

Season of Birth and Schneider-Oriented Diagnosis of Schizophrenia, “Neurosis” and Psychopathy

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Summary. Most earlier studies and all studies on national samples in Scandinavia and in England and Wales have shown that schizophrenics have a significant excess of births in the winter or early months of the year when compared with the expected distribution of the normal population. The present German study, carried out on schizophrenic patients diagnosed in a strongly Kurt Schneider-oriented clinic, in contrast to almost all other authors, demonstrated no such significant overrepresentation of births in the winter months. Thus, the findings of Danneel's (1973) German report, also utilizing Schneider-diagnosed schizophrenics, seem, at least for the present, to be confirmed.

Key words: Season of Birth – Schizophrenia – “Neurosis” – Psychopathy.

Zusammenfassung. Die meisten früheren, wie auch alle anderen nationalen Studien in Skandinavien, England und Wales zeigten, daß Schizophrene in den Wintermonaten eine signifikant höhere Geburtenfrequenz in Vergleich mit der erwarteten Häufigkeit der Normalpopulation aufweisen. In der jetzigen Studie, durchgeführt an Schizophrenen, die an einer stark K. Schneider-orientierten deutschen Klinik diagnostiziert wurden, fand man — in Gegensatz zu fast allen anderen Autoren — keine solche signifikant erhöhte Geburtenfrequenz in den Wintermonaten. Dadurch wurden die Ergebnisse der vor kurzem erschienenen deutschen Stichprobe von Danneel (1973) vorläufig bestätigt.

Schlüsselwörter: Geburtsmonat – Schizophrenie – „Neurose“ – Psychopathie.

Introduction

Only in recent years have studies on national samples been carried out to test the hypothesis that there might be a significant association between season of birth and schizophrenia. Indeed, the results of such research in England and Wales (Hare et al. 1974; Hare, 1975), in Sweden (Dalén, 1968; Dalén, 1974), in Norway (Ødegård, 1974) and in Denmark (Videbech et al., 1974) have all demonstrated that schizophrenic patients are born significantly more often in the early months of the year than would be expected when compared with the general population.

These national samples met the methodologic criticisms, such as sampling bias and insufficient control, which had been often leveled at many of the earlier studies. Interestingly enough, these earlier research efforts, mostly carried out on the sample of a single hospital or sometimes on samples of several hospitals (e.g., Tramer, 1929; Lang, 1931; Petersen, 1935; Huntington, 1938; Pile, 1951; Barry and Barry, 1961; Norris and Chowning, 1962; Barry and Barry, 1964; Hare and Price, 1968), usually also demonstrated an excess, at times to a significant degree, of winter births in schizophrenic patients.

Unfortunately, until only recently, the main contribution to the subject of schizophrenia and season of birth from Germany had been Lang's (1931) paper on schizophrenics admitted to the University Clinic in Munich. However, in 1973, Danneel reported on a German sample of 698 schizophrenics from the University Clinic in Bonn for the years 1968—1971. In contrast to almost all other researchers, Danneel found no excess of births in the early months of the year for these patients. In his paper he made no specific mention of the fact that these schizophrenics had been diagnosed by strict Schneiderian criteria; this had actually been the case, since during the years involved in Danneel's study Weitbrecht (1973), an orthodox proponent of Schneider's views, had been chief of the Bonn clinic. Then, in 1975, Diebold published material on a sample of 730 schizophrenics admitted to the Heidelberg Clinic during the years 1944—1967. For only less than half of this time span the clinic had been strongly Schneider-oriented (Kolle, 1970), so that Diebold's sample does not seem to be truly representative of Schneider-diagnosed schizophrenia. At any rate, Diebold, like Lang and most non-German researchers, also found a significant excess of winter births in his patients.

In the present paper a report is given on a larger number of schizophrenics than found in Danneel's (1973) and Diebold's (1975) German studies combined. As in Danneel's study, the present sample is also strongly Kurt Schneider-oriented in its diagnostic bias. It would seem, however, that this particular bias is an advantage in specifically attempting to test Danneel's contention that there was no association between season of birth and Schneider-diagnosed schizophrenics. Despite the inadequacies of any study carried out in a single hospital, the present effort appeared worthwhile especially since our sample seemed representative of the Schneider-oriented diagnosis of schizophrenia from various clinics and regions of Germany over a period of about 40 years (Koehler and Steigerwald, 1976).

Method

The present findings are based on psychiatric patients first admitted to the strongly Schneider-oriented University Neuropsychiatric Clinic in Homburg/Saar, West Germany, during the years 1962—1972 with the discharge diagnosis of schizophrenia, "neurosis" (reactions and developments), and personality disorder (psychopathy). Table 1 shows the actual numbers of first admissions and their month of birth for these diagnostic categories. During the period involved, H.-H. Meyer, Schneider's close associate while in Heidelberg, was head of the Homburg/Saar Clinic. Information on diagnostic habits and practice in this center is given elsewhere (Koehler and Steigerwald, 1976; Koehler and Guth, 1976). Furthermore, during the years 1962—1972 the catchment area and admission policies remained constant.

The Homburg/Saar Clinic serves not only the population of the Saar region (Saarland) to which it officially belongs, but also, because of its geographical location, the catchment area

Table 1. Number of first admissions by diagnosis and month of birth to a Schneider-oriented German clinic (1962—1972)

Diagnosis	J	F	M	A	M	J	J	A	S	O	N	D
Schizophrenia	142	153	134	146	130	127	125	130	108	119	134	128
Neurosis	135	119	142	123	121	119	118	101	140	118	115	122
Personality disorder	88	96	103	107	96	82	89	89	85	88	75	64
Neurosis and Personality disorder	223	215	245	230	217	201	207	190	225	206	190	186

spreads out widely into the neighboring Rheinland-Pfalz region of Germany. Thus, a large portion of admissions are actually derived from outside the borders of the Saarland. There was extensive live birth information available for the normal population of the Saar region. Unfortunately, live birth figures for Rheinland-Pfalz for the period prior to 1946 were grossly inadequate since only information for 3 years could be furnished. Thus, it was decided not to use the live birth figures from the Saar area alone, but rather the more extensive information available for the German population as a whole served as the control. In point of fact, however, there was no significant difference in the frequency distributions between the Saarland and the national German figures in this respect.

All patients admitted in the above-mentioned years were considered for study even if their birth occurred before the cut-off year used in the national sample study in England and Wales (Hare et al., 1972; Hare, 1975). Despite the fact that the older first admission schizophrenics were thereby included in the calculations, the increasing age frequency in the younger groups was still balanced by the decreasing age frequency in these older groups. Thus, the age frequency effect for the sample of schizophrenics as a whole was not appreciable.

Since the numbers of the present study were relatively small when compared with the national samples, the distributions of patients' live births was considered in quarters of the year even though monthly live birth information on the control normal population was available. Furthermore, due to the size of our sample, the overall χ^2 values seemed more important than giving results in terms of the quinquennia, since in practice it has been found that the overall season of birth distribution over decades is not appreciably different from year to year or from quinquennial calculations.

Results

Tables 2 and 3 show the observed distribution of patients' births compared with that expected from the general population. Among 1576 Schneider-diagnosed schizophrenics the overall distribution of births does not significantly depart from the

Table 2. Observed quarterly distribution of births of schizophrenic first admissions to a Schneider-oriented German clinic (1962—1972) compared with expectation from all live births in Germany

Diagnosis	Quarter year					χ^2 values ^a	Significance
Schizophrenia	Obs.	429	403	363	381	2.72	NS
	Exp.	409.7	396.6	388.7	381.1		

^a df = 3.

Table 3. Observed quarterly distribution of births of first admissions with "neurosis", personality disorders and of the grouping "neurosis" plus personality disorder to a Schneider-oriented German clinic (1962—1972) compared with expectation from all live births in Germany

Diagnosis	Quarter year					χ^2 values ^a	Signif- icance
Neurosis	Obs.	396	363	359	355	0.66	NS
	Exp.	382.9	370.6	363.3	356.2		
Personality disorder	Obs.	287	285	263	227	5.07	NS
	Exp.	276	267.3	261.9	256.8		
Neurosis and Personality disorder	Obs.	683	648	622	582	2.62	NS
	Exp.	659	637.9	625.2	612.9		

^a df = 3.

expected distribution, there being no significant over- or underrepresentation in any of the four quarters of the year (Table 2). It is evident that the same holds true for the 1473 "neurotics", the 1062 cases of personality disorder and the 2535 patients comprising the grouping "neurosis" plus personality disorder, that is, the seasonal distribution of birth does not depart significantly in the direction of under- or overrepresentation in any of the four quarters (Table 3).

Comment

Hare (1975) recently fully discussed the major possible sources of technical error, among these the diagnostic question, in studies dealing with season of birth and schizophrenia. He stressed the fact that the diagnosis of schizophrenia is "often problematical" and that uncertainties in diagnosis might account for negative results in studies of this type. Videbech et al. (1974) also mentioned the importance of keeping in mind that the diagnostic concept of schizophrenia can vary from time to time and from place to place.

In the present study no differences were found between Schneider-diagnosed schizophrenics, neurotics, and patients with personality disorders. The value of this finding seems to depend on how reliably Schneider-typical the diagnostic concepts used in the Homburg/Saar Clinic are in actual practice when compared with similar concepts used in other strongly Schneider-oriented German facilities in other regions of Germany or at different points in time in Germany. In three such clinics (Munich, 1932—1936; Heidelberg, 1946—1954; Homburg/Saar, 1962—1972) most comparisons of diagnostic categories between centers showed statistical inconsistency for diagnostic first admission rates of schizophrenia (34.2, 32.8, and 26.8% for the three clinics respectively) and of the grouping neurosis plus personality disorder (59.8, 43.1, and 52.3%) over a period of about 40 years. However, the actual differences in percentage, especially for schizophrenic first admissions, were not really that large and were, from a practical clinical point of view, rather similar, probably only reaching statistical significance because such large numbers of subjects were involved (Koehler and Steigerwald, 1976).

Since there are some recent diagnostic comparative studies between England and Germany available (but not as yet between Germany and various Scandinavian countries), it is possible to tentatively consider if a diverging concept of schizophrenia applied to our sample could be the reason for the failure to find a significant association with season of birth for Schneider-diagnosed schizophrenics. The findings of Kendell et al. (1974) indicated that London and Munich psychiatrists share much the same global concepts of schizophrenia, neurotic disturbances, and personality disorder. Although the London clinicians are typical for Britain (Copeland et al., 1971), it was not certain that those in Munich were typical of West Germany as a whole. Indeed, a recent study by Koehler and Jacoby (1976) seems to show that whereas Schneider-oriented German clinicians have much the same concepts of schizophrenia and of total "neurosis" as do the English, they would appear to have—in contrast to the results of the Kendell et al. study just mentioned—a much wider concept for personality disorder and for the grouping neurosis plus personality disorder.

Thus, the positive season of birth effect observed in the British studies for schizophrenia does not appear to be due to gross discrepancies in diagnostic concepts between England and Germany. For the rather similar concepts of "neurosis" used in both areas, there were also the same negative findings with respect to such an effect; however, despite the much broader Schneider-oriented concept of personality disorder, the results in our sample showed the same negative result as was the case in England. Since season of birth effect was found for affective illness in the British studies (this is in contrast to the findings of some of the Scandinavian national sample studies), it is possible that a positive effect might also be found somewhere in the various categories of affective disorder in our material. However, it is then possible that this might not be true for the category of mania where the greatest affective diagnostic discrepancy between England and Schneider-oriented clinics seems to be located (Koehler and Jacoby, 1976). Such a study is now being carried out.

Not only does Schneider-oriented psychiatry represent a major force in diagnostic practice in Germany today, but also many English and American researchers in recent years have evinced an interest in varied aspects of Schneider's psychopathology, especially in his first rank symptoms of schizophrenia (Koehler, 1976; Koehler and Witter, 1976). It might be of value, then, to more closely examine season of birth and schizophrenia in the material of various past and present Schneider-oriented German centers. Such an investigation appears justified in the light of the findings reported by Danneel (1973) and also confirmed in the present study. For example, taking all first admissions of schizophrenia in Munich (1932–1936), Heidelberg (1946–1954) and from the Homburg/Saar Clinic during these strongly Schneider-oriented periods would give a total of 5563 cases, a sum that is more than the total used by Hare et al. (1974) for their first national sample report in England and Wales. Numbers approaching some of the more recent larger national samples (Videbech et al., 1974; Hare, 1975) could be easily attained by adding other Schneider-oriented clinics (e.g. Bonn, Cologne, Erlangen).

In general, however, assuming that diagnostic discrepancies are not responsible for the difference found in the present material from that shown in Britain, the lack

of season of birth effect could be due to some cultural factor or factors, for example, those cited by Hare (1975), that might be specific to our German sample. Perhaps, then, the best initial and more global test of Danneel's (1973) and our own contention would be on different samples gathered within various regions of Germany, within Austria, and within the German-speaking area of Switzerland, in which different methods of diagnosis of schizophrenia (e.g., Bleuler-oriented [Bleuler, 1950], Leonhard-oriented [Leonhard, 1968], Burger-Prinz-oriented [Mentzos, 1967]) could be compared according to season of birth effect. In particular, a large sample of Leonhard-oriented schizophrenia, since it is most likely the closest to the original Kraepelinean concept of dementia praecox (Kraepelin, 1913), could prove very important. This is especially so in the light of the negative season of birth effect findings of the St. Louis Group (Woodruff et al., 1974) for all categories of patients in their clinic, including those diagnosed according to research criteria (Feighner et al., 1972), which clearly reflect a very narrow Kraepelin-oriented concept of schizophrenia.

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