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Unipolar and Bipolar Schizoaffective Disorders: A Comparative Study*

I. Premorbid and Sociodemographic Features

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Summary. Seventy-two schizoaffective patients were investigated longitudinally (mean follow-up period 25.6 years). Unipolar ($n = 37$) and bipolar ($n = 35$) schizoaffectives were compared. Relevant differences in sociodemographic variables were found between the two groups, especially in: (a) sex distribution (more females among unipolar schizoaffectives), (b) social class, (c) occupational and educational level (higher in bipolars), and (d) premorbid personality (obsessoid and low-self-confidence personality types were more frequent in unipolars). Surprisingly there was no difference in age of onset, but some factors were identified that elevated the age of onset in bipolar and reduced it in unipolar schizoaffectives, which may explain this finding. Among bipolars there were more frequent relapses, but there was more suicidal symptomatology in unipolars. No differences were found with regard to long-term outcome, i.e. disability (Disability Assessment Schedule), level of functioning (Global Assessment Scale) or psychopathology at follow up.

Key words: Schizoaffective disorders – Sex-distribution – Social classes – Occupational and educational levels – Premorbid personality – Unipolar – Bipolar

Introduction

The simple categorization of the schizoaffective disorders into schizodepression and schizomania according to cross-sectional criteria has proved to be inadequate both for clinical and for research purposes; several studies have shown that the schizoaffective disorders are usually polymorphous, i.e. they have more than one type of episode (Angst 1986; Angst et al. 1978; Brockington et al. 1980a, b; Marneros et al. 1986c, 1988d). Comparative studies of cross-sectionally diagnosed schizodepression and schizomania therefore have only limited value; but by subclassifying the schizoaffective disorders longitudinally into unipolar and bipolar disorders, as with the affective disorders, we take into consideration the longitudinal aspect and thus the syndrome shift. Pure affective and pure schizophrenic episodes manifested during the long-term course are also covered by this term, and a more reliable comparison with the affective disorders is possible.

The aim of this study was to describe differences and similarities between unipolar and bipolar schizoaffective disorders by means of narrow definitions, a long follow-up period and a variety of elements of course and outcome.

Definitions and Diagnostic Criteria

Some of the definitions and diagnostic criteria have been described earlier (Marneros et al. 1988a); only the most essential points are reviewed here. We defined schizoaffective disorders as being the concurrent or sequential presence of schizophrenic (or mood incongruent paranoid) symptoms and melancholic or manic symptomatology. The DSM-III (or DSM-III-R) criteria for schizophrenic and paranoid disorders (schizophrenic symptomatology), for the melancholic type of major depressive disorders (melancholic symptomatology) and for manic episodes (manic symptomatology) form the basis of the definitions used. Only slight modifications of DSM-III

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criteria were made (Marneros et al. 1988a). We defined as bipolar schizoaffective disorders the schizoaffective disorders which had at least one occurrence of manic symptomatology, and as unipolar schizoaffective disorders those schizoaffective disorders which never had manic symptomatology, again following the slightly modified DSM-III criteria.

Subjects and Methods

The subjects and methods have been partially described elsewhere (Marneros et al. 1988a) and are reviewed only briefly here. This presentation is part of the Cologne study (Marneros et al. 1986a–c, 1988a–d). It is based on the personal follow-up of 205 inpatients of the University Psychiatric Hospital, Cologne, with the discharge diagnosis "case-in-between" according to Schneiders' criteria or "suspected schizophrenia". Seventy-two of the patients fulfilled the above criteria of schizoaffective disorders. Thirty-seven of them fulfilled the criteria of unipolar schizoaffective disorders, 35 those of bipolar schizoaffective disorders. Some features of the population are given in Table 1.

Instruments of evaluation are given in Table 2. They were described earlier by Marneros et al. (1988a–c). Special instruments and methods will be described in the appropriate sections.

Statistical methods are the same as those applied for the investigations of the course and outcome of schizoaffective and schizophrenic disorders (Marneros et al. 1988a–c, 1989a–c). Special methods such as logarithmic transformation and tests (Mann-Whitney U-test, *t*-test, etc.) will be referred to in the appropriate sections below.

Results

Sociodemographic and Psychological Data

Sex Distribution. While in the group of unipolar schizoaffective disorders females were significantly more frequently represented (76%) than males (24%), the distribution of the two genders in the group of bipolar schizoaffective disorders was almost equal (51% females, 49% males, Fig. 1).

Age at Onset. Contrary to expectations [based mainly on results in the literature on affective disorders and the recent work of Angst (1989)] no significant differences regarding age at onset were found between unipolar and bipolar schizoaffective disorders. Further investigations showed that the following factors can probably interfere with the variable "age at onset":

1. Patients with a bipolar course without depressive symptomatology had a much lower age at onset (mean 28.6 years) than bipolar patients with depressive symptoms; but 77% of the bipolars in this study did have depressive symptomatology; that

Table 1. Schizoaffective disorders (n = 72): features of study population

	Unipolar (n = 37)	Bipolar (n = 35)	Total (n = 72)	P
Age at end of follow-up period (years)	M = 59 x = 60.18 SD = 12.45 Min = 35 Max = 87	M = 53 x = 55.11 SD = 14.40 Min = 27 Max = 86	M = 57.5 x = 57.72 SD = 13.58 Min = 27 Max = 87	0.114 [a]
Duration of follow-up period (years)	M = 29 x = 27.7 SD = 9.69 Min = 10 Max = 56	M = 23 x = 23.37 SD = 10.9 Min = 10 Max = 59	M = 25 x = 25.61 SD = 10.46 Min = 10 Max = 59	0.077 [a]
Patients personally interviewed	100%	100%	100%	
Place of interview				0.482 [b]
– Patients visited us	32%	46%	39%	
– Patients were visited at home	62%	51%	57%	
– Psychiatric hospital/care unit	5%	3%	4%	
Patients' relatives or relevant persons interviewed additionally	49%	63%	56%	0.225 [b]

M = median; x = arithmetic mean; SD = standard deviation; Min = minimum value; Max = maximum value; n = number of patients

[a] *t*-test

[b] Chi-square test

Table 2. Cologne Study – instruments of evaluation

1. PSE = Present State Examination (Wing et al. 1982)
2. Modified version of PSE for follow-up
3. Course and outcome protocol:
   a) DAS = Disability Assessment Schedule (WHO 1978, 1986) [a]
   b) FU-HSD = Follow-Up History and Sociodemographic Description Schedule (WHO) [b]
   c) PHSD = Past History and Sociodemographic Description Schedule (WHO) [b]
   d) PIRS = Psychological Impairment Rating Schedule (WHO 1986) [a]
   e) GAS = Global Assessment Scale (Spitzer et al. 1976)
   f) Own completions: i.e. sociodemographic data, therapy etc.
4. Case record evaluation protocol
   a) Sociodemographic data
   b) Family history
   c) Broken home
   d) Live events
   e) History of illness
   f) Psychopathological symptoms (ADMP oriented)
   g) Somatic findings
   h) Treatment
   i) Course and outcome of episode

[a] In Schubart et al. 1986; [b] in WHO 1979a)

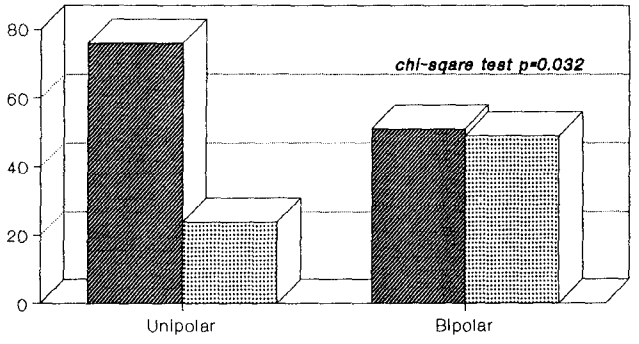

Fig. 1. Schizoaffective disorders ($n = 72$): sex distributions. (▨) Female; (▩) male

means they had a factor elevating the average age at onset.

2. Specific types of bipolar episodes, namely the mixed manic-depressive and schizomanic-depressive, were found to be correlated with a higher age at onset than other kinds of episodes. The majority of the bipolars of our sample (57%) did in fact have such mixed episodes; in 26% the course began with such an episode. This is also a factor elevating the average age at onset of the bipolar group.

3. In the majority of the bipolar schizoaffectives of this sample (69%) the course began with episodes other than manic or schizomanic, which are the episodes with the lower age at onset. This is also a factor elevating the average age at onset of the bipolar group.

4. In the vast majority of the unipolar patients of this sample (76%) the course began with a schizodepressive episode, and as many as 95% had schizodepressive episodes during the course of the illness. Schizodepressive episodes as initial episodes were found to be correlated with lower age at onset than other types of episodes with depressive symptomatology; this is a factor decreasing the average age at onset in the unipolars of this sample.

5. Both unipolar and bipolar schizoaffective patients of this sample had a very strongly "schizoaffective focused" course, whereas an affective or schizophrenic bias was rare in both groups (see part II of this study, Marneros et al. 1989c). Perhaps the extremely rare presence of affect-dominant and schizodominant cases in both groups and their strong similarity regarding "schizoaffective dominance" could be related to the similar average age at onset in both groups.

Season of Birth. No statistically significant differences were found between unipolar and bipolar schizoaffective disorders regarding season of birth (Fig. 2). Notable, however, was the low proportion of patients with unipolar schizoaffective disorders born in summer.

Educational Level. The educational level – in this case the highest achieved educational level – was allocated to four categories: (a) lowest level, that is uncompleted elementary education or special education for children with learning problems; (b) low level, that is completed elementary school or uncompleted intermediate school; (c) middle level, that is completed intermediate/vocational school or high school,

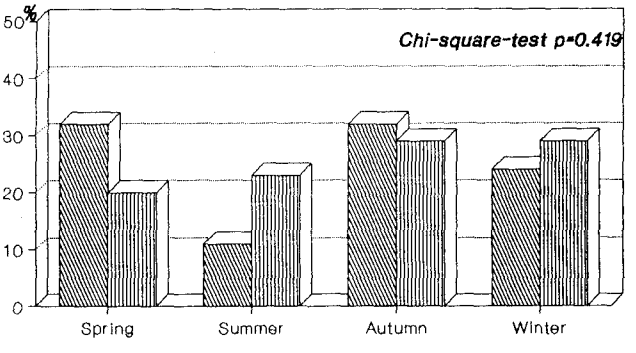

Fig. 2. Schizoaffective disorders ($n = 72$): season of birth. (▧) Unipolar; (▥) bipolar

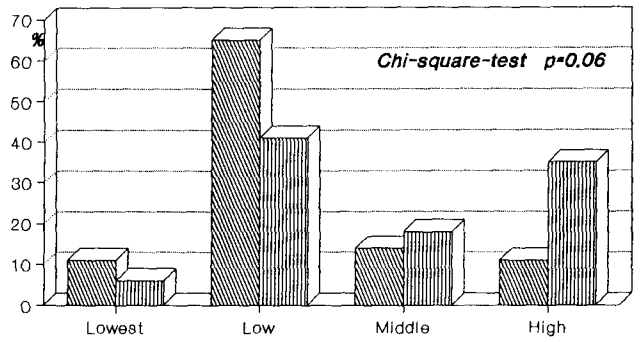

Fig. 3. Schizoaffective disorders ($n = 72$): educational level. (▨) Unipolar; (▥) bipolar

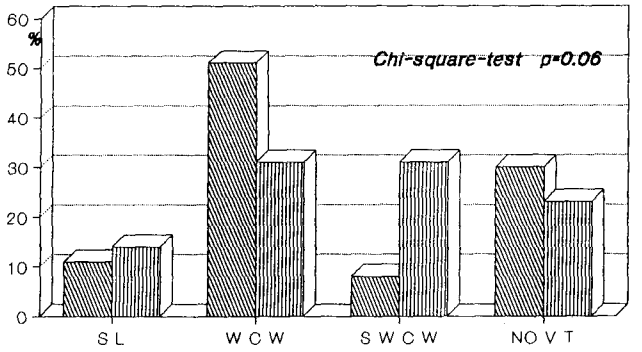

Fig. 4. Schizoaffective disorders ($n = 72$): highest achieved occupational level. (▨) Unipolar; (▥) bipolar. *SL,* Skilled labourer; *WCW,* white collar worker; *SWCW,* senior white collar worker; *NOVT,* no vocational training

not completed; (d) high level, that is completed high school or university study. As Fig. 3 shows bipolar schizoaffective patients were found to have a higher educational level than the unipolar ones ($P = 0.06$).

Highest Achieved Occupational Level. Comparing the highest achieved occupational level (before or after first manifestation of the illness), in the group of bipolar schizoaffective patients more senior white collar workers were found, while in the group of unipolars there were more white collar workers of the lower and middle ranks (Fig. 4).

Social Class. Social class was found to be higher in bipolars than in unipolars, but nevertheless no differences in social mobility were found (Table 3). Social class was first judged according to the criteria of Kleining (1975), Kleining and Moore (1968), Moore and Kleining (1960), and then transferred to the categorization of Hollingshead and Redlich (1958). According to German sociological investigations, there are no significant differences in social structure among Western industrial countries, especially between the United States of America and the Federal Republic of Germany (Kleining and Moore 1968), so the categorization of Kleining and Moore is compatible with that of Hollingshead and Redlich.

Table 3. Schizoaffective disorders ($n = 72$): social class

	Unipolar ($n = 37$)	Bipolar ($n = 35$)	Total ($n = 72$)	P
Parents' social class[a]				0.015* [b]
I + II	14%	37%	25%	
III	27%	37%	32%	
IV	51%	26%	39%	
V	8%	–	4%	
Highest achieved social class of patients[a]				0.004** [b]
I + II	16%	57%	36%	
III	32%	14%	24%	
IV	43%	26%	35%	
V	8%	3%	6%	
Social class at follow-up[a]				0.029* [b]
I + II	16%	49%	32%	
III	30%	14%	22%	
IV	43%	31%	38%	
V	11%	6%	8%	
Social mobility				0.986 [b]
Same level	68%	66%	67%	
Downward change	14%	14%	14%	
Upward change	19%	20%	19%	

[a] Social class according to the criteria of Kleining and Moore (1968), transferred to the categorization of Hollingshead and Redlich (1958)
I + II Upper classes, upper middle class, middle middle class; III Lower middle class; IV Upper lower class; V Lower lower class
* $P < 0.05$; ** $P < 0.01$
[b] Chi-square test

The comparison of the distribution in the social classes found with that of the general population of the Federal Republic of Germany shows that a general conclusion is difficult; nevertheless, it can be said that the representation in the upper classes of the unipolar schizoaffective disorders is lower and that of bipolar higher than in the general population.

Premorbid Personality. Because of the mainly retrospective estimation of the premorbid personality structure, we rejected standardized evaluation instruments, relying instead on the interviewer's opinion and information from case records. We used three global categories, which are only clinical categorizations, not laying claim to be precise: (a) obsessoid

Table 4. Schizoaffective disorders ($n = 72$): premorbid personality (global categories)

	Unipolar ($n = 36$)	Bipolar ($n = 33$)	Total ($n = 69$)	P
Obsessoid	39%	15%	28%	0.008** [a]
Sthenic/high-self-confident	14%	46%	29%	
Asthenic/low-self-confident	47%	39%	44%	

** $P < 0.01$
[a] Chi-square test

personality ("typus melancholicus" of Tellenbach, see Akiskal et al. 1983), (b) sthenic/high-self-confident personality, (c) asthenic/low-self-confident personality structure. We diagnosed an obsessoid personality if the three following features were prominent:

1. Tendeny of perfectionism
2. Insistence on orderliness
3. Overconscientiousness, scrupulousness and inflexibility concerning matters of moral and ethical values.

For a patient to be categorized as asthenic/low-self-confident personality, the following four features had to be present:

1. Difficulty in initiating projects or doing things alone
2. Difficulty in making everyday decisions without an excessive amount of advice or reassurance from others
3. Easily hurt by criticism or disapproval
4. Difficulty in self-assertion achieving goals

A sthenic/high-self-confident personality was diagnosed if the opposite features were present.

Table 4 shows the distribution of personality types in unipolar and bipolar schizoaffectives. Obsessoid personalities were found more frequently in unipolars, and sthenic/high-self-confident more frequently in bipolars. Asthenic/low-self-confident personalities were nearly equally represented in both groups.

Other Sociodemographic and Psychological Factors Investigated. No significant differences between unipolar and bipolar schizoaffective patients were found regarding some other investigated variables, such as broken home, precipitating factors, stable heterosexual partnership before onset, social contacts, or family history of mental illness.

Discussion

The findings from this investigation support the assumption that some significant differences between unipolar and bipolar schizoaffective disorders do exist. Such differences mainly concern sociodemographic, psychological, and course parameters: in the unipolar group three-quarters of the patients were female, but in the bipolar group the two sexes were represented almost equally, a finding similar to that in some investigations concerning affective disorders (Weissman and Boyd 1983).

The bipolar patients in the Cologne study had a significantly higher educational and occupational level and a higher social class than unipolar ones. Although we did not find the personality type of unipolars or of bipolars, we did observe obsessoid personalities ("typus melancholicus", Tellenbach 1976; see Akiskal et al. 1983) more frequently in the unipolars and sthenic/high-self-confident personalities more frequently in the bipolars; asthenic/low-self-confident personalities were equally represented in both groups. It has to be pointed out, however, that the above categories are global clinical categories derived either from retrospective estimation or based on information in case records. Thus they have to be confirmed by prospective investigations. Nevertheless, the recent investigations of Sauer et al. (1989) pointed, to some extent, in the same direction, namely finding no homogeneous personality for either group.

Contrary to our expectations and to the findings of Angst (1989) we did not find any significant differences regarding age at onset between unipolar and bipolar schizoaffective disorders. The possible reasons for such a surprising finding are sample dependent: in the bipolar group investigated some important factors interfere, elevating the average age at onset of the group. These factors are the rarity of cases in which the illness began with manic or schizomanic episodes among the bipolars, the rarity of cases with an absence of depressive symptoms during the course in the bipolars, and the frequent presence of mixed manic-depressive symptomatology. In the unipolar group onset and course are dominated by schizodepressive episodes which reduced the average age at onset of the unipolars. In both groups an affective first episode was rare, and in both the course was equally schizoaffective dominated, which perhaps correlated with similar average age at onset in both groups. Nevertheless it is interesting that the abovementioned factors mainly influenced age at onset, but not parameters of course, which differ significantly between the two groups (part II of this study, Marneros et al. 1989c), or other sociodemographic

variables referred to above. No differences between the two groups were found with regard to broken home, precipitating factors, stable heterosexual partnership before onset, social contacts, or family history of mental illness.

References

Akiskal HS, Hirschfeld RMA, Yerevanian BI (1983) The relationship of personality to affective disorders. A critical review. Arch Gen Psychiatry 40:801–810

American Psychiatric Association (1980) Diagnostic and statistical manual of mental disorders, 3rd edn. APA, Washington, D.C.

American Psychiatric Association (1987) Diagnostic and statistical manual of mental disorders, 3rd edn (revised). APA, Washington, D.C.

Angst J (1986) The course of schizoaffective disorders. In: Marneros A, Tsuang MT (eds) Schizoaffective psychoses. Springer, Berlin Heidelberg New York, pp 63–93

Angst J (1989) Der Verlauf schizoaffektiver Psychosen. In: Marneros A (ed) Diagnose, Therapie und Prophylaxe der schizoaffektiven Psychosen. Springer, Berlin Heidelberg New York, pp 47–54

Angst J, Felder W, Frey R, Stassen HH (1978) The course of affective disorders. Arch Psychiatr Nervenkr 226:57–64

Brockington I, Wainwright S, Kendell R (1980a) Manic patients with schizophrenic or paranoid symptoms. Psychol Med 10:73–83

Brockington I, Wainwright S, Kendell R (1980b) Depressed patients with schizophrenic or paranoid symptoms. Psychol Med 10:665–675

Hollingshead AB, Redlich FC (1958) Social class and mental illness. Wiley, New York

Kleining G (1975) Soziale Mobilität in der Bundesrepublik Deutschland I. Klassenmobilität. Kölner Z Soziol Sozialpsychol 27:97–121

Kleining G, Moore H (1968) Soziale Selbsteinstufung (SSE) – Ein Instrument zur Messung sozialer Schichten. Kölner Z Soziol Sozialpsychol 20:502–552

Marneros A, Deister A, Rohde A (1986a) The Cologne Study on Schizoaffective Disorders and Schizophrenia Suspecta. In: Marneros A, Tsuang MT (eds) Schizoaffective psychoses. Springer, Berlin Heidelberg New York, pp 123–142

Marneros A, Rohde A, Deister A (1986b) Features of schizoaffective disorders: the "cases-in-between". In: Marneros A, Tsuang MT (eds) Schizoaffective psychoses. Springer, Berlin Heidelberg New York, pp 143–154

Marneros A, Rohde A, Deister A, Risse A (1986c) Schizoaffective disorders: the prognostic value of the affective component. In: Marneros A, Tsuang MT (eds) Schizoaffective psychoses. Springer, Berlin Heidelberg New York, pp 155–163

Marneros A, Deister A, Rohde A, Jünemann H, Fimmers R (1988a) Long-term course of schizoaffective disorders. Definitions, methods, frequency of episodes and cycles. Eur Arch Psychiatr Neurol Sci 237:264–275

Marneros A, Rohde A, Deister A, Jünemann H, Fimmers R (1988b) Long-term course of schizoaffective disorders. Length of cycles, episodes and intervals. Eur Arch Psychiatr Neurol Sci 237:276–282

Marneros A, Rohde A, Deister A, Fimmers R, Jünemann H (1988c) Long-term course of schizoaffective disorders. Onset, type of episodes and syndrome shift, precipitating factors, suicidality, seasonality, inactivity of illness and outcome. Eur Arch Psychiatry Neurol Sci 237:283–290

Marneros A, Rohde A, Deister A, Jünemann H (1988d) Syndrome shift in long-term course of schizoaffective disorders. Eur Arch Psychiatr Neurol Sci 238:97–104

Marneros A, Deister A, Rohde A, Steinmeyer EM, Jünemann H (1989a) Long-term outcome of schizoaffective and schizophrenic disorders: a comparative study. I. Definitions, methods, psychopathological and social outcome. Eur Arch Psychiatr Neurol Sci 238:118–125

Marneros A, Steinmeyer EM, Deister A, Rohde A, Jünemann H (1989b) Long-term outcome of schizoaffective and schizophrenic disorders: a comparative study. III. Social consequences. Eur Arch Psychiatr Neurol Sci 238:135–139

Marneros A, Rohde A, Deister A (1989c) Unipolar and bipolar schizoaffective disorders: a comparative study. II. Long-term course. Eur Arch Psychiatr Neurol Sci 239:164–170

Moore H, Kleining G (1960) Das soziale Selbstbild der Gesellschaftsschichten in Deutschland. Kölner Z Soziol Sozialpsychol 12:86–119

Sauer H, Sass H (1989) Zur prämorbiden Persönlichkeit von Patienten mit schizoaffektiven Psychosen. In: Marneros A (ed) Diagnose, Therapie und Prognose der schizoaffektiven Psychosen. Springer, Berlin Heidelberg New York, pp 109–118

Tellenbach H (1976) Melancholie. Springer, Berlin Heidelberg New York

Weisman MM, Boyd JH (1983) The epidemiology of bipolar and non-bipolar depression: rates and risks. In: Angst J (ed) The origins of depression: current concepts and approaches. Springer, Berlin Heidelberg New York, pp 27–37

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