The Epidemiology of Paranoid Schizophrenia

by E. Fuller Torrey

Abstract

Epidemiological data available on paranoid schizophrenia are noteworthy for their paucity and poor quality. Although it is commonly said that the paranoid subtype is less common in developing countries, published studies are contradictory. It has also been said that paranoid schizophrenia occurs more frequently among educated persons, but the evidence is not conclusive. Two Scandinavian studies suggest that the paranoid subtype increased in frequency during this century. Assertions that some cultures produce large numbers of paranoid persons are of great interest since schizophrenic symptomatology is partly dependent on culture. The most famous such culture, the Dobuans, are found to be a product of ethnographic bias and probably do not exist as described. This leaves the question of cultural influence on paranoid schizophrenia wide open. Two studies on the seasonality of paranoid schizophrenic births found that their birth pattern does not differ from the seasonal pattern previously established for schizophrenic births as a whole. It is concluded that the epidemiology of paranoid schizophrenia is an area of potentially fruitful inquiry and one that is mostly terra incognita.

It has been said that the first step in the scientific approach to a problem is to replace ignorance with confusion. Such is the case with the epidemiology of paranoid schizophrenia, an area in which both the quantity and quality of data available are remarkably poor. If this review does no more than focus attention on the need for better data, it will accomplish its purpose.

Epidemiology has provided important breakthroughs in understanding the etiology and pathogenesis of many chronic diseases of man. Several of the cancers are being linked to possible etiological agents using epidemiological studies. Within the nervous system such diseases as Parkinson's dementia, spina bifida, amyotrophic lateral sclerosis, and multiple sclerosis are under intense epidemiological investigation. But for the schizophrenias, comparatively little work has been done.

The epidemiological research that has been done on schizophrenias to date has been provocative. Since it has been extensively reviewed elsewhere (Torrey 1979, 1980), it will be only briefly summarized. There appear to be areas of the world in which the schizophrenias occur very frequently (e.g., western Ireland, northwestern Croatia) and others in which they occur infrequently (e.g., many developing countries). The difference from the lowest prevalence areas to the highest prevalence areas appears to be 10-fold. Furthermore, there is evidence that the prevalence of the schizophrenias is not static but may change over time. Studies have also confirmed that the schizophrenias occur more frequently in lower socioeconomic groups in the United States, England, Ireland, Norway, Iceland, and Japan, but

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The Frequency of Paranoid Schizophrenia

When the frequency of paranoid schizophrenia is discussed in the psychiatric literature, it is usually asserted to be lower than other schizophrenic subtypes, especially in developing countries. Thus Wittkower and Fried (1959, p. 424), in a worldwide survey, noted that "most observers agree that the hebephrenic form of schizophrenia is most commonly seen and that the paranoid form is relatively uncommon." And Benedict and Jacks (1954, p. 387) concluded that "paranoid schizophrenia and paranoid forms of mental illness in general appear to be relatively infrequent among primitive peoples—or, at any rate, they are less frequently recognized as such."

An examination of specific studies yields contradictory results on this question. Moffson (1954), in a study of 227 hospitalized Bantu in South Africa, reported that only 7 percent of the schizophrenics were paranoid. Carothers (1948), in his well-publicized study in Kenya, found that 11 percent of his schizophrenic patients had "paranoia" or the paranoid subtype. Among the less westernized Tallensi in Northern Ghana, Fortes and Mayer (1969) reported very few paranoid schizophrenics, and contrasted this with the frequent occurrence of paranoid symptoms among the more westernized people in Southern Ghana.

Higher frequencies of paranoid schizophrenia were found in other African studies. Lamont and Blignault (1953) also studied South African Bantu and, in contrast to Moffson (1954), said that 24 percent of their schizophrenics were paranoid or "paranoid states." Smartt (1956) in Tanzania gave a similar figure of 25 percent. Shelley and Watson (1936) in Zambia reported that 33 percent of schizophrenics were paranoid. And Collomb in Senegal found paranoid and simple subtypes to be most common there (Sanua 1969). Lambo (1955, 1960) in Nigeria explicitly refuted the idea that paranoid schizophrenics are less common in Africa.

Elsewhere in the world, Pfeiffer (1962, 1963) in Indonesia reported that only 4 percent of schizophrenics there were of the paranoid subtype; Kline (1963) confirmed this low frequency. In China, by contrast, Cerny (1965) found the paranoid subtype to comprise 46 percent of all schizophrenics. In Moscow in the Soviet Union the paranoid subtype was said to constitute 38 percent of the schizophrenics (Hein 1968). In Sweden, by contrast, in a survey of two rural islands the paranoid subtypes were only 9 percent of the total schizophrenics (Larsson and Sjögren 1954). Thus the weight of studies done to date, many of which have used poor methodology, does not allow a firm conclusion on whether paranoid schizophrenia is comparatively infrequent around the world or whether it is especially infrequent in countries that have not been highly westernized.

A closely related assertion found frequently in the cross-cultural literature is that paranoid schizophrenia occurs more commonly among people who are more highly educated. For example, German (1972, p. 469), after surveying the African literature, concludes that "all the authors quoted appear to agree that systematized paranoid features are more common in the educated, westernized African, although not totally absent in the unsophisticated." This same pattern has been claimed to exist in Indonesia (Pfeiffer 1962), in India (Dhunjibhoy 1930), and among Chinese on Taiwan (Lin 1953). In western nations this pattern has been reported in Italy (Rose 1964).
If paranoid schizophrenia really is more common among the more highly educated, this would be a strong argument in support of paranoid schizophrenia as a separate disease; it might also offer some clues to etiology. Other observers have questioned whether this pattern does in fact exist, however. Yap (1951) believes that the apparent paucity of paranoid schizophrenia among less literate people is simply a language problem and that the educated observer does not know how to elicit paranoid symptoms in less educated persons. Lambo (1955) agrees with this and has argued strongly that there is no difference in the prevalence of paranoid schizophrenia between rural, nonliterate and urban, highly westernized Africans.

Another intriguing observation about the frequency of paranoid schizophrenia is Achte’s (1961) claim that it increased sharply between the 1930s and the 1950s in Finland. He studied all admissions to the country’s mental hospitals for 1933–35 and for 1953–55, randomly selecting 100 cases from each group for interview and 4-year followup. All final diagnoses were made by the same person, and the methodology of the study was very good. He concluded that “there has occurred an increase in the frequency of paranoid types. In the 1930’s, 36 percent of the cases fell under this head, but in the 1950’s the percentage was 59. The difference is highly significant” (Achte 1961, p. 223). Similarly Ødegård (1971) in Norway found an increase in paranoid schizophrenia between 1921 and 1965. To date these studies have been neither confirmed nor refuted. Hare (1974) in England believes that this trend toward paranoid schizophrenia may be associated with schizophrenia becoming a milder disease in the 20th century.

**Paranoid Symptoms and Paranoid Societies**

It is generally acknowledged that the content of schizophrenic symptoms is culturally dependent. Thus in northern Ghana, which is less technologically developed, the content of a schizophrenic’s delusions centers around the fetish system; by contrast in more highly developed southern Ghana the delusions may include such things as electricity, radios, and television (Tooth 1950). Similarly in Nigeria “in the rural non-literate Africans in this tribe the delusional contents are often centered around the concepts of supernaturalism and ancestral cults, while in the literate African hypochondrial delusions and bizarre somatic complaints, especially in the early stages, seem to dominate the picture” (Lambo 1965, p. 65). The content of schizophrenic delusions can also change over time as the culture changes, as in Japan when pre-World War II delusions focused on the Emperor but postwar delusions included such things as the United States, Communism, radio, and television (Asai 1964).

It is also widely believed that some cultures emphasize certain personality characteristics over others. Mistrust, suspiciousness, and paranoid thinking are a way of looking at the world which, according to some anthropologists and psychiatrists, is more common in some cultures than in others. Since culture influences the content of schizophrenic symptomatology, one might reasonably expect that cultures which are more paranoid in outlook would produce more paranoid schizophrenics. Thus the question of whether paranoid cultures exist is integral to sorting out the confusion of data on the epidemiology and causes of paranoid schizophrenia.

Individual personality traits, it is generally agreed, are strongly influenced by early childhood experiences and child-rearing practices. Thus some psychoanalysts and psychoanalytically trained observers believe that traits like mistrust and paranoia may be products of a specific kind of early experience. Hitson and Funkenstein (1959), for example, cite the authoritarian family structure as predisposing to paranoid personality development. Since authoritarian family structures are widespread in some cultures, one would expect large numbers of paranoid individuals in such cultures. Such is the case, claim Hitson and Funkenstein (1959), for Burma. Unfortunately there are as yet no data with which to ascertain whether Burma or other cultures with an authoritarian family structure produce a larger number of paranoid schizophrenics.

Of the relatively paranoid cultures described to date, none is better known than the Dobuans who live on an island off the coast of Papua New Guinea. They were immortalized by Reo Fortune, a psychologist who lived with them and in 1932 published *The Sorcerers of Dobu*. Two years later Ruth Benedict included the Dobuans in her *Patterns of Culture*, one of the most widely read anthropological works of all time and a cornerstone for culture-and-personality studies.
Fortune (1932) described the Dobuans as “almost pathologically jealous” (p. 235) with “a strong thieving tendency” (p. 145). “The fear of being poisoned dominates native life” (p. 170). “Sorcery and witchcraft are by no means criminal, because everyone indulges in one or the other according to sex, and everyone knows it. . . .” (p. 79). “The whole life of the people is strongly colored by a thorough absence of trust in neighbors and the practice of treachery beneath a show of friendliness” (p. 137). Perhaps Fortune’s whole book can be best summed up by his observation that the Dobuans “prefer to be infernally nasty or else not nasty at all!” (p. 56).

Benedict (1934), basing her chapter on Fortune’s book and on private conversations with him, describes the Dobuans as “lawless and treacherous” and “consumed with jealousy and suspicion and resentment.” “All existence is cutthroat competition, and every advantage is gained at the expense of a defeated rival. . . .” “The good man, the successful man, is he who has cheated another of his place. . . .” “It is taken for granted that he has thieved, killed children and his close associates by sorcery, cheated whenever he dared. . . .” “Dobuan conventions exclude laughter and make dourness a virtue,” and the ethical ideal of the culture is described as “treacherous conflict.” They are said to be “a race of Iagos, secretive, dour, prudish and treacherous.”

Certainly this would seem to be fertile ground for paranoid schizophrenia to thrive. With this in mind the author undertook a record survey of all psychiatric inpatients in Papua New Guinea (of which Dobu is part) for the years 1960–1973 (Torrey, Torrey, and Burton-Bradley 1974). The population of Dobu during these years was approximately 1,000 people. For the 14-year period only three Dobuans were psychiatrically hospitalized, and none of them had predominantly paranoid symptoms.

Fortune could argue that the personality of the Dobuans had changed between 1932 and 1960 and that this is why large numbers of paranoid schizophrenics cannot be found today. However, there are other reasons to doubt the validity of Fortune’s observations. First, a missionary who spent 20 years among the Dobuans at the turn of the century described them as believing in sorcery (as is true for most South Pacific cultures) but “cheerful, laughter-loving folk” (Bromilow 1929). Most of the individuals he described are likable, pleasant, and helpful, not dour and paranoid as described by Fortune. Furthermore there are serious methodological limitations to Fortune’s work, including the fact that he spent less than 5 months there, could not possibly have learned the language fluently, and obtained most of his information from a single informant. Most damaging to Fortune’s description is the biography of Margaret Mead (1972), who married Fortune immediately after his Dobuan field work and described Fortune himself as argumentative, pathologically jealous (e.g., “he begrudged even the attention I gave to a piece of mending”), and paranoid (e.g., when Mead and Fortune went to work with the Omaha Indians, Fortune “became convinced that he had been sent there to fail.”). There is also evidence in Fortune’s book that the Dobuans personally disliked him and he, in turn (according to Mead), “had passionately disliked” the Dobuans. Thus Fortune’s description of Dobuan personality traits would in retrospect seem to be a reflection, at least in part, of his own personality traits.

It is important to be aware of this because the Dobuans have been popularized as a predominantly paranoid society. If that description of them is inaccurate, as would seem to be the case, then is there any such thing as a predominantly paranoid society? Certainly there are cultures and subcultures (e.g., inner city New York) in which people are more suspicious and less trusting, but does this variation lead to any differing prevalences of paranoid schizophrenia? If so, then it would argue strongly for more psychosocial determinants of the disease. If not, then it may be that the paranoid subtype is more a product of biological variables such as genetic antecedents, the etiological agent, the part of the brain affected, or the timing of the biological insult to the brain. It is an important and researchable question, but we do not now have many answers.

**Seasonality of Paranoid Schizophrenic Births**

Another approach to the epidemiology of paranoid schizophrenia is to look at the seasonality of their births. As mentioned previously, it is now established that schizophrenics as a group have a statistically significant skew to their birth seasonality with disproportionate numbers of them born in the late winter and/or early spring months in the northern hemi-

Two researchers have examined the seasonality of paranoid schizophrenic births as a subgroup. Dalen (1975) in Sweden compared all patients with a diagnosis of "paranoid or status paranoicus" (International Classification of Disease No. 303) with normal controls and found that the paranoid subgroup had a marked increase in February births. He concluded that this subgroup "showed some peculiarities but its seasonal pattern could not be said to differ significantly from that of schizophrenic groups" (p. 104).

Torrey, Torrey, and Peterson (1977) in the United States obtained birth data on 14,964 schizophrenic admissions in Missouri and 3,159 in Texas. They compared the birth seasonality of paranoid schizophrenics (DSM-III 295.3) with an aggregate of simple, hebephrenic, catatonic, and chronic undifferentiated schizophrenics (295.0, 295.1, 295.2, and 295.9), and reported that the paranoid subgroup did not differ significantly from the aggregate. Thus from seasonality of birth studies there is no evidence to support paranoid schizophrenia as a distinct etiological subgroup of the disease.

In conclusion, it should be reiterated that the epidemiology of paranoid schizophrenia has been barely touched as a research area. Although most researchers are in agreement today that the schizophrenias are more than one disease, there is no consensus as to whether the etiological subgroups correspond in any way to clinical subtypes. The question is not likely to be settled conclusively until the terra incognita of schizophrenic epidemiology is further explored.

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