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PROPHYLACTIC EFFECTS OF PSYCHOANALYSIS ON CANCER-PRONE AND CORONARY HEART DISEASE-PRONE PROBANDS, AS COMPARED WITH CONTROL GROUPS AND BEHAVIOUR THERAPY GROUPS

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Summary — It has been shown repeatedly that behaviour therapy fulfils a useful prophylactic function in the prevention of cancer and coronary heart disease. The present study investigates the effects of orthodox psychoanalytic treatment on the eventual probability of death from cancer and coronary heart disease in probands treated by psychoanalysis for over two years, probands who broke off psychoanalytic treatment after less than two years, and various control groups. Psychoanalysis is shown to have a significantly *negative* effect on survival after seven years follow-up.

There has been a good deal of interest recently in the discovery of negative outcome in psychotherapy, particularly psychoanalysis (Strupp, Hadley & Gomes-Schwartz, 1977; Mays and Franks, 1985). There is now a good deal of evidence to suggest that in typical psychiatric disorders, negative outcomes are frequently the effect of psychoanalytic interventions. In this paper we are concerned to investigate the effect of psychoanalysis on non-psychiatric diseases of a physical character, namely cancer and coronary heart disease (CHD). The results will be compared with non-intervention, and with the results of behaviour therapy. We deal here with prospective studies, i.e. studies in which physically healthy probands are given or not given psychoanalytic treatment, or behaviour therapy, and are then followed up for various periods to discover who suffered death, and from what cause, as shown on the death certificate.

Our conclusions regarding behaviour therapy are based on published data (Eysenck, 1984a, b, c; Eysenck, 1987a, b; 1988a, b; Grossarth-Maticek, 1990; Grossarth-Maticek, Eysenck & Vetter, 1988; Grossarth-Maticek, Eysenck, Vetter & Frentzel-Beyme, 1988; Grossarth-Maticek, Eysenck, Vetter & Schmidt, 1988). These are reports of three major prospective investigations in which 3,235 healthy probands were given personality and stress inventories at the beginning of the study, as well as having cholesterol level, smoking and drinking habits, blood pressure, etc. determined. They were determined according to the personality/stress inventory, with Type 1 constituting the cancer-prone type according to theory, Type 2 the CHD-prone type, with Type 3 being a mixed but essentially healthy type, and Type 4 the autonomous, healthy individual. Taking the results from these three ten-year follow-up studies together, we obtained the results shown in Table 1.

The Table shows the percentages of probands still alive ten years after agreeing to take part in the investigation, or dead from various reasons. It will be seen that probands of Type 1 die disproportionately frequently of cancer, probands of Type 2 of CHD or other causes; while probands of Types 3 and 4 die quite infrequently of these causes. Personality/stress factors were found to be over 6 times as predictive of death from cancer and CHD as

Table 1

Proportion of Probands of Different Personality Types Still Alive, or Dead From Various Causes

Type	Alive	Died of Cancer	CHD	Other Causes	*N*
1	38%	39%	7%	17%	901
2	43%	4%	25%	27%	818
3	81%	1%	4%	14%	570
4	95%	—	1%	4%	946
			Total:		3,235

smoking, cholesterol level and blood pressure taken together. (For details, see Grossarth-Maticek, et al., 1988; Grossarth-Maticek, et al., 1988.)

A special form of intervention technique, creative novation behaviour therapy, has been devised to change probands' behaviour from that typical of Types 1 and 2 to that typical of Type 4 (Grossarth-Maticek & Eysenck, in press). This means essentially to make people more autonomous, more expressive of emotions in a socially acceptable manner, and make them able to cope with interpersonal and other stresses; this inability to deal with stress, to give up, and to encounter feelings of hopelessness, helplessness and depression are the major factors in making Type 1 and Type 2 probands disease-prone. It is the aim rather than the methods used which characterize our approach; most of the specific methods used, such as desensitization, relaxation, suggestion, hypnosis, modelling, flooding with response prevention, etc., are familiar to all behaviour therapists. A specific feature of our method is that probands are asked to devise methods of dealing with stressful situations on their own, rather than having solutions suggested or dictated to them. The major aim is for the proband to realize the inefficacy of the methods used by him, and the positive effects that might be expected from alternative methods of behaviour.

The results of this type of prophylactic therapy have been highly significant when control groups similar in Type score, smoking habits, age and sex were compared in follow-up studies with probands receiving behaviour therapy. Whether we used extended individual treatment, lasting for 30 hours, or group treatment lasting on the average 15–25 hours, or short-term individual treatment accompanied by bibliotherapy, results always showed highly significant reduction in the death rates from cancer, CHD and other causes in those probands who received the treatment (results are summarised in Eysenck & Grossarth-Maticek, 1989.) Thus behaviour therapy clearly is effective as a prophylactic treatment, and we shall now examine the effects, if any, that psychoanalytic treatment has on comparable groups of probands who received or did not receive psychoanalytic treatment.

The Experiment

The experiment consists essentially in a contrast between probands psychoanalytically treated, and probands suitably matched, but not treated by psychoanalysis. The probands were assigned to personality type in 1973, as part of a large group of over 7,000 people investigated at that time. In 1977, in a follow-up study, probands were asked whether they had been under any form of psychotherapy, and notes were made at the time concerning

duration and type of treatment. Questions were also asked concerning the effects of the treatment on the proband's degree of autonomy, i.e. the degree to which the treatment led him in the direction of the (healthy) Type 4 behaviour. In 1986 the participants were followed up, and death and cause of death established by reference to the death certificates of those who had died.

Two groups of physically healthy probands who were under psychoanalytic treatment of an orthodox kind, for mild psychiatric disorders in the main, constituted our therapy groups. Group 1 had been treated for between 1 and 2 years, and had then discontinued treatment. Group 2 had been in treatment for 2 years or more, and had not broken off treatment. Two control groups were created from the large pool of probands so that they could be matched closely with the two treatment groups on age, sex, personality type and cigarette consumption. Matching was person-to-person, thus guaranteeing equality of means and SDs. A final overall control group was created to match the two groups together overall. Table 2 shows the composition of these 5 groups. It will be seen that Groups 1 and 3, and Groups 2 and 4 are closely matched as far as Type is concerned, but that Group 5 is not matched on this variable, which has always proved to be the most predictive of all those studied, as far as cancer and CHD are concerned.

Table 3 shows in detail the results of the follow-up study. The percentages given for Type 4 are of course meaningless as the numbers involved are so small, but they are given nevertheless for the sake of completeness. The same is true of many of the percentages in the control groups; there were simply only very few deaths from any cause in the control groups, or among probands of Type 4. Probands who could not be located on follow-up are designated in the Table as *omitted*.

The major findings are as follows:

(1) In Group 1, 82% of probands are still alive; in Group 2, 72%; this difference is

Table 2

Matching of Groups With or Without Psychoanalytic Therapy

Therapy	Type 1	Type 2	Type 3	Type 4	*N*
(1) 1–2 years Psychoanalysis, then terminated.	162	90	109	1	362
(2) Psychoanalysis, longer than 2 years: not terminated.	102	46	108	3	259
(3) Control group for Group 1, matched on age, sex, type and amount of smoking.	162	90	109	1	362
(4) Control group for Group 2, matched on age, sex, type and amount of smoking.	102	46	108	3	259
(5) Control group for Groups 1 and 2 combined, matched on age, sex, and cigarette consumption.	187	197	121	116	621

Table 3

Mortality of Therapy and Control Groups

Therapy	Status	Type 1		Type 2		Type 3		Type 4	
			%		%		%		%
(1) Up to 2 years of Psychoanalysis, then terminated.	Cancer	11	7.1	4	4.6	5	4.8	1	100.0
	CHD	7	4.5	5	5.8	6	5.7	0	0
	Other	7	4.5	5	5.8	6	5.7	0	0
	Living	129	83.7	72	83.7	87	83.6	0	0
	Omitted	8	4.9	4	4.4	5	4.5	0	0
	Total	162		90		109		1	
			%		%		%		%
(2) Psychoanalysis for longer than 2 yrs. not terminated.	Cancer	9	9.3	3	6.5	8	7.7	1	33.3
	CHD	8	8.2	6	13.0	8	7.7	1	33.3
	Other	8	8.2	5	10.8	7	6.7	1	33.3
	Living	72	74.2	32	69.5	81	77.8	0	0
	Omitted	5	14.9	0	0	4	3.7	0	0
	Total	102		46		108		3	
			%		%		%		%
(3) Control group for Gp. 1, matched on age, sex, type and amount of smoking.	Cancer	2	1.3	1	1.2	0	0	0	0
	CHD	1	0.6	2	2.4	0	0	0	0
	Other	3	1.9	2	2.4	3	2.7	0	0
	Living	149	96.1	80	94.1	100	95.2	1	100.0
	Omitted	7	4.3	5	5.5	5	4.6	0	0
	Total	162		90		109		1	
			%		%		%		%
(4) Control group for Gp. 2, matched on age, sex, type and amount of smoking.	Cancer	1	1	1	2.2	0	0	0	0
	CHD	1	1	1	2.2	1	0.9	0	0
	Other	1	1	3	6.6	5	4.6	0	0
	Living	94	96.9	40	88.8	98	95.1	3	100.0
	Omitted	5	4.9	1	2.1	5	4.6	0	0
	Total	102		46		108		3	
			%		%		%		%
(5) Control group for Groups 1 and 2 combined, matched on age, sex, and cigarette consumption.	Cancer	1	0.6	1	0.5	0	0	1	0.9
	CHD	2	1.2	2	1.0	1	0.9	0	0
	Other	5	2.9	5	2.7	2	1.8	2	1.8
	Living	166	95.4	180	95.7	107	96.4	107	97.3
	Omitted	13	6.9	9	46.6	10	8.3	6	5.2
	Total	187		197		121		116	

statistically significant, and indicates that those who broke off analysis had a better chance of surviving.

(2) In Group 3, 329 probands survived, which is significantly superior to the matched Group 1, indicating that psychoanalysis, even when discontinued, has a negative effect on health.

(3) In Group 4, 232 probands survived, which is significantly superior to the matched Group 2, indicating that psychoanalysis, when continued for more than two years, has a negative effect on health.

(4) In Group 5, 453 survived out of 505, i.e. 90%; this compares with 82% in Group 1 and 72% in Group 2; here also probands receiving no treatment survived better than probands receiving analysis. (In Group 5, we omitted Type 4 probands, as these played an insignificant part in Groups 1, 2, 3 and 4.)

(5) The data provide some evidence that typology is related to cause of death, although

the results are not statistically significant. Taking only the patients treated with psychoanalysis, there being too few deaths in the control group to make comparisons possible), we find the death rate for cancer to be 8% for Type 1, 5% for Type 2, and 6% for Type 3. For CHD, the figures are 6% for Type 1, 8% for Type 2, and 7% for Type 3. For death from other causes, the figures are 6%, 8% and 6%. For cancer and CHD the data are in line with expectation, but these support prediction only very weakly.

Probands who stayed in analysis for more than 2 years were asked whether in the course of their treatment they had found support for autonomous (Type 4) behaviour, and had become more autonomous, or whether they had found their autonomy diminished. Table 4 shows the results. It is clear that the probands receiving therapy which increased autonomy survived better than those receiving therapy not supporting autonomy, at a statistically significant level.

Points were given according to the answers received to two questions as follows:-

(1) I have learned during therapy to create conditions through my own actions which prove satisfying to me in relationships with other people, and internally. (+ 1)
Therapy has made me less able to create conditions which prove satisfying to me in relationships with other people, or internally. (− 2)

(2) The therapist has been instrumental in causing me to become more active in producing satisfactory outcomes in my relationships with other people, and in my own internal feelings. (+ 3)
In therapy, I have been directed to carry out behaviours which the therapist considers best for improving my mental health, without much interest being shown in my own views and desires. (− 3)

Also included in the original survey were short-term therapy patients, i.e. patients with therapies lasting less than one year. Results are shown in Table 5. There are no significant differences from the control group. Table 6 shows patients who thought the treatment had *increased* or *decreased* their autonomy. Numbers are too small to take seriously, other than the percentages still living for Types 1, 2 and 3.

Table 4

Mortality of Groups Treated With Psychoanalysis, Depending on Whether the Treatment Increased or Decreased Autonomy

	Type 1		Type 2		Type 3		Type 4	
N	32		20		34		1	
Increasing autonomy:		%		%		%		%
Cancer	1	3.2	0	0	0	0	0	0
CHD	1	3.2	1	10	1	3	0	0
Other	1	3.2	1	10	1	3	1	100
Living	28	90.3	8	80	31	93.9	0	0
Omitted	1	3.1	0	0	1	2.9	0	0
N	70		36		74		2	
Decreasing autonomy:		%		%		%		%
Cancer	8	12.1	3	8.3	88	11.2	1	50
CHD	7	10.6	5	13.9	7	9.9	1	50
Other	7	10.6	4	11.1	6	8.4	0	0
Living	44	66.7	24	66.7	50	70.4	0	0
Omitted	4	5.7	0	0	3	4.1	0	0

Table 5

Mortality of Short-Term Therapy and Control Groups

	Type 1		Type 2		Type 3		Type 4	
Short-term therapy:		%		%		%		%
Cancer	6	3.3	3	2.0	5	2.4	0	0
CHD	3	1.7	6	4.0	5	2.4	1	25
Other	4	2.2	5	3.4	8	3.8	0	0
Still living	168	92.8	134	90.5	193	91.5	3	75
Not located	4	2.2	2	1.3	4	1.7	0	0
Total	185		150		215		4	
Control group:		%		%		%		%
Cancer	5	2.8	2	1.4	1	0.5	0	0
CHD	2	1.1	4	2.8	1	0.5	0	0
Other	4	2.2	6	4.0	3	1.5	0	0
Still living	169	93.9	136	91.9	206	97.6	4	100
Not located	5	2.7	2	1.4	4	1.8	0	0
Total	185		150		215		4	

Table 6

Mortality of Groups Treated With Short-term Therapy, Depending on Whether the Treatment Increased or Decreased Autonomy

	Type 1		Type 2		Type 3		Type 4	
Increasing autonomy:								
N	104		92		113		4	
		%		%		%		%
Cancer	1	0.9	0	0	1	0.9	0	0
CHD	1	0.9	1	1.1	1	0.9	0	0
Other	1	0.9	2	2.2	2	1.8	0	0
Still living	98	97.0	88	96.7	106	96.4	4	100
Not located	3	2.99	1	1.1	3	2.7	0	0
Decreasing autonomy:								
N	81		58		98		2	
		%		%		%		%
Cancer	5	6.3	3	5.3	4	4.1	0	0
CHD	2	2.5	5	8.8	4	4.1	0	0
Other	3	3.75	6	10.5	5	5.2	1	50
Still living	70	86.42	43	75.4	84	86.6	1	50
Not located	1	1.2	1	1.7	1	1.0	0	0

These are 97, 97 and 96% for patients who received treatment *increasing* autonomy, and 86, 75 and 87% for those receiving treatment *decreasing* autonomy. Again, the figures are highly significant overall by analysis of variance.

A final table (Table 7) may be of some interest, although the numbers are too small to have much significance. We are here dealing with 3 groups. Group 1 is constituted of patients who broke off psychoanalytical treatment after two years or less, and were then

Table 7

The Effects on Mortality of Receiving Behaviour Therapy

	N	Type:	Cancer		CHD		Other causes of death		Still living		Not located	
				%		%		%		%		%
(1) Psychoanalysis	26	1	1	3.8	0	0	1	3.8	23	92	1	3.8
discontinued after	19	2	0	0	1	5.3	0	0	18	94.7	0	0
two years or less;	20	3	0	0	0	0	0	0	19	95	1	5
then autonomy training.												
				%		%		%		%		%
Control group for	26	1	1	4	0	0	0	0	24	96	1	4
(1)	19	2	1	5.4	1	5.6	0	0	16	88.9	1	5.3
	20	3	0	0	0	0	1	5.3	18	94 7	1	5
				%		%		%		%		%
Psychoanalysis	26	1	3	12	2	8	2	8	18	72	1	4
discontinued after	19	2	2	10.5	3	15.8	2	15.8	12	63.1	0	0
two years or less.	20	3	2	11.1	2	11.1	3	16.7	11	61 1	2	10

treated with behaviour therapy. Group 2 is a control group matched with the members of Group 1 on age, sex, smoking and personality type. Group 3 is a control group which discontinued psychoanalysis, like Group 1, but did not receive behaviour therapy. Members of Groups 1 and 2 do not differ significantly in mortality, but Group 3 has significantly greater mortality than either. Looking again at the percentage of patients still living, we find for Group 1 92, 95 and 95%, for Group 2 96, 89 and 95%, for Group 3 the figures are: 72, 63 and 61%. Clearly behaviour therapy can reverse the negative impact psychoanalysis has on survival.

The overall impression given by these studies must surely be that psychoanalysis and other similar psychotherapies have a *negative* influence on survival, as compared with short-term therapies which have little or no influence on survival, while behaviour therapy has a very *positive* influence on survival. Before accepting the evidence concerning the negative influence of psychoanalysis we must consider certain complications. We do not know what caused probands to undergo psychoanalysis; it is possible that these were suffering from neurotic symptoms and debilities which would make them more susceptible to cancer and CHD. We tried to guard against this possibility by matching in terms of smoking (often a sign of neurotic despair) and personality type, but there can be no certainty that we have succeeded in ruling out the possibility of contamination — the only possible way of deciding the question once and for all is for a prospective study to be done along the lines of our studies 1, 2 and 3, but using psychoanalysis instead of behaviour therapy. Failing such a study, the evidence suggests strongly that psychoanalysis may be a danger to health.

Theoretically, this conclusion is not unreasonable. We have shown that stress is a powerful factor in causing cancer and CHD, and it is widely agreed, even among psychoanalysts, that their treatment imposes a considerable strain on patients. The hope is often expressed that finally the treatment will resolve these strains, but there is no evidence to suggest that this is true (Rachman & Wilson, 1980; Eysenck & Martin, 1987). Indeed, there is good evidence that even in cases of mental disorder psychoanalysis often does considerable harm (Mays & Franks, 1985). A theoreti-

cal model to account for these negative outcomes of psychoanalysis and psychotherapy generally has been presented elsewhere (Eysenck, 1985); it would apply as well in the psychosomatic as in the purely psychiatric field.

Discussion

It is always difficult to draw definitive conclusions from epidemiological data, for the simple reason that these are always *correlational*, and it is well known that it is not possible to convert correlational statements into causal ones. Also, the particular variables being correlated with the occurrence of disease do not stand by themselves; they are connected with a whole host of other variables. Thus smoking is correlated with drinking, promiscuity, late nights and many other variables including personality traits like extraversion, neuroticism and psychoticism, which in turn are correlated with sensation seeking, impulsivity, empathy and many other traits. Thus we always deal with a complex net of interrelated variables; seeking out just one for the purpose of epidemiological study neglects the possible effects of associated variables (Eysenck, 1985a).

The use of an intervention design makes the drawing of causal inferences more secure, although conclusions must still be stated with caution. Intervention studies using control groups give certain results only if the matching of therapy and control groups is adequate; in the absence of full knowledge of the variables constituting the causal networks we can never be certain that the matching was in fact adequate. In our case we have combined the most obvious social variables (sex and age) and the most widely acknowledged disease-related variables (smoking and personality type) to effect what should be an acceptable matching procedure.

Where previous studies (Eysenck, 1989) have shown that behaviour therapy has a very significant *positive* prophylactic effect over no therapy where cancer and CHD are concerned, this study suggests that psychoanalysis has a powerful negative prophylactic effect. This effect shows a dose-effect relation, in the sense that the longer treatment is continued, the stronger is the negative prophylactic effect. Furthermore, the negative effect is conditional on methods of treatment which undermine the patient's autonomy; methods which enhance autonomy have the opposite effect.

Why is the result of psychoanalysis so negative, both in relation to neurosis and to physical disease? A possible cause for the former effect has been suggested by Eysenck (1985b). This cause is derived directly from a general theory of neurosis and treatment (Eysenck, 1976, 1979, 1982, 1985a) which in essence explains the growth of anxiety which usually accompanies psychoanalytic treatment (Fenichel, 1945; Gossop, 1981). We can apply this general theory to physical disease, along lines described elsewhere (Eysenck, 1985d).

The theory makes sufficient testable predictions (e.g. as regards the reaction of the immune system in the case of cancer, of sclerosis in the case of CHD), to make experimental verification or falsification possible.

On the practical side it would seem that people contemplating psychoanalytic treatment should be warned of the dangers, both to mental and physical health, which they expose themselves to if they undergo what seems to be misnamed *therapy*. There is a very definite danger that psychoanalysis may impair their mental and physical health, and a wider appreciation of these dangers is clearly needed.

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