51	45 (33.3)	15 (33.3)	20 (44.4)	4 (28.6)	4 (44.5) 4.5[a]	88 (34.8)
Total	135 (100)	50 [max] (100)	45 [max] (100)	14 (100)	9 (100)	253

[a]Estimated prevalence

Table 6 Prevalence of somatic illness

Somatic illness	Overall prevalence (n = 231) n %	Prevalence in psychiatric cases (n = 24) n %	Chi-square	Odds ratio
Cardiopathies	6 (2.6)	3 (12.5)	9.4**	7.0
Acute malaria	19 (8.2)	1 (4.3)	1.8	0.8
Genito-urinary and reproductive diseases	16 (6.9)	10 (41.6)	23.8**	49.9
Tuberculosis	4 (1.8)	2 (8.3)	6.8*	9.3
Bilharziasis	16 (6.9)	3 (12.5)	1.2	2.1
Drepanocytosis	2 (0.9)	0	0.4	0

*$P < 0.01$; **$P < 0.001$

between healthy, PSY and SOC groups was evident concerning patterns of use of self-administered drugs (traditional or conventional). Groups with somatic disorders (SOM, SOMSOC and SOMPSY) showed clear statistical differences with respect to healthy subjects.

In contrast, traditional divining practices seemed not to be sought by healthy and SOM groups, as opposed to the psychiatric and social cases (PSY, SOC, SOMPSY, SOMSOC); however, the limited numbers observed reduced the reliability of the latter evidences.

Table 7 Working days lost, request for care and operational diagnosis

	Healthy n	SOC n	SOM n	PSY n	SOMPSY n	SOMSOC n	Total
Absenteeism	7	3	37	2	11	1	231
%	(7.2)	(21.3)	(45.7)	(33.3)	(45.8)	(63.6)	
Odds		3.8	10.7**	6.3*	10.8**	22.2***	
Self-administration of drugs	20	2	40	2	12	5	231
and traditional therapies %	(20.1)	(15.4)	(49.4)	(33.3)	(50.0)	(50.0)	
Odds		0.7	3.7**	1.9	3.8*	3.8*	
Divination	1	2	4	1	2	3	228
%	(1.1)	(15.4)	(5.0)	(16.7)	(8.3)	(27.3)	(3ns)
Odds		16.9**	4.9	18.6*	8.4*	34.9***	
Health care system	10	3	27	1	10	4	231
or traditional healers %	(10.4)	(23.1)	(33.3)	(11.7)	(41.7)	(36.4)	
Odds		3.8	10.7**	6.3*	10.8**	22.2***	

$*P > 0.05$; $**P > 0.01$; $***P > 0.001$

Discussion

The results obtained with the QDSM in the Donno-so version testified the difficulty in adapting and translating into an African language an instrument of Western origin. In fact, the QDSM demonstrated a sufficiently high internal consistency, as measured by Cronbach's coefficient, and high sensitivity, but also a less pronounced specificity and a low positive predictive value, misidentifying two-thirds of subjects who were judged as needing no care, as "cases". Therefore, these results suggest that further modifications of the instrument are required before its use as a reliable screening tool in two-phase studies.

The identification of psychiatric cases by the Malian physician by means of the operational criteria showed sufficient reliability when compared with the case discrimination performed by means of the PSE-ID algorithm. The rate of psychiatric disorders identified (6.4%) and the "estimated prevalence" in the sample as a whole (7.5%) do not seem to be particularly high for a developing country. A comparison with data from other studies carried out in Africa is in any case very difficult, due to the different case-finding techniques adopted, to the existing, often marked, cultural differences between the populations studied and also to the time of carrying out the studies. For example, the Ugandan survey (Orley and Wing 1979) carried out by means of a similar technique of case-finding during the period of the threatening leadership of Amin Dada, should be cited. The prevalence rates of minor disorders (in particular depressive disorders) found in Africa are invariably higher than those found in our survey (Leighton et al. 1963; Gillis et al. 1968); moreover, surveys using the PSE-ID system in developed countries show a rate of prevalence for minor disorders of approximately 15% (Bebbington 1990). Our results seemed to be similar only to those of Giel and Van

Luijk who studied the population aged over 15 years in Ethiopia (Giel and Van Luijk 1969a, b) and demonstrated a rate of 6.4% in a small town and 9.1% in a village. It is difficult to provide a satisfactory explanation for our findings. Whether the phenomenon could be due to a low incidence of psychoneuroses linked to specific "protective" factors, or to a lower life expectancy of neurotic patients, or to a shorter course of the illness is hard to say, and only a prospective study could address these questions.

As far as psychosocial risk factors are concerned, belonging to a particular ethnic group seemed to be of little significance in the area studied. In contrast, women seemed to be generally more at risk, although this is not consistent with data concerning the use of psychiatric services in Bamako, the capital of Mali (Awandè 1989) nor with those deriving from other African studies of primary care (Dhaphale et al. 1983). This is not surprising, since almost all community surveys highlight a larger number of women among those suffering from anxious and/or depressive states (Bebbington 1990), but more males are found among those who utilize pyschiatric services, at least in developed countries (Systema et al. 1994).

Education and residence do not seem to be linked to an increased risk of psychopathology, although a higher number of psychiatric cases without any associated somatic disorder was found among literate subjects. The majority of cases registered (23 out of 29) showed both psychic and somatic complaints.

Clinical and laboratory data demonstrated that in most cases we were dealing with true, often severe, somatic disorders, the symptoms of which had started prior to the onset of the psychiatric disorder. Somatoform disorders were excluded and, therefore, our evidence did not seem to support the common assumption (Harding 1980) that somatization disorders as an expression of psychological distress are particularly common in the African context, although the methodology

of our study was unsuitable for identifying those typical expressions of somatization that seem to be particularly frequent in West African contexts (Ohaeri and Odejide 1994). In any case, it is worth stressing the importance of psychological distress deriving from somatic illness among Dogons and Peuls, in particular when the reproductive role (as in the case of parasitic orchitis), or the social and familial role (as in the case of cardiopathies or tuberculosis) are compromised. In particular, the value in West African societies of a man's ability to be sexually adequate and of a woman's ability to have children has been clearly shown by Makanjoula and Olaifa (1987) in his study on masked depression among Nigerians. Psychopathological disorders, and depression in particular, may be then considered both as a reaction to the loss of the position of the subject in the group to which he/she belongs and as a reaction to the threat of a "catastrophe". In fact, a somatic illness could be effectively catastrophic for these people heavily burdened by economic, social and sanitary problems. The problem of the fear of dislocation from the group is considered typical in Africa, where depression is characterized by persecutory symptoms more than by ideas of fault, as depicted by Murphy (1978). The peculiarity of depressive symptomatology in Africa has been recently confirmed by a study carried out in Benin on hospitalized patients (Bertshy et al. 1992). This study has demonstrated five principal factors in depressive symptomatology evaluated by means of the Comprehensive Psychopathological Rating Scale (CPRS; Asberg et al. 1978); mood alteration and motor slowness, psychic slowness, anxiety, fatigue and persecution. "Aches" and "pain" were frequently registered, but could not be attributed to any of the principal "component factors". Moreover, the study did not assess somatic comorbidity in the 92 patients examined. The somatic evaluation is in fact crucial in order to exclude the somatic basis of psychiatric disorders, as Gureje and Obikoja (1992) have stressed in their study among primary health care patients in Nigeria.

One of the most interesting aspects of our study was the analysis of the type of care that patients sought. Among subjects affected by a true psychiatric disorder (not associated with a somatic disorder) only one was attributed to "wind" on the basis of local nosology. This subject was the only one showing clear-cut psychotic symptoms and underwent a traditional treatment that diminished the intensity and frequency of his crises. The other five cases had not been recognized as "cases" on the basis of local criteria; only one was referred to a traditional healer due to migraine and another used self-administered drugs.

In other words, only the case of "wind" was culturally codified as an illness and referred to the traditional health care system (healer), while the subjects identified as "anxious", "depressed" or "drug dependent" were not considered as "cases" according to local criteria, and therefore required no care or specific treatment. Unlike somatic disorders, the presence of a psychological disorder alone did not stimulate any request for care, either traditional or conventional. In other words, "minor" psychiatric disorders are not considered as illnesses in Dogon and Peul culture; consequently, they are not pertinent to the health care system, as further illustrated by resorting to divinatory practices. The latter results are partially in agreement with the study of Patel et al. (1995), conducted in an urban context of Zimbabwe, which aimed to generate information about the local concepts of mental illness by means of case vignettes constructed according to Western psychiatric categories. In fact, one of the most interesting findings of this study derived from the vignette representing a case of depression. All interviewees recognized this condition, but only a few identified it as "kufungisisa" (i.e. "thinking too much"), which was considered more as a stress-related condition than as an illness. Only psychiatric nurses, who were more accustomed to Western nosologic criteria, identified it as depression; moreover, they considered the lack of sleeping or an overdose of antimalarial drugs as the causative agent of the condition. The village community workers, more linked to the traditional culture, held, on the contrary, that these cases could be better cared for by means of social and economical than by medical interventions. On the whole, these results seem partly to confirm our findings, demonstrating that cases of depression are not recognized as such in different African contexts and that they are considered more social than medical problems.

In conclusion, this study indicated, by means of a replicable methodology, that Peul and Dogon people suffer from minor psychoneurotic disorders as defined in terms of Western psychiatric criteria, although less frequently than in other African populations. The "etic" approach of our study aimed also to demonstrate the extendibility of Western psychiatric categories to the African setting studied. Although we were able to identify some clearly defined psychiatric "cases" using these categories – demonstrating the presence of mental disorders – these "cases" were not recognized as such in the local settings. Further research should be undertaken in order to understand what kind of non-medical care, probably consistent with a different interpretation, is typical for minor psychiatric disorders in these cultural settings.

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