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PSYCHOLOGICAL DISORDERS IN PRIMARY CARE: CROSS-CULTURAL COMPARISONS

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INTRODUCTION.

Epidemiological investigations of psychological disorder have had a strong boost in the past decade by the adoption of new methods of epidemiological investigation. The adoption of definitional approaches to the study of psychopathology has clearly demonstrated the high prevalence of psychological disorders, and particularly the high rates of psychological disorder among primary care patients (Goldberg & Huxley, 1980). This general finding has been commented upon in various reviews, with one of the most recent reviews arguing for an increasing focus upon primary care (Shepherd & Wilkinson, 1988).

The high prevalence of psychological disorders in primary care settings has also been shown in many different cultures, which is supportive of the general model developed by Goldberg and Huxley (1980). Cross-cultural comparison has often been a method for establishing the limits of models, and the present paper examines the findings from epidemiology in order to indicate the limitations of the Goldberg model.

Psychopathology in Western Countries

Modern epidemiology has frequently been a useful tool in the understanding of pathology. This has been no less so in the field of psychopathology, where

recent decades have shown a shift in both the methods adopted and the samples of study. The shift in the epidemiological study of psychological disorders, from institutional populations to primary care and community settings, resulted in a much clearer understanding of the pattern and prevalence of morbidity. This change in epidemiological strategy was predicated by the realization that the majority of cases of "conspicuous" psychiatric morbidity never reach the attention of specialist psychiatric services. One of the earliest studies, for example, indicated that, although there was a total prevalence rate of 14% (140 per 1000 persons at risk), the annual inception was a mere 5.2% (52 per 1000 persons at risk)(Shepherd et al, 1966). This discrepancy required explanation, and forced a methodological change.

Reasoning that descriptions of psychopathology derived from cases receiving specialist psychiatric care may represent a highly selected group, workers moved to primary care in order to determine more precisely the pattern of morbidity. As Goldberg and Huxley (1980) have put it: "Knowledge about mental illness and its social correlates has until recently largely been derived by studying those treated by the psychiatric services. This is reasonable for major disorders which are relatively rare and which are likely to reach the psychiatric services, but it is unreasonable for common conditions which often do not reach them. For example, a study that is based only upon those under treatment by psychiatrists cannot possibly demonstrate the importance of a possible social correlate which may itself be associated with a reduced chance of receiving treatment" (p1).

Various methods were developed in order to overcome this probable sampling flaw, generally adopting a definitional approach. The most widely used of the methods developed have been those of Wing et al (1977) and Goldberg & Blackwell (1970). However, despite the variations in methodology, there has been general agreement in the estimates of morbidity. The field has been comprehensively reviewed by Goldberg and Huxley (1980), and it is to their conclusions that I shall largely refer. Goldberg and Huxley (1980) offer a descriptive model, the Filter Model, to account for the Western epidemiological findings. The Model, derived from prescriptive screenings in various settings (community, primary care, and specialist mental health care), shows the progressive "filtering" of cases from community to specialist mental health care, with only the most severe cases reaching specialist mental health care.

It seems apparent that the severe disorders, referred to psychiatrists, will include most cases of psychosis, but is not confined merely to cases of psychosis. The criterion of severity thus includes non-psychotic disorders

such as chronic neurosis, violent behaviour, parasuicide, and depression (Gater & Goldberg, 1991). The bulk of the disorders presenting at primary care level will be the less severe disorders, with perhaps a preponderance of these disorders being composed of anxiety and depression. However, it is clear that these latter are not the distinct syndromes that might be expected, and Goldberg and Huxley (1980) have proposed that these cases represent disorders with a common core of emotional symptoms, with relatively few cases of distinct anxiety or depression, which view has been bolstered by more recent work (Goldberg et al, 1986; Grayson et al, 1988).

These findings cast doubt upon the validity of the existing nosologies, and would suggest that the restricted sampling used in the derivation of these descriptive systems has resulted in classifications unable to account for much of the morbid population. This criticism has been forcefully put by general practitioners (Sharp & King, 1989). This criticism would fall away if it could be shown that samples of patients seen by specialist mental health workers differed from primary care samples only in severity, and not in the frequency or phenomenology of disorder-types.

It is apparent that not all of the morbid cases presenting to primary care settings are seen by medical workers as cases of "conspicuous" psychiatric morbidity. A percentage of the morbid population remain undetected, or "hidden" to primary care workers. Goldberg and Huxley (1980) estimate that a substantial proportion of total morbidity remains undetected to primary care workers, perhaps as much as 50%. A recent Italian study estimated that about 59% of total morbidity was missed by Italian general practitioners (Bellantuono et al, 1987). Goldberg and Huxley (1980) argue, on the basis of several studies, that "hidden" disorders are more likely to be transient, whereas "conspicuous" disorders are more likely to be severe or chronic. This suggests that the filtering process is rational, and that primary care and specialist psychiatric care differ mainly according to severity.

There is also some evidence that prognosis is dependent to some degree on the severity of the disorder. Goldberg and Blackwell (1970) have shown that both severity and social adversity affect outcome adversely, and also that these factors are largely independent of each other. It has also been demonstrated that detection facilitates both a good outcome, and a likelihood of referral to specialist mental health care, in severe cases, but has little effect on the generally good prognosis of mild cases (Johnstone & Goldberg, 1976). This further supports the view of samples from the two settings being distinguished only by severity, and supports the view that current classifications are valid, and further, that the main distinction in the two populations is one of severity.

However, the low rates of detection remains a problem for this argument, and attempts have been made to explain these low rates. That low detection rates are a problem seems self-evident: incorrect diagnosis leads to incorrect treatment, quite apart from the more theoretical problem of why the "detector" does not "see" the disorder. When this problem is considered together with the findings on severity, indicated above, then it is tempting to see the problem of low detection rates as determined by health worker factors, such as level of training. However, one current explanation offered is that low detection rates are produced by the manner in which patients to primary care settings present their problems to health workers.

The presenting complaints of primary care patients have been examined in several studios. Goldberg and Blackwell (1970) earlier demonstrated that patients were more likely to present with physical symptoms. This was corroborated by a more recent study, where it was shown that 58% of the morbid group had mainly physical symptoms as the reason for consultation (Skuse & Williams, 1984). Goldberg and Huxley (1980) have argued that physical presenting symptoms are likely, together with other factors, to contribute to non-detection and the disorder remaining "hidden". The other factors argued to contribute to non-detection are age, being unmarried, and being male. On the other hand, the severity of the disorder, being female, a frequent attender, and having some form of relationship dysfunction have all been shown to contribute to making the disorder "conspicuous".

Amongst the features that contribute to consultation in the first instance are many characteristics that are conventionally assumed to cause disorder. Stressful life events, being lonely, unemployed, and having relationship dysfunctions, are all argued to contribute to consultation. However, this is perhaps not very significant since the majority of cases will consult in any event. All of those features are seen, in the Filter Model, as being due to the "illness behaviour" of patients.

Generally these studies have used a standard method; that of correlating various measures of patients and health workers against the rate of detection. This latter measure, usually a self-report questionnaire and interview, is validated in turn by expert psychiatric diagnosis, using a standardized interview such as the Present State Examination. As Skuse and Williams (1984) point out, agreement between psychiatrists (or inter-rater reliability) is problematic, and there is no satisfactory answer, in social sciences generally, to this problem. It is well to be clear here: there are both empirical and epistemological problems in accepting inter-rater agreement as a standard. Pragmatically, it remains the only standard that we have. Goldberg does not deal with the epistemological problem in any depth, but he and his associates have tackled the empirical issue with some diligence.

Goldberg and Huxley (1980) have advanced two main factors as determining the rate of detection by health care workers: accuracy and bias. These theoretical constructs are operationally defined, and measured against the prescriptive screening procedures. Accuracy can be defined as agreement with an independent measure, whereas bias is defined merely as the tendency to make psychiatric diagnoses. These two factors interact in rather complex fashion, and the interested reader is referred to Goldberg and Huxley (1980) for their-detailed description. Here it is enough to note the factors, and indicate briefly their characteristics.

For example, it has been shown that accuracy (the ability to make diagnoses congruent with patients' symptom levels) is unaffected by the type of setting the patient attends, whereas bias (the tendency to make psychiatric assessments) is clearly affected by the setting. However, variations in detection are not solely a function of the health care setting, and it is also clear that health care workers themselves vary greatly in both aAccuracy and bias, and further that these two factors may operate independently: doctors may have a high bias without being accurate.

In sum, then, Goldberg and Huxley (1980) have offered a model that appears to account for the known epidemiological findings. The Filter Model provides the clearest description of psychopathology and its variation, and its proponents have argued that the Model will hold true in other cultures. As there is now a reasonable African body of knowledge on this field, it is interesting to evaluate these claims against the African findings. Clearly the Filter Model will have even greater applicability if it can be shown to hold in even more widely different cultures than the above, and its proponents argue that the African studies seem generally supportive. It is to these African studies we now turn.

PSYCHOPATHOLOGY IN AFRICA.

The prevalence of psychological disorders in Africa is well-known, and there are a number of studies attesting to the manifest occurrence of such disorders. These studies have been reviewed elsewhere (Reeler, 1991; German, 1987; Reeler, 1986; Egdell, 1983; Giel & Harding, 1976; German, 1972), and I would wish only to emphasize a number of the most important findings.

Firstly, it is clear that the gross rates of disorder reported in Africa are little different to those reported in the West. The prevalence rates do not appear to have changed much over time, which is interesting when one considers the enormous economic and socio-cultural changes that have occurred in Africa

in recent decades. The prevalence rates do not, furthermore, appear to vary according to the setting, and rates seem similar in both rural and urban settings. A recent Zimbabwean study confirmed these findings, and demonstrated no differences in prevalence rates either over time or due to the setting (Reeler, Williams & Todd, 1991). The general point would seem to remain: that, in Africa, psychopathology seems to be relatively constant over time and culture.

Secondly, the composition of the morbid population in Africa bears a strong resemblance to the composition of populations studied elsewhere. Specifically, high rates of neurosis are found, with a rough ratio of neurotic to psychotic conditions of 4 to 1. Among the neurotic population, anxiety and depression predominate, accounting in some studies for as much as 70% of the total morbidity (Hall & Williams, 1987a; Dhadphale, Ellison & Griffin, 1983; Harding et al, 1980).

Thirdly, the rates of disorder would seem to be largely the same whether one examines prevalence in community samples or whether one examines clinic attenders. The general finding in the West has been that the first filter, that between the community and primary care, is relatively permeable, and that most cases of psychopathology seek medical care. This is replicated by the African studies. This is a direct refutation of early work, and in particular the conclusions of Carothers (1948), who had asserted that psychopathology was relatively uncommon in Africa and that rural life had a buffering effect on the acquisition of disorder.

In reviewing African studies on primary care presenting psychological disorders, it is difficult to make many comparisons between studies. Reports describe different aspects of the presenting problem, and clearly many studies have differing aims: few are concerned with detection per se. There is unanimity on the more general aspects of the morbid population: agreement over prevalence, agreement over the rough composition of the morbid group, and agreement over the ratio of neurotic to psychotic conditions. Furthermore, the studies note that patients frequently present with physical symptoms, tend to be frequent attenders of health care facilities, and have had symptoms for a relatively long period of time. And, of course, there are the apparently high rates of "hidden" psychological disorder. Given the various methodological shortcomings, it is interesting still to examine the studies and the general conclusions of these studies.

The most influential to date, that of the World Health Organization's collaborative study (Harding et al, 1980), indicated most of the later findings, and generated most of the hypotheses of the later studies. The WHO study

noted the high prevalence of psychopathology, and also noted the preponderance of undetected minor disorders. Harding and his colleagues noted that physical symptoms predominated amongst the morbid group, leading to the hypothesis that there was an inverse relationship between the number of presenting symptoms and the probability of organic disease: three or more physical symptoms were indicative of psychological disorder.

The frequency of physical symptoms was noted by earlier studies (Giel & van Luijk, 1969; Leighton et al, 1963). A recent Zimbabwean study found again that the morbid group had approximately three somatic symptoms (Reeler, Williams & Todd, 1991), but also indicated that symptoms may not be the best indicator of psychopathology. Here the number of systems (musculo-skeletal, gastro-intestinal, etc) was a more reliable indicator than the number of symptoms. Somatic symptoms are a frequent African mode of presenting for help. The symptoms are usually vague and unrelated to each other, but several studies now suggest that some symptoms are more salient than others. Ndetei and Muhangi (1979) reported the frequency of symptoms per bodily system: central nervous system, musculo-skeletal, eyes; eyesight and gastro-intestinal complaints were the most frequent.

A more recent report indicated that a similar pattern obtained in a Zimbabwean sample (Hall & Williams, 1987a). The most recent Zimbabwean study found the following symptoms in rank order of symptoms per bodily system: musculo-skeletal, neuro-physiological, gastro-intestinal, genito-urinary, respiratory, E.N.T., cardio-vascular and dermatological (Reeler, Williams & Todd, 1991). The first three sets of symptoms were markedly more frequent in the psychopathological group, suggesting that there may be a profile to the multiple somatic complaints of patients with psychological disorders.

The African studies also support the finding from the West that most of the morbid population suffers from the so-called minor disorders. Given the high rates of somatic complaint and the low rates of detection, it is unsurprising that African workers comment that it is difficult to clinically distinguish anxiety and depression (Acuda & Egdell, 1984). This also lends support to Goldberg's view of a more general disorder-type with a core of emotional symptoms. It will be interesting here to attempt a direct comparison with Goldberg's most recent work, which has given empirical support to his earlier assertion (Goldberg et al, 1986; Grayson, 1988).

It would seem thus that there are similarities in African and British patients, and that the method of epidemiology outlined earlier has been fruitful in quite different cultural settings. The findings allow us to make a comparison of the

Filter Model in different cultural settings, and to thus estimate the limits of its generality.

COMPARISON OF FINDINGS.

Perhaps the most significant finding is the comparative similarity of the prevalence rates. This has received considerable comment over the years, as was mentioned above. However, the similarities in prevalence rates have received little theoretical comment, which is interesting when one considers that this finding seems such a direct refutation of the view that culture has a "pathogenic" role in the causation of psychological disorder. That the prevalence of psychological disorder remains constant across culture and over time would not be predicted by many theories: in particular, the group of theories arguing for social causes of individual behaviour.

The proponents of the Filter Model have argued that both severity and social adversity will contribute to poor prognosis, but will do so independently. The implication here is that social adversity has a direct influence upon disorder, which is not the same as arguing that social adversity causes disorder. In Africa, it is difficult to find comparability with the West in what might be considered to be social adversity: life events, relationship dysfunctions, economic deprivation, the number of children under 5 years (for women), and social class have all been offered in the West as indicators of social adversity, or social correlates as Goldberg and Huxley (1980) term this. These social correlates do not appear to have the same effects in Africa. Reeler et al (1991) argue that these factors do not distinguish the psychopathological group from ordinary primary care clinic attenders.

This then adds a different degree of complexity to the debate. If the prevalence studies show no comparative differences between and within cultures, presumably we will have to think more carefully about the role of culture in disorder. If prevalence studies in Africa additionally show that there is no greater social adversity in the psychopathological group, are we then re-introducing a cultural variable? Goldberg and Huxley (1980) argue that the social correlates of stressful life events, unemployment, and relationship dysfunction determine whether patients in the West will consult for their disorders, and yet the African work suggests that these factors do not so determine consultation in African patients. This is only a speculative difference, based upon a single study, but the difference deserves more consideration. Clearly there is a need for more careful descriptive studies in Africa, before we can conclusively assert that there is comparative difference between Africa and the West, and before we can assert that the Filter Model has limited descriptive power.

The prevalence studies would also seem to be further support for the refutation of the Mental Paradise Lost Doctrine (Srole & Fischer, 1980), the view that the prevalence of disorder will increase with acculturation and urbanization. Reeler et al (1991) show very little difference between urban and rural settings, which replicates the general finding in Africa. In general, it would seem that sociological factors have been overemphasised in their importance for the acquisition of psychological disorder, and it would seem that rather more attention should be paid to psychological and biological factors.

There are some other differences between Africa and the West which may affect the generality of the Filter Model. There are differences between the West and Africa in what constitutes "conspicuous psychiatric disorder". In Africa, this term seems synonymous with psychosis, and it would seem that severity too is synonymous with psychosis (Diop et al, 1982)). This would appear to be a difference with the Western studies, where severity seems to include a wider range of disorders than merely psychosis. This observation, about "conspicuous" psychiatric disorder, should be read together with the findings on detection: that few cases of psychological disorder are detected by African primary care workers. Although this finding has received general comment, there are as yet few investigations of detection per se in Africa, and thus the observation must remain tentative.

Tentative as it may be, it is still very interesting that the rates of "hidden psychiatric disorder" are much higher in Africa than they are in the West. This may represent differences in the levels of training of health care workers in these respective cultures, but equally may not. A singular difference lies in the fact that, in Africa, primary care workers are predominantly nurses or medical assistants, whereas, in the West, they tend to be doctors. A recent Zimbabwean study has shown that the detection skills of primary care workers may be improved by training (Hall & Williams, 1987b), but this does not clearly demonstrate that the differences in detection rates are only to be explained by levels of training. The explanation of the low rates of detection will only come from the kinds of careful epidemiological study that have been undertaken in the West. In particular there would seem to be some merit in the examination of accuracy and bias as determinants of detection.

As regard the presenting picture of African as opposed to Western patients, there are some other interesting similarities, and perhaps an important quantitative difference. It does seem that the tendency to present with physical symptoms is found across cultures, and it may be that the only significant difference is merely quantitative. The earlier finding of the WHO collaborative study (Harding et al, 1980), that the number of symptoms is

directly related to the presence of psychological disorder, has been replicated (Reeler et al, 1990), and it is interesting to find a cross-cultural difference, albeit quantitative only, in the midst of a general lack of cross-cultural differences. This finding deserves much more attention than it receives at present. It is interesting that Western studies suggest that Western patients too show a tendency towards "physicalizing" their problems, and a recent study suggests that this may have changed over the years (Gill, 1985). This study indicates the change in presenting complaints of British psychotherapy patients over 40 years, and shows a move from "physicalizing" to "psychologizing", which seems again to implicate a social or cultural variable.

Thus, the findings of epidemiological studies in Africa seem to support the views of Goldberg and Huxley (1980): that the Filter Model seems to have general applicability across cultures. With one quantitative difference, the prevalence studies replicate the findings of the Western studies. This suggests that the Filter Model should be more seriously considered than it is at present. It does not, however, suggest that cultural factors have no role to play, or that we understand fully their contribution to psychopathology.

Kleinman (1987) has recently criticized the disregard within psychiatry for the contributions of social anthropology (and culture), and attempts to argue that culture may have a "pathogenic" role in the genesis of psychological disorder. As I have mentioned, the data do not support this argument, and nor does Kleinman refer to the findings covered by the reviews given above. The findings are unsupportive of Kleinman's suggestion that culture may play a causal role in the genesis of psychopathology, and in fact, there would seem to be only a single study that suggests that culture may have direct effects upon the acquisition of disorder (Murphy & Taumoepeau, 1980). This study, conducted in Tonga, would only support the view that culture may prevent disorder, and additionally, suffers from the flaw of focusing almost exclusively on the major disorders.

The African studies, whilst supporting the Filter Model in many ways, also show some differences, and these differences may indicate some interesting problems for the Filter Model. The problem of non-detection is possibly the most interesting, and the quantitative differences in Western and African settings requires some explanation. If it can be assumed that cultural influences are minimal, then is the problem of non-detection only to be explained by differences in the level of training of health workers? The Hall and Williams (1987b) study would support this view, but this study cannot be accepted as conclusive support of this argument.

Goldberg's own work on detection suggests that detection is a function of three sets of interacting factors: the patient, the health worker, and the health care setting. Each of these factors is very complex in their own right, and the African studies have only concentrated on the patient. It will be important to extend this work to more careful descriptions of health workers and health care settings. Such studies will have to take into account the "illness behaviour" of African patients, which re-introduces an important cultural variable, lay theories of illness. Lay theories of illness may have an important effect on our understanding of health, as Dingwall (1972) has argued, and of course, Kelly (1955) has argued this position strongly for psychopathology and psychotherapy.

Lay theories of illness may also be important in understanding the accuracy and bias of African health workers. Since lay theories of illness in Africa usually involve some spiritual causation, it may be that this becomes an important factor in the bias of African health care workers. Spiritual agency always has a strong relationship to the African family (Chavunduka, 1978; Mavi, Owen &Gelfand, 1983), and thus disorder usually has some familial basis. Health workers may thus perceive the problem as being more appropriately treated within the informal health care system, by traditional healers, and thus "detect" merely the physical symptoms.

Some evidence for this view comes from the observation that primary care workers frequently seem aware of the meaning of vague physical problems, and the concomitant social correlates. However, since they also express an inability to manage these patients, the issue of levels of training is perhaps still relevant. It may well be that the discrepancies in detection rates are related primarily to levels of training in health workers, and hence are to be explained by reference to features of health workers. However, as indicated above, the discrepancies may equally be explained by reference to the wider context, to the social psychological or cultural processes occurring in health care. It is in the explanation of non-detection that some aspects of the Filter Model are wanting, and to simply describe the causes of attendance at primary care clinics as due to "illness behaviour" leaves much still to be explained.

As it stands, the Filter Model treats illness behaviour as a composite of traits, or features, and does not view illness behaviour as the consequence of patients' constructions of their "illnesses", and the manner in which they are managed. Patients are seen as wholly passive, which is at variance with modern conceptions of people and their behaviour. Dingwall (1974), for example, argues that all illness is both a social and a medical construction, and that both sets of reasons will need to considered when explaining illness

behaviour. Many modern theorists take exception to the conception of humans as the passive recipients of experience, and authors who are as distant from each other as Popper (Popper & Eccles, 1977) and Harre (Harre, 1979; Harre & Secord, 1972), are united in their view of humans as active interpreters of their experience. Thus, it is unsatisfactory for the proponent of the Filter Model to accept illness behaviour a feature of a passive organism, and indeed requires specific justification.

This is not a trivial problem, and leaves the behaviour of the patient as unexplained in a very important way. What, for example, are the consequences of non-detection to the patient? Will this lead to increased attendance at primary care facilities, or decreased attendance? Will non-detection lead to chronicity or not? What are the consequences of non-detection on patients' own theories of their illness? These questions will need to be answered if we are to understand the problem of non-detection.

The Filter Model has provided a useful and productive reduction of the phenomena involved in the epidemiology of psychopathology, but it does seem that cross-cultural comparison has shown some of its limitations. The limitations seem most clearly shown by the problem of non-detection, and future work should aim at clarifying this issue. In this process of clarification, it will be very important to pay close attention to cultural variables, and perhaps also to the lay theories of patients.

CONCLUSION.

Thus, there remain important issues in the study of psychopathology, and perhaps a problem of considerable value: the problem of non-detection. The problem of non-detection seems to indicate some difficulties with the Filter Model, which revolve around the understanding of illness behaviour and culture. That culture does not seem to play a pathogenic role in psychopathology does not diminish its pathoplastic role, and the role of illness behaviour may be considerably more important than the advocates of the Filter Model would suggest.

Cross-cultural testing of a theory is often a useful method for establishing the limits to the generality of the theory, and it would seem that, useful as the Filter Model may be, there are problems revealed by cross-cultural comparison. At present, it seems safe to conclude that culture does not protect against psychopathology, but also that culture may have an important role in the manner in which psychopathology manifests itself, and perhaps also in the way in which psychopathology may be treated. This understanding is only possible because of the epidemiological advances of recent decades, as

Goldberg and Huxley (1980) have commented: "There are still large areas of doubt and uncertainty in social psychiatry, but it is our contention that a consistent picture is beginning to emerge from the research of the last decade, made possible by the union of epidemiological method with operational criteria for defining the various syndromes of psychiatric disorder" (p157).

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REFERENCES.

Acuda, S W & Egdell, H C (1984) Anxiety and depression and the general doctor. **Trop. Doctor, 14**, 51-55.

Bellantuono, C et al (1987) Psychiatric morbidity in an Italian general practice. **Psychol. Med., 17**, 243-247.

Carothers, J C (1948) A study of mental derangement in Africans and an attempt to explain its peculiarities, more especially in relation to the African attitude to life. **J Mental Sci., 98**, 548-596.

Chavunduka, G L (1978) **Traditional healers and the Shona patient.** Gweru: Mambo Press.

Dhadphale, M, Ellison, R H & Griffin, L (1983) The frequency of psychiatric disorders among patients attending semi-urban and rural general out-patients. **Brit. J Psychiat., 143**, 379-383.

Dingwall, R (1972) **Aspects of illness.** London: Martin Robertson.

Diop, B et al (1982) Diagnosis and symptoms of mental disorders in a rural area of Senegal. **African J Med. Sci., 11**, 95-103.

Egdell, H C (1983) Mental health care in the developing world. **Trop. Doctor, 13**, 149-152.

Gater, R & Goldberg, D P (1991) Pathways to psychiatric care in south Manchester. **Brit J Psychiat., 159**, 90-97.

German, A (1972) Aspects of clinical psychiatry in Sub-Saharan Africa. **Brit. J Psychiat., 121**, 461-479.

German, A (1987) Mental health in Africa: I. The extent of mental health problems in Africa today. **Brit. J Psychiat., 151**, 435-443.

Giel, R & Harding, T W Psychiatric priorities in developing countries. **Brit. J Psychiat., 128**, 513-522.

Giel, R & van Luijk, J N (1969) Psychiatric morbidity in a small Ethiopian town. **Brit. J Psychiat., 115**, 149-152.

Gill, H (1985) Complaints of patients presenting for psychotherapy in 1938 versus 1978. **Brit. J Psychol. Med., 58**, 55-56.

Goldberg, D P et al (1986) Dimensions of neuroses seen in primary care settings. **Psychol. Med., 17**, 461-470.

Goldberg, D P & Huxley, P H (1980) **Mental illness in the community.** London: Tavistock.

Goldberg, D P & Blackwell, B (1970) Psychiatric illness in a general practice: A detailed case study using a new method of case identification. **Brit. Med. J, 2**, 439-444.

Grayson, D et al (1988) The relationship between symptoms and minor psychiatric disorder in general practice. **Psychol. Med., 17**, 933-942.

Hall, A & Williams, H (1987a) Hidden psychiatric morbidity Part I: Study of prevalence in an outpatient population at Bindura Hospital. **Central Afr. J Med., 33**, 239-245.

Hall, A & Williams, H (1987b) Hidden psychiatric morbidity Part II: Training health care workers in detection: A pre- and post-study at Karanda Mission Hospital. **Central Afr. J Med., 33**, 255-258.

Harding, T W (1980) Mental disorders in primary health care: A study of their frequency and diagnosis in four developing countries. **Psychol. Med., 10**, 231-241.

Harre, R (1979) **Social being: A theory for social psychology.** Oxford: Blackwell.

Harre, R & Secord, P F (1972) **The explanation of social behaviour.** Oxford: Blackwell.

Johnstone, A & Goldberg, D P (1976) Psychiatric screening in general practice. **Lancet, 1**, 605-608.

Kelly, G A (1955) **The psychology of personal constructs. Volume 1.** New York: Norton.

Kleinman, A (1987) Anthropology and Psychiatry: The role of culture in cross-culture research on illness. **Brit. J Psychiat., 151**, 447-454.

Leighton, A H et al (1963) Psychiatric disorder in West Africa. **Amer. J Psychiat., 120**, 521-527.

Mavi, C S, Owen, F A & Gelfand, M (1983) The aetiology of illness as determined by divination and methods of treatment by Zimbabwe N'anga. **Central Afr. J Med., 29**, 5-8.

Murphy, H B M & Taumoepeau, B M (1980) Traditionalism and mental health in the South Pacific: A re-examination of an old hypothesis. **Psychol. Med., 10**, 471-482.

Popper, K R & Eccles, J C (1977) **The self and its brain.** London: Springer.

Ndetei, D N & Muhangi, J (1979) The prevalence and clinical presentation of psychiatric illness in a rural setting in Kenya. **Brit. J Psychiat., 135**, 269-272.

Reeler, A P (1991) Psychological disorder in primary care and the development of clinical services: An African perspective. **The Psychologist, 4**, 349-353.

Reeler, A P (1986) Psychological disorders in Africa: I. Issues and prevalence. **Central Afr. J Med., 32**, 298-303.

Reeler, A P, Wiliams, H & Todd, C H (1990) Psychopathology in primary care patients: A four year study in rural and urban setting in Zimbabwe. Unpublished typescript.

Sharp, D & King, M B (1989) Classification of psychosocial disturbance in general practice. **J Royal College Gen. Pract., 88**, 356-358.

Shepherd, M & Wilkinson, G (1988) Primary care as the middle ground for psychiatric epidemiology. **Psychol. Med., 18**, 263-267.

Shepherd, M et al (1966) **Psychiatric illness in general practice.** London: Oxford University Press.

Skuse, D & Williams, P (1984) Screening for psychiatric disorder in general practice. **Psychol. Med., 14**, 365-377.

Srole, L & Fischer, A L K (1980) The Midtown Manhattan longitudinal study versus "The mental paradise lost" doctrine. **Archives Gen. Psychiat., 37**, 209-221.

Wing, J K et al (1977) Reliability of the PSE (9th edition) used in a population survey. **Psychol. Med., 7**, 505-516.