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Patterns of Aggression in the Personality Structure of Depressed Patients*

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Abstract. The personality characteristics of 208 depressed patients of both sexes were studied by means of a Swedish personality inventory—the KSP—when the patients had recovered from the depressive syndrome. The patients in the study were divided into unipolars, bipolars, neurotic-reactive and "unspecified", i.e. those patients who did not meet the criteria for inclusion in any of the aforementioned groups. Female patients scored higher on variables of anxiety and psychasthenia and male patients scored higher on variables indicating distance preference and hostility. Several traits, in particular those reflecting aggression-out and hostility-out, appeared to be negatively correlated with age, whereas inhibition of aggression appeared to be positively related with age. Bipolar patients scored slightly differently from unipolars in many variables but none of the differences was significant. Neurotic-reactive patients distinguished themselves from the other in variables of aggression-out. Several interrelations between different personality characteristics and aspects of aggression have been investigated. Significant correlation could be shown between aspects of aggression and socialization, impulsiveness and aspects of anxiety. A positive correlation was shown between inhibition of aggression and social desirability, and both variables were shown to correlate with age. It is concluded that the difference in inhibition of aggression between "endogenous" and "non-endogenous" patients found in earlier studies might be due to a difference in age, and to the influence of social desirability.

Key words: Aggression – Hostility – Inhibition of aggression – Unipolar – Bipolar – Neurotic-reactive depression – Socialization – Impulsiveness KSP

Zusammenfassung. Die Persönlichkeitseigenschaften von 208 deprimierten Patienten beiderlei Geschlechts wurden mit Hilfe eines schwedischen Persönlichkeitstest, dem KSP untersucht, nachdem die Patienten sich vom depressiven Syndrom erholt hatten.

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Die Patienten wurden in folgende Gruppen eingeteilt: monopolare, bipolare, neurotisch-reaktive und „nicht-spezifiziert", d. h. solche Patienten, die die Kriterien für keine der vorhergenannten Gruppen erfüllten.

Weibliche Patienten erzielten höhere Werte bei den Variablen „Angst" und „Psychasthenie" und männliche Patienten bei den Variablen „Zurückhaltung" und „Feindseligkeit". Mehrere Charakterzüge, besonders solche, die nach außen gerichtete Aggression und Feindseligkeit widerspiegeln, zeigten eine negative Korrelation mit dem Alter, wohingegen „Aggressionshemmung" positiv korrelierte.

In vielen der Variabeln erhielten die bipolaren Patienten etwas unterschiedliche Werte als die monopolaren, jedoch war keiner der Unterschiede signifikant. Neurotisch-reaktive Patienten unterschieden sich von den anderen bezüglich der Variabeln „nach außen gerichtete Aggression". Einige Wechselbeziehungen zwischen verschiedenen Persönlichkeitseigenschaften und Aggressionsaspekten wurden untersucht. Signifikante Korrelationen erwiesen sich zwischen den Aggressionsskalen und den Skalen „Sozialisation", „Impulsivität", „somatische und psychische Angst".

Eine positive Korrelation ergab sich zwischen „Aggressionshemmung" und „Sozialer Erwünschtheit", und beide Variablen korrelierten mit dem Alter. Es wird der Schluß gezogen, daß der bezüglich „Aggressionshemmung" in früheren Untersuchungen gefundene Unterschied zwischen „endogenen" und „nicht-endogenen" Patienten auf Altersunterschiede und den Einfluß der sozialen Erwünschtheit zurückgeführt werden kann.

Schlüsselwörter: Aggression - Feindseligkeit - Aggressionshemmung - Monopolar - Bipolar - Neurotisch-reaktive Depression - Sozalisation - Impulsivität - KSP

Introduction

Within the framework of a multifactorial view of the causation and development of affective disorders, in particular of depression, studies of the depressive personality have a prominent place. In fact, the enduring personality characteristics of an individual might contribute, not only to a predisposition to a depressive breakdown but also to colouring or altering depressive symptoms and to the clinical course and even to influencing the response to treatment.

The importance of personality factors has been acknowledged since Kraepelin published his research results in biological as well as in psychological theories of depression, and much effort has been made in an attempt to identify and define the personality make-up of the depression-prone individual. Comprehensive reviews of the most prominent studies of the depressive personality have also become available, (Chodoff 1972; Becker 1974; von Zerssen 1976, 1977). Despite various sources of error, extensively reviewed by Chodoff, and the use of a wide array of approaches in the assessment of personality characteristics, it seems that the findings of both clinical psychiatrists and psychoanalysts have converged toward the identification of a common core regarding the personality structure of

the depression-prone individual. Thus, both anal (items like orderly, conscientious, cautious, bound to routine, conventional) and oral (in its more modern concept of dependency on personal relationships) traits seem to characterize the depressive personality (see, also Strandman 1978; Perris and Strandman 1978).

The object of the research work during the last decade has been to evidentiate possible differences in personality between unipolar and bipolar depressives. The results of these investigations, reviewed by von Zerssen point to a difference in personality make-up between unipolar and bipolar patients as well as between unipolars and controls, whereas differences between bipolars and controls seem to be less definable.

Whereas several thorough investigations have been carried out concerning the personality of the "endogenous" depressives, either unipolar or bipolar, less attention has been paid to the personality of the neurotic-reactive patients by psychiatrists and psychoanalysts (Chodoff 1972). In his most recent review, von Zerssen maintains the opinion that depressed neurotics share some of the core characteristics of the "melancholic type" as sketched above, and are characterized in addition by a particularly high degree of "neuroticism" when recovered from the depressive episode. This opinion is in agreement with results obtained by our group (Perris 1971; Strandman 1978).

It is more remarkable that in most recent studies of the personality of the depressed patients aspects of aggression have been neglected. In fact although hypotheses about the role of aggression were central in classical psychoanalysis, and are still alive in the conception of hostility maintained by Klein 1940 and by Bonime 1960, only a few authors have been engaged in more systematic studies of the expression of aggression in patients with affective disorders (Gershon et al. 1968; Weisman et al. 1971, 1973; Friedman 1970; Pilowsky and Spence 1975; Cochrane 1975, and Mörbt 1977). Moreover, most of those studies were concerned more with a definition to types of aggression with the same patient group when ill and when recovered, than with possible differences between subgroups of depressives. Gershon et al. studied a very small sample ($n=6$) and suggested the possible identification of two different patterns of hostility in depression: one characterized by an increase of hostility-out with deepening depression in hysterical personalities, and one with no relation or a low negative relation of hostility-out to clinically evident effects. Blackburn 1974, compared bipolar and unipolar patients, when ill and when recovered, as to measures of intro-punitiveness and extra-punitiveness. The results showed that the manic patients had significantly higher extra-punitive scores than the two depressed groups, i.e. they appeared to channel their hostility predominantly outwards, projecting hostility and acting out hostility. However, this feature appeared to be state-dependent since it significantly changed upon recovery. Depressed unipolars and bipolars had an equally high level of intro-punitiveness, but unipolar patients were significantly more extra-punitive than bipolar. Upon recovery, unipolar patients had non-significantly higher levels of both intro-punitiveness and extra-punitiveness than bipolar.

Pilowsky and Spence (1975) very cautiously discussed the contribution made by one aspect of hostility, viz. an individual's position on the endogenous–non-endogenous depressive dimension and suggested that the anger score made a

substantial contribution to the individual's position on this dimension, in the sense that an inhibited expression of hostility seemed to be more in keeping with endogenous depression, whereas expressed anger seemed to be more associated with non-endogenous depression.

In a previous article (Perris et al. 1979a) we reported some preliminary results concerning aspects of aggression in a small series of formerly depressed patients who were compared with healthy controls. Those findings showed that subjects who had recovered from a non-psychotic depressive illness scored significantly higher than healthy controls on many variables of aggression. Thus, formerly depressed patients scored higher than controls on irritability, suspicion, guilt and inhibition of aggression, whereas no significant differences emerged as concerns the variables indirect aggression and verbal aggression. However, the series comprised in our previous study was very small ($n=30$), and was not sufficient for a more detailed analysis of possible differences among subtypes of depressed patients, or for a study of other personality characteristics which could be related with traits of aggression.

From what has been reported so far, it appears that aspects of aggression and hostility have not yet been thoroughly investigated in large series of depressed patients, nor have possible differences between diagnostic subgroups been established. Even less has the relationship, if any, between aspects of aggression and other stable personality characteristics been studied. The present study was planned to contribute to the clarification of some of these issues, and to extend our previous findings to comprise a much larger series. In particular, we wanted to see whether differences in patterns of aggression occurred between patients classified in various diagnostic subgroups, and whether aspects of aggression were related to other relevant personality characteristics. We had previously shown (Perris et al. 1979b) that measures of aggression obtained by means of the personality inventory that we planned to use were relatively stable traits not confounded by depression.

Patients and Methods

Since 1976 depressed patients of both sexes within the age range 21 to 65 years, suffering from a primary depressive illness of any severity, consecutively admitted to the Department of Psychiatry, Umeå University have participated, if they consent, in an ongoing large-scale study of depression in its biological, clinical, psychological and social aspects. So far, only a handful of patients has refused to participate, thus the only limitation for inclusion in the study has been that imposed by the work load of our research team. Patients who, during their hospitalization, proved to suffer from any kind of brain damage or severe somatic illness have been identified and are not included in this study.

The patients admitted to the study are diagnostically classified, by two experienced psychiatrists into different diagnostic categories according to most of the current systems of classification for affective disorders. Here we present data referring to patients classified into unipolar and bipolar according to the definition given by Perris (1966, 1973) neurotic-reactive according to the definition given by d'Elia et al. (1974) and "unspecified", i.e. those patients who did not fulfil the criteria for inclusion in any of the subgroups named above.

The present series comprises 208 patients, 81 males and 127 females. Their distribution according to sex, age and diagnosis is shown in Tables 1 and 2. For 170 of them we also had a

Table 1. Distribution of the series according to sex and age

	21-30	31-40	41-50	51-60	61-	Total
Male	17	12	12	30	10	81
Female 18	37	25	29	18	127	

$X^2=9.97$, $df.=4$ $P<0.05$

Table 2. Distribution of the series according to age and diagnosis

	21-30	31-40	41-50	51-60	61-	Total
Unipolar	2	13	10	27	10	62
Bipolar	6	10	4	9	2	31
Neurotic-reactive	19	12	11	10	6	58
Unspecified	8	14	12	13	10	57

Table 3. Distribution of the series according to the classification used in the present article and the DSM-III ($n=170$)

	296.2	296.3	296.5	296.8	300.4	309.0
Unipolar	3	55	–	3	1	–
Bipolar	–	–	22	1	–	–
Unspecified	6	17	–	5	1	–
Neurotic-reactive	6	21	–	14	8	7

DSM-III (American Psychiatric Association 1980) diagnosis. This is shown in Table 3 to make it easier to understand the kind of patients we studied. According to our results in this smaller sample, there seems to be a good correspondence between the two systems as concerns the bipolar patients. In contrast, a large proportion of the patients classified as "neurotic-reactive" are comprised under the heading "major depressive disorder" in the DSM-III. In the whole series 94% of the patients fulfilled Kendell's criteria for depression (Brockington and Leff 1979). The few who did not were patients who were admitted mostly for social reasons and who were not currently depressed.

Assessment of Personality Characteristics. The personality characteristics of the patients were assessed by means of a Swedish personality inventory, the KSP developed by Schalling and her co-workers, and frequently used in Sweden (Schalling 1970, 1975, 1978, 1979). The inventory contains 135 items which are grouped in the following 15 subscales: somatic anxiety, muscular tension, social desirability, impulsiveness, monotony avoidance, distance preference, psychasthenia, socialization, indirect aggression, verbal aggression, irritability suspicion, guilt, and inhibiton of aggression. In addition an "aggression factor" is obtained by combining the scales indirect and verbal aggression, and irritability, and a "hostility factor" is obtained by combining the subscales suspicion and guilt. The format is that of a four-point response.

Although we had shown that most of the variables covered by the KSP were independent of depression (Perris et al. 1979) the test was consistently administered when the patients has recovered from depression or at least their condition had so much improved that they were on their way to being discharged from hospital.

Statistical Analysis. Mean values and standard deviations for each of the subscales of the KSP were assessed separately for patients of the two sexes and for patients in each subgroup. Corre-

Table 4. KSP scores in male ($n=81$) and female ($n=127$) patients. Mean values and SD.

KSP variable	Males		Females		P (Mann-Whitney U-test
	mean	SD	mean	Sd	
Somatic anxiety	19.9	5.3	23.5	6.7	***
Psychic anxiety	25.4	5.6	26.8	5.7	
Muscular tension	18.8	5.6	22.4	6.9	***
Social desirability	1.9	1.9	1.9	2.0	
Impulsiveness	22.7	3.1	22.7	4.5	
Monotony avoidance	21.6	3.8	21.2	4.2	
Distance preference	23.4	3.2	22.2	3.8	***
Psychasthenia	24.6	4.5	26.6	4.9	***
Socialization	63.0	8.7	61.1	9.2	
Indirect aggression	10.6	2.8	11.0	2.9	
Verbal aggression	11.4	3.0	10.8	3.0	
Irritability	11.7	2.2	11.7	2.3	
Suspicion	10.8	2.3	11.2	2.3	
Guilt	12.6	2.1	13.2	2.6	
Inhibiton of aggression	25.9	4.9	27.2	5.0	
Aggression factor	33.6	6.1	33.2	6.3	
Hostility factor	23.2	3.4	24.5	4.0	***

* $P<0.05$; ** $P<0.01$; *** $P<0.001$

lations with age, correlations among subcales, and differences between sexes and among diagnostic subgroups were calculated by using standard computerized programmes (Statistical Package for Social Science, SPSS) at the Umeå Computer Centre (UMDAC). When intergroup differences could have been affected by differences in age, multiple regression analyses have also been calculated. Throughout, the 5% level has been accepted for significance.

Results

A. Sex Differences and Correlations with Age

The mean scores for the KSP subscales in male and female patients are shown in Table 4. Only a few significant differences occurred, which could be expected from current opinions. Thus, female patients scored higher in the scales "somatic anxiety", "muscular tension" and "psychasthenia" whereas male patients scored higher in "distance preference" and "hostility". This last result is in line with findings by Pilowsky and Spence (1975).

The correlations with age for patients of both sexes are presented in Table 5. It can be observed that several statistically significant relations occur. In particular, most of the variables referring to aggression show a significant negative correlation with age, apart from that which refers to "inhibition of aggression" for which the correlation is positive. The finding that aggression variables are age-related in depressed patients is consistent with earlier results in the literature (Friedman

Table 5. Spearman Rank correlation coefficients between KSP scores and age in patients of the two sexes

KSP variables	Males	Females
Somatic anxiety	–0.05	0.04
Psychic anxiety	0.00	0.06
Muscular tension	0.00	0.15
Social desirability	0.26*	0.28**
Impulsiveness	0.02	–0.14
Monotony avoidance	–0.19	–0.19*
Distance preference	–0.04	0.11
Psychasthenia	0.00	0.09
Socialization	0.29*	0.24*
Indirect aggression	–0.29*	–0.32***
Verbal aggression	–0.29*	–0.34***
Irritability	–0.06	–0.06
Suspicion	0.14	–0.06
Guilt	0.19	–0.12
Inhibition of aggression	0.22	0.20*
Aggression factor	–0.26*	–0.38***
Hostility factor	0.23*	–0.10

* $P<0.05$; ** $P<0.01$; *** $P<0.001$

Table 6. KSP scores (mean values and SD) in the diagnostic subgroups

	($n=62$)($n=31$) Unipolar		($n=57$)($n=58$) Bipolar		UNS		RND	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
Somatic anxiety	22.7	5.9	19.9	6.5	21.8	6.9	23.0	6.3
Psychic anxiety	26.4	4.9	24.5	7.2	26.0	6.0	27.2	5.3
Muscular tension	21.5	6.0	19.0	8.1	20.2	6.5	22.3	6.6
Social desirability	1.7	2.0	1.8	1.9	2.0	2.0	2.2	2.1
Impulsivity	22.4	4.1	23.6	3.9	22.9	3.5	22.5	4.6
Monotony avoidance	20.4	3.7	22.0	4.8	21.5	4.0	21.9	3.9
Distance preference	22.9	3.4	21.8	3.8	22.5	3.6	23.1	3.9
Psychasthenia	26.3	4.5	24.3	5.6	26.1	4.6	25.8	5.2
Socialization	63.3	8.2	62.5	10.3	61.7	8.9	60.1	9.3
Indirect aggression	10.5	2.6	10.1	2.4	10.6	2.7	11.8	3.2*
Verbal aggression	10.2	2.7	11.0	3.2	11.0	2.6	12.0	3.4**
Irritability	11.5	1.9	11.7	2.6	11.6	2.2	12.1	2.4
Suspicion	10.9	2.0	10.7	2.5	11.3	2.6	11.1	2.4
Guilt	13.1	2.2	13.2	2.6	13.2	2.7	12.4	2.3
Inhibition of aggression	27.1	5.0	26.1	6.3	27.0	4.3	26.5	5.0
Aggression factor	32.3	5.6	32.9	6.0	32.4	5.4	35.8	7.2**
Hostility factor	24.0	3.7	23.8	3.9	24.9	4.4	23.4	3.4

* $P< 0.05$; ** $P< 0.01$

Table 7. Significant correlations between age and KSP scales in diagnostic subgroups (Spearman

Diagnostic group	KSP scales								
	Som anx	Psych anx	Musc tens	Social desir	Im-puls	Monot avoid	Dist pref	Psych asth	Soc
Unipolar ($n=62$)									
Bipolar ($n=31$)				0.46***					
Episodic ($n=9$)									
NUD ($n=48$)	−0.28*							0.33*	
Rnd									
1) reactive ($n=10$)									
2) neurotic ($n=24$)						−0.43*			
3) mixed ($n=24$)				0.48**		−0.41*	0.41*		0.66**
RND 1)+2)+3) ($n=58$)				0.41***		−0.41***	0.26*		0.48**

* $P<0.05$; ** $P<0.01$; *** $P<0.001$

and Gramick 1963; Pilowsky and Spence 1975). However, the magnitude of the correlations is consistently very low leaving much of the variance unexplained.

B. Results in Diagnostic Subgroups

Table 6 shows the distribution of the KSP mean scores in the diagnostic subgroups. When performing analysis of variance only a few statistically significant differences occurred, all of them related to aspects of aggression. In this respect, neurotic-reactive patients scored consistently higher than patients in the other groups. As can be seen in the Table the difference concerns mainly out-directed aggression. It should be noted that no significant intergroup differences emerged for the variable "inhibition of aggression". In line with previous findings in the literature, patients in the bipolar group scored slightly differently from unipolar patients. Thus, bipolar patients scored lower on anxiety variables, on "psychathenia" and on "inhibition of aggression" than unipolar. The bipolars also had higher mean scores on the variables "impulsiveness", "monotony avoidance" and "verbal aggression". However, none of those differences was statistically significant. In Table 7 the correlations between KSP scores and age are presented separately for each diagnostic subgroup. It can be seen that almost all the age-related variations occur in the neurotic-reactive group.

Since the personality characteristics, particularly those reflecting aspects of aggression, seem to be rather independent of age in unipolar and bipolar patients but age-related in neurotic-reactive patients, multiple regression analyses comprising age and diagnosis were carried out for the variables of aggression. The

Rank correlation coefficients)

Ind agg	Verb agg	Irrit	Susp	Guilt	Inh agg	Agg fact	Host fact
−0.32*			−0.34**				−0.34***
−0.45*	−0.75***				0.61**	−0.74***	
−0.64***	−0.50**	−0.41*			0.43*	−0.72***	
−0.51***	−0.57***	−0.42***			0.50***	−0.66***	

Table 8. Results of the multiple Regression Analyses for the variables of Aggression

	F to enter or to remove	*P*
Indirect aggression		
Age	27.48	0.000
Diagnosis	5.20	0.02
Verbal aggression		
Age	25.58	0.000
Diagnosis	4.10	0.04
Irritability		
Age	16.72	0.000
Diagnosis	0.32	0.571
Suspicion[a]		
Age	2.99	0.085
Guilt		
Diagnosis	4.42	0.037
Age	2.84	0.093
Inhibition of aggression		
Age	10.43	0.001
Diagnosis	0.02	0.875

[a] The variable diagnosis did not enter at all in this case

Table 9. Correlations between the aggression variables and social desirability, socialization, impulsiveness and traits of anxiety

Aggression variables	Social desirability	Socialization	Impulsiveness	Traits of anxiety		
				Somatic anxiety	Psychic anxiety	Muscular tension
Indirect aggression	–0.24***	–0.38***	0.09	0.22***	0.20**	0.22***
Verbal aggression	–0.31***	–0.26***	0.29***	0.03	–0.12	0.02
Irritability	–0.31**	–0.06***	0.11	0.47***	0.33***	0.36***
Suspicion	–0.08	–0.47***	0.15*	0.41***	0.38***	0.36***
Guilt	–0.20**	–0.35***	0.10	0.39***	0.39***	0.30***
Inhibition of aggression	0.27***	–0.11	–0.15*	0.30***	0.52***	0.34***
Aggression factor	–0.36***	–0.38***	0.17*	0.26***	0.13*	0.20*
Hostility factor	–0.17*	–0.52***	0.16*	0.48***	0.46***	0.42***

$P < 0.05$; ** $P < 0.01$; *** $P < 0.001$

results are presented in Table 8. Both for "irritability", and for "inhibition of aggression" age seems to be the only important factor.

C. Relation of Variables of Aggression to Social Desirability

Social desirability reflects the proneness to conform, to admit frailties, and to deny in self-reports. Thus, it was important to discover what kind of relation occurred between the various aspects of aggression and this particular subscale. The results are shown in Table 9. Almost all variables show significant negative correlations. However, the one referring to "inhibition of aggression" shows a significant positive correlation suggesting that the desire to be socially acceptable might have influenced the patients' self-report in this variable.

D. Relation of Variables of Aggression to Socialization

"Socialization" measures the internalization of rules and the strength of the superego, low scores reflect arrogance, impatience, and irritability. Thus, it might be expected that significant relationships could occur with variables of aggression, especially those referring to aggression-out or hostility-out. In fact, as can be seen in Table 9, all variables of aggression apart from that referring to "inhibition of aggression" are significantly negatively correlated with socialization.

E. Relation of Aspects of Aggression to Impulsiveness

To investigate whether aggressive people were also likely to be impulsive in their personality structure possible correlations between the different aspects of aggression and impulsiveness were also calculated. The results are presented in Table 9. It can be seen that a significant positive correlation occurs between verbal aggression and impulsiveness, and a somewhat weaker but still significant negative correlation between impulsiveness and inhibition of aggression.

F. Relations of Aggression to Traits of Anxiety

From psychodynamic theories (for example, Bowlby 1973) it might be hypothesized that expressed aggression may have an adaptive function and be a part of the universal response to loss and frustration. Thus, important different relationships could be expected to occur between different aspects of aggression and traits of anxiety. The correlations among these variables are shown in Table 9. All but one of the aggression variables show quite high correlations with anxiety traits. In line with expectations, only the variable "verbal aggression" seems to be unrelated or slightly negatively related to anxiety.

G. Intercorrelations Among Measures of Aggression

In Table 10 the correlation coefficients among the different measures of aggression are presented. It can be seen that significant correlations occur among the different components of aggression and hostility-out. The variable "inhibition of aggression", in contrast, appears to be unrelated or negatively correlated with the

Table 10. Correlations among variables of aggression

	Verbal aggression	Irri-tability	Suspicion	Guilt	Inhibition of aggression
Indirect aggression	0.48***	0.36***	0.36***	0.22***	−0.12
Verbal aggression	–	0.34***	0.24***	0.08	−0.35***
Irritability		–	0.36***	0.27***	−0.03
Suspicion			–	0.29***	0.12
Guilt				–	0.14*

* $P < 0.05$; *** $P < 0.001$

others. Gershon et al. (1968) suggested in their study that different patterns of hostility can occur in depressed patients. Our results concerning intercorrelations among measures of aggression confirm that this is the case, and that those patterns can be identified.

Discussion

The results of the present study have shown that there are a few differences in the personality organization of male and female depressed patients, in that female patients score higher on variables reflecting anxiety and psychastenia, whereas males score higher on distance preference and hostility-out. Many of the traits studied by means of the KSP show significant relationships with age. In line with previous studies, it has been found that variables reflecting excess anger and hostility-out are negatively correlated with age. It is of particular interest that the variable "inhibition of aggression" shows a weak but statistically significant positive correlation with age. In earlier studies, it was found that "endogenous„ depressed patients are more inhibited in their aggression than "non-endogenous" patients (Pilowsky and Spence 1975; Pilowsky 1979). We were unable to confirm these results. Since inhibition of aggression seems to be age-related, and since "endogenous" patients tend to be older than "non-endogenous", an alternative explanation of the results obtained by Pilowsky and his group could be that the difference was due to a difference in age.

We have found that both "social desirability" scores and scores of "inhibition of aggression" are positively correlated with age. Thus, it could be assumed that the greater measure of inhibition of aggression shown by older patients is due to a desire to appear more socially desirable.

Only a few significant differences have been found among subtypes of depressed patients. In line with earlier findings in the literature, bipolar patients scored slightly differently from unipolar patients but none of the differences reached statistical significance. The only intergroup difference concerns the variables of aggression for which neurotic-reactive patients obtained the highest scores. This finding is in line with earlier results in the literature, for example those by Pilowsky and Spence (1975). However, most aspects of aggression in the neurotic-reactive group appeared to correlate negatively with age. When

multiple regressions were calculated, it was found that age alone is the strongest factor contributing to the variations of "irritability", and "inhibition of aggression", but that diagnosis is a more powerful factor as concerns the variation in the variable "guilt". All the variables reflecting aggression-out or hostility-out appear to be negatively correlated with "socialization" i.e. a variable measuring internationalization of rules and superego strength. Since we do not yet have a contrast group comprised of healthy subjects we cannot conclude that this particular characteristic is one of the depressive personality.

Most of the variables reflecting aggression-out appeared to be positively correlated with impulsiveness. In a study of hostility in patients who had attempted to commit suicide Weissman et al. (1973) found that such people were more hostile than depressive who had not made suicide attempts. Our finding that hostility-out is linked with impulsiveness might add further meaning to the finding by Weissman et al. In the future, the interrelations of those two variables should be carefully scrutinized in depressed patients who exhibit suicidal behaviour. Only overt aggression is not correlated or only weakly negatively correlated with psychic anxiety, thus suggesting a possible adaptive mechanism for coping with frustrations and loss. In contrast, all the other measures of aggression, and especially that reflecting "inhibition of aggression" appeared to be highly correlated with measures of anxiety. One finding that is perhaps worth closer scrutiny in future studies concerns the differences in size among the correlations between various aspects of aggression and of anxiety. In fact, the most pronounced correlation for the variable "inhibition of aggression" was with psychic anxiety ($r=$ 0.52), whereas the most pronounced correlations for the variables "irritability", "suspicion" and the hostility factor were with somatic anxiety ($r=0.47$, 0.41 and 0.48 respectively). It can thus be assumed that aspects of hostility might be accompanied by a tendency to somatization.

In our previous study (Perris et al. 1979a), we showed that recovered depressed patients deviated from healthy controls on most variables of aggression. We are now collecting a larger series of controls to compare their results with those obtained in the present study as concerns other personality traits besides aggression. However, the findings which we have now reported are in line with those obtained in our previous smaller series. Since the scores obtained by the patients in the present series for the variables which differentiated formerly depressed from controls in the previous study are of the same size or even higher, the present results verify our previous findings, and confirm that depressives differ from controls regarding several aspects of aggression. We plan to present in the near future comparisons with a larger series of healthy controls aimed at testing further hypotheses about an interaction between patterns of aggression and other personality traits arising from the present study.

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