Long-Term Outcome of Schizoaffective and Schizophrenic Disorders: a Comparative Study*

III. Social Consequences

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Summary. A significantly higher proportion of schizophrenic than schizoaffective patients were found to experience negative social consequences of their illness. Schizophrenic males are more likely to have an unfavourable social prognosis than are schizophrenic females or schizoaffective patients of either gender. Schizophrenic males are, however, equally disadvantaged in regard to social consequences independently of other premorbid and sociodemographic factors. Unfavourable social consequences in male schizophrenics and favourable ones in female schizoaffectives can be predicted with high probability. Some social consequences can be predicted with relatively high probability for male schizoaffectives, while no prognosis can be made for female schizophrenics.

Key words: Long-term outcome – Prediction – Schizophrenia – Schizoaffective disorders – Social consequences

Introduction

Parts I and II of the present study show that schizoaffective disorders have a significantly more favourable prognosis than schizophrenia. The long-term prognosis is influenced by different factors in different ways (Marneros et al. 1989b; Steinmeyer et al. 1989). There is good agreement in the literature that the social consequences, for instance downward drift in occupational status or social class, disability or non-

achievement of the expected development in various social areas (family, public life, career etc.), are more severe and more frequent in schizophrenics than in schizoaffectives (Coryell and Tsuang 1983; Grossman et al. 1984; Harrow and Grossman 1984; Möller et al. 1988; Pope et al. 1980; Tsuang et al. 1986).

However, one thing frequently ignored when the social consequences of the two types of disorder are compared is the fact that some important sociodemographic and premorbid features differ considerably between schizoaffective and schizophrenic patients (Marneros et al. 1989a). The question arises as to whether the reported differences in the social consequences may not be at least partially a function of these differences in sociodemographic and premorbid features rather than resulting purely from the illness per se? In this part of the Cologne Study we investigated the following questions: (a) are some combinations of features relevant for the social consequences of both disorders?; (b) to what extent can good or poor social consequences be predicted by such combinations of features?

Materials and Methods

The material and some of the methods are described in part I of this study (Marneros et al. 1989b). Hence only some supplementary information need be given here. From the group of evaluated factors reflecting social consequences of the illnesses (Table 1) we selected as most representative and, at the same time, reliable the following: (1) occupational mobility (only downward drift), (2) social mobility (only downward drift), (3) premature retirement and (4) non-achievement of the expected social development. (For definitions of the variables see the respective sub-sections of the Results section). From the group of sociodemographic and premorbid features whose relation to outcome we investigated (Table 2), we selected six independent variables on the grounds of their statistical signifi-

Table 1. Variables of social consequences of the mental disorder evaluated

Occupational status at end of observation time
Occupational mobility between onset and end of observation time
Highest achieved social class
Social class at end of observation time
Social class at end of observation time
Social mobility
Marital status at end of observation time
Unemployment at end of observation time
Premature retirement
Non-achievement of social development
Living situation at end of observation time
Permanent hospitalization
Income situation at end of observation time

Table 2. Variables of sociodemographic and premorbid situation evaluated

Sex
Age at onset
Stable heterosexuel partnership before onset
Marital status at onset
Educational level
Occupational status at onset
Parents' social class
Social class at onset
Premorbid personality
Premorbid social interactions
Broken home situation
Mental illness in the family
Life events

cance: (a) diagnosis, (b) sex, (c) age at onset, (d) original social class, i.e. parents' social class, (e) level of education and (f) occupational status at onset.

In a first step we investigated the relation of the independent variables to dependent variables by univariate statistical methods. If it was found that more than one independent variable had a significant relation ($P < = 0.05$) to the dependent ones, then, in a second step, we investigated their relation using a multivariate statistical method, the Configuration Frequency Analysis (CFA) (Lienert 1978; see Marneros et al. 1989b), which permits the identification of combinations of features discriminating between two samples. The CFA supports the estimation of the prognostic validity of feature combinations (see Lienert 1978).

Results

Downward Occupational Drift

Occupational drift is defined as the difference in occupational status between the onset and the time of the follow-up investigation or, for retired patients, the time of retirement. In this part of the investigation we considered only those patients for whom downward occupational drift was possible, i.e. those classified as housewives or retired at onset were excluded. Significant differences were found between the schizoaffective and schizophrenic groups (Table 3): significantly more schizophrenics than schizoaffectives exhibited downward drift during the time referred to. The proportion of schizoaffective patients with upward occupational drift during the observation time (10%) is almost equal to that of schizophrenic patients (9%). Only the variables "diagnosis" and "sex" were found to be significantly related to downward occupational drift (Table 4). To compute the degree of relation between the combination of the variables "diagnosis" and "sex" and "downward occupational drift" versus "no downward occupa-

tional drift" we carried out a CFA. Table 5 shows that the combination of the features "schizophrenia" and "male" defines a highly significant discrimination type ($\chi^2 = 86.8$, $P < 0.001$). With a coefficient of distinctiveness of $r = 0.5229$, a downward occupational drift can be predicted for male schizophrenic patients with a probability of 76.2%. Conversely, the combination "schizoaffective disorder" and "female" has a more favourable prognosis in that "no downward occupational drift" can be predicted with a probability of 58.7% in female schizoaffectives (coefficient of distinctiveness $r = 0.1741$).

Downward Social Drift

The downward social drift was estimated by comparing the patient's original social class (parents' social class) with the patient's social class at the end of the observation time. The social class was estimated according to the criteria of Kleining and Moore (1968) transferred to the classification of Hollingshead and Redlich (1958). We excluded all the patients for whom downward drift was impossible because their original social class was already the lowest one.

An upward drift in social class was found more frequently in schizoaffectives (20%) than in schizophrenics (9%).

As Table 3 shows, significantly more schizophrenics (53%) than schizoaffectives (15%) experienced a downward social drift. The variables "diagnosis", "age at onset", and "broken off education" were found to be significantly correlated with downward social drift (Table 4). Despite its significance, the variable "broken off education" was not computed in the CFA because of the under-representation in the schizoaffective group of subjects who had broken off their education, these being the ones more likely to be affected.

Table 3. Social consequences of the mental disorder in regard to the diagnosis

	Schizoaffective disorders	Schizophrenia	P value[a]
Downward occupational drift	n = 71	n = 95	0.0006
Downward occupational drift	22 (31%)	55 (58%)	
No downward occupational drift	49 (69%)	40 (42%)	
Downward social drift	n = 69	n = 66	0.0000
Downward social drift	10 (15%)	35 (53%)	
No downward social drift	59 (85%)	31 (47%)	
Premature retirement	n = 49	n = 82	0.0468
Premature retirement	13 (27%)	36 (44%)	
No premature retirement	36 (73%)	46 (56%)	
Expected social development	n = 72	n = 97	0.0004
Non-achievement of the expected social development	21 (29%)	55 (57%)	
Achievement of the expected social development	51 (71%)	42 (43%)	

[a] Chi-square test

Table 4. Correlation of the variable reflecting social consequences with the selected independent variables: P values (χ^a)

	Diagnosis	Sex	Age at onset	Original-social class	Broken-off education	Occupational at onset
Downward occupational drift	0.0006**	0.0000**	0.0832	0.2587	0.2232	—
Downward social drift	0.0000**	0.0879	0.0217*	0.3073	0.0465*	—
Premature retirement	0.0468*	0.4420	0.4957	0.5127	0.6077	0.1205
Non-achievement of expected social development	0.0004**	0.0011**	0.0729	0.3786	0.0488*	0.0915

*$P<0.05$, **$P<0.01$

Table 5. Downward occupational drift: Configuration Frequency Analysis (CFA)

Configuration	Downward drift n	No downward drift n	Significance	Coefficient of distinctiveness
Schizoaffective / female	10	35	$P<0.01$	0.1741
Schizoaffective / male	12	14	n.s.	—
Schizophrenic / female	14	26	n.s.	—
Schizophrenic / male	41	14	$P<0.001$	0.5229

$\chi^2 = 30.19$, $df = 3$, $P<0.001$

The CFA shows (Table 6) that the combination of the features "schizophrenia" and "age at onset lower than 26 years" can predict the feature "downward social drift" with a probability of 68%. The feature "no downward social drift" can be predicted with a probability of 61% by the combination of the features "schizoaffective disorder" and "age at onset between 26 and 35 years" and with a probability of 60% by the

combination of "schizoaffective disorder" and the "age at onset more than 35 years".

Premature Retirement

Excluding patients with no paid occupation before onset (housewives and retired people), we defined the remaining population as "working". We found that

Table 6. Downward social drift: Configuration Frequency Analysis (CFA)

Configuration	Down-wards drift n	No down-wards drift n	Signifi-cance	Coeffi-cient of distinc-tiveness
Schizoaffective / <26 years at onset	4	16	n.s.	—
Schizoaffective / 26–35 years at onset	3	22	$P<0.05$	0.217
Schizoaffektive / >35 years at onset	3	21	$P<0.05$	0.204
Schizophrenic / <26 years at onset	22	14	$P<0.001$	0.354
Schizophrenic / 26–35 years at onset	7	5	n.s.	—
Schizophrenic / >35 years at onset	6	12	n.s.	—

$\chi^2 = 27.38$, $df = 5$, $P<0.001$

Table 7. Expected social development: Configuration Frequency Analysis (CFA)

Configuration	Non-achieve-ment n	Achieve-ment n	Signifi-cance	Coeffi-cient of distinc-tiveness
Schizoaffective / female	15	31	n.s.	—
Schizoaffective / male	6	20	$P<0.05$	0.170
Schizophrenic / female	14	28	n.s.	—
Schizophrenic / male	41	14	$P<0.001$	0.380

$\chi^2 = 29.61$, $df = 3$, $P<0.001$

significantly more schizophrenic (44%) than schizoaffective (27%) "working" patients had retired early because of their mental illness (Table 3). No variable other than the illness per se was significantly correlated with premature retirement (Table 4).

Non-achievement of the Expected Social Development

"Non-achievement of the expected social development" reflects the opinion of the expert (interviewer) as to whether the patient is fulfilling his or her expected social role and whether he or she has achieved the social status which would be expected on the basis of the status of the family, education, possibilities of upward social drift and so on.

Significantly more schizophrenics (57%) than schizoaffectives (29%) were found to fulfil the criteria of non-achievement (Table 3). The variables "diagnosis", "sex" and "broken off education" were significantly correlated with "non-achievement of the expected social development" (Table 4). The variable "broken off education" was again not computed in the CFA because of the under-representation of non-completed education in the group of schizoaffective patients.

The CFA shows that the combination of the features "schizophrenia" and "male" predicts non-achievement of the expected social development with

69% probability. Conversely, achievement of the expected social development can be predicted with 59% probability in the presence of the combination "schizoaffective" and "male" (Table 7).

The "non-achievement of the expected social development" cannot be predicted for female patients, either in the schizoaffective or the schizophrenic group.

Discussion and Conclusions

In agreement with the findings confirming the more favourable psychopathological and psychological long-term outcome, and the less severe disability, of schizoaffective disorders in comparison with schizophrenia (Marneros et al. 1989b; Steinmeyer et al. 1989) are the findings concerning social consequences. Schizophrenic patients significantly more frequently experience negative social consequences, for instance downward occupational or social drift, premature retirement, or non-achievement of the expected social development, than do schizoaffective patients. However, some of the above-mentioned social consequences are determined not only by the kind of illness, but also by the combination of the illness with some sociodemographic and premorbid factors. According to the findings of the present study,

the combination of the factors "kind of illness" and "sex" is relevant for a possible downward occupational drift of the patients. Such a downward occupational drift can be predicted with a high probability in male schizophrenics (76.2%). Conversely, the absence of negative occupational changes can be predicted with a probability of 58.7% in female schizoaffectives. The findings of the present study permit no prognosis regarding the occupational status of male schizoaffective and female schizophrenic patients. Age at onset, original social class (parents' social class) and broken off education have no significant influence on a downward drift of occupational status either in schizophrenic or in schizoaffective patients.

Significantly fewer schizoaffective than schizophrenic patients experience downward social movement, i.e. significantly more schizophrenic patients move into a social class lower than their original class. The best prognosis regarding social class, i.e. no downward drift, is displayed by schizoaffective patients aged over 25 years at onset.

The combination "schizophrenia" and "age at onset lower than 26 years" can predict a downward social drift with a high probability (68%).

Schizophrenic male patients are significantly more likely not to achieve their expected social development than are schizoaffective patients. Thus, even social stability (for instance, no downward drift of occupational status or social class) is not always an indicator of a favourable outcome. Some examples of difficulties existing in spite of apparent social stability are patients remaining unusually long on the same low rung of the ladder at work, housewives partially or completely unable to run their household and grandparents unable to fulfil their expected role in the family. In contrast to schizophrenic males, schizoaffective males have good chances of achieving their expected social development. No prognosis can be made from the findings of the present investigation regarding achievement of the expected social development on the part of female patients.

Interpreting the findings of the Cologne Study, the following conclusions can be drawn. Although the social prognosis of schizophrenia is in all aspects significantly poorer than that of schizoaffective disorders, different combinations of factors can influence various aspects of the social prognosis differently. Schizophrenic males more frequently suffer negative consequences of their illness than do schizophrenic females or schizoaffective patients of either gender. On this point we agree partially or fully with other long-term investigations (Huber et al. 1979; Möller and von Zerssen 1986).

The methods employed, however, show that schizophrenic male patients are equally disadvantaged in regard to the social consequences of their illness, independently of other relevant premorbid and sociodemographic factors.

Females, especially schizoaffective females, are less likely to suffer social consequences as a result of their disease.

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