

NEUROTICISM, EXTRAVERSION AND MEANING OF LIFE: A COMPARATIVE STUDY OF CRIMINALS AND NON-CRIMINALS

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Summary—This study attempts to examine possible connections between neuroticism, extraversion and the meaning of life. A population consisting of 446 subjects, 140 incarcerated criminals and 306 non-criminals, was examined. A negative correlation was found between the meaning of life and neuroticism. No connection was found between extraversion and the meaning of life. It was found that only in specific cases can criminal solutions be a substitute for the meaning of life.

INTRODUCTION

Several recent studies have examined the relationships among extraversion/neuroticism and other personality factors, e.g. empathy and embarrassability (Edelmann and McCusker, 1986); oral character traits (Corulla, 1986); and subjective well-being (Okun and George, 1984). Others have investigated various attitudes and personality traits in prisoner populations (Ray, 1984; Wilson and MacLean, 1974). The present study combines a focus on extraversion/neuroticism and meaning of life in a comparative investigation of criminals and non-criminals.

On the basis of Frankl's (1970) theory of logotherapy, it is assumed that the search for meaning and existential substance are primary human forces and not simply a rationalization of instinctive impulses. In this light, the more psychogenic neuroticism grows, the further a person loses full awareness of his life's mission. Conversely, the further a person loses full awareness of his life's mission, the higher his psychogenic anxiety (neuroticism) will be. It follows, then, that the less the neuroticism, the more awareness a person will have about the meaning of life. According to Adler's conception, criminality provides the individual with a sense of control and can serve as a substitute for existential meaning, thus providing an outlet for meaning in life. In a population of criminals, then, we might expect to find a low level of neuroticism and a high expression of meaning in life.

METHOD

Subjects

The research sample was composed of 446 people, 140 imprisoned criminals and 306 non-criminals. The criminal population included: 58 male prisoners ages 30 and above, all incarcerated in Ayalon Prison (Israel); 21 female prisoners who constituted the total criminal population of that prison; a sample of 15 drug offenders (Ayalon Prison); and 31 young male offenders randomly selected from a prison for 17–20 year olds (Tel Mond). The ages of the entire sample ranged from 17–51. 103 were ages 17 to 20, 261 were ages 21 to 30, and the remaining 82 were 31–51 years of age.

Questionnaires

Two questionnaires were employed in this study, one based on Eysenck and Eysenck (1969) to assess extraversion and neuroticism (MPI) and the other to investigate meaning of life (PIL).

Extraversion and Neuroticism Questionnaire (MPI)

Eysenck and Eysenck's (1969), questionnaire consists of 48 items, 24 of which relate to extraversion and 24 to neuroticism. The subject is given a three-way choice for each item; one

positive, one negative and "don't know". for example:

1. Are you happiest when doing something requiring swift action? Yes, No, Don't Know.
2. Do you sometimes feel happy and sometimes depressed for no apparent reason? Yes, No, Don't Know.

The level of extraversion is checked according to a key prepared by Eysenck (1969). Those scoring 48 or more are attributed maximum extraversion. At more moderate levels, 24 points serves as a cut-off. An individual who scores 24 points or more is labeled extraverted; one scoring fewer than 24 points is said to be introverted.

Neuroticism (amount of stability resulting from anxiety) is assessed by 24 items which are scattered randomly throughout the same questionnaire. The scale ranges from 0 (lowest) to 48 (highest). Level of anxiety was also examined by the above questionnaire.

Meaning of Life Questionnaire

Known as the *Purpose in Life Test* (PIL), this measure is a scale of attitudes constructed according to the principles of logotherapy. As mentioned earlier, it is a unique result of an existential concept of life according to which the primary power which gives a person vitality is in the existential meaning which he seeks and finds.

The PIL was prepared by Crumbaugh and Maholick (1964, 1969; see also Crumbaugh, 1968, 1977). It consists of 20 questions, and subjects are asked to respond on a scale from 1 to 7.

Two items serve as illustrations:

1.	I am usually:	1.	2.	3.	4.	5.	6.	7.
					Neutral		Full of life	
2.	Life for me seems to be:	7.	6.	5.	4.	3.	2.	1.
		Full of interest and purpose			Neutral		Routine and uninteresting	

The score for each subject is the sum total for all questions. This score can range from 20 to 140 points. A raw score in the range of 92–112 points indicates a vague definition for meaning of life (i.e. in the 'indecisive range'). A score below 92 shows a low meaning of life, and a score above 112 shows a clear meaning or purpose in life.

The score for each subject is then divided by the number of questions answered in order to provide a measure relative to the 7-point scale. On this scale a high score (75) indicates a high meaning of life while a low score (<3) is indicative of a low meaning of life for the subject. Only the data from those subjects who answered at least 16 of the 20 questions were used in the statistical analysis.

Validity for PIL has been documented in both psychiatric and normal populations. Validity of this instrument was measured by calculating the correlation between a PIL score and the evaluations of therapists who had examined the subjects. Split-half reliability of the PIL produced coefficients of 0.81 (Pearson's Test) and 0.90 (according to Spearman-Brown).

Procedure

All subjects responded to the questionnaires individually. Each one answered the questions himself without assistance, except for the general instructions given at the beginning of the interview. Administration of the questionnaire to the incarcerated subjects was carried out under the following conditions. Some of the subjects responded in a private interview with the author or one of three assistants; others completed the questionnaires in the same room where other subjects were also sitting. Both questionnaires were given to the subjects as a single unit.

Subjects were told that they were part of a random sample and that the purpose of the questionnaire was to check their attitudes, feelings and thoughts. They were assured of anonymity, and in order to avoid questions they were permitted to place the completed questionnaires in a pile in any order they chose. Subjects were also told that their answers were for internal use only

for the purpose of research, and that there was no way that the researcher or the prison authorities could know which questionnaire any particular individual had answered.

The procedure as far as the general (non-criminal) population was concerned was similar. The instructions were identical to those given to the criminal group. All subjects responded individually though they were administered in small groups of approx 4-5.

RESULTS

In the total population sample (both criminals and non-criminals) a significant negative correlation was found ($r = -0.53$) between the PIL (Meaning of Life) and the neuroticism score on the Eysencks' MPI. The mean score on the PIL was 5.38 ($SD = 0.88$) on a 7-point scale. The population mean was found to be 24.61 ($SD = 11.26$) out of a maximum total of 48 points on the neuroticism scale.

Correlations for the two measures were also computed for the target subjects and their non-criminal counterparts. For both groups significant negative correlations emerged ($r = -0.52$ and -0.33 , for criminals and non-criminals, respectively).

Significant differences emerged between non-criminals and each of the four criminal subgroups on the meaning of life (PIL) measure. Mean PIL scores were 5.65 for the non-criminals and 4.26 for the adult criminals, 4.44 for the female prisoners, 4.96 for the drug offenders and 4.95 for the young prisoners.

In an attempt to further characterize the target populations, correlations for these same two measures were computed for the four subgroups of the criminal population ($r = -0.53$, -0.53 , -0.51 and -0.44 for the older—above 30—male prisoners, female prisoners, drug offenders and young male offenders, respectively). The consistency of the findings across these sub-groups substantiates the negative relation between meaning of life (as measured by the PIL) and neuroticism (as assessed by the MPI).

In an attempt to further clarify the negative correlation between meaning of life and neuroticism, the data were broken down into four overlapping levels of neuroticism which were examined separately for three of the criminal subgroups (excluding the drug offenders): adult males, females, and young prisoners. The four overlapping levels of neuroticism were: low (which included scores from 0-24); low-moderate (scores from 0-36); moderate-high (scores from 25-48); and high neuroticism (scores from 37-48). The findings are presented in Table 1. These data show a very consistent inverse relation between neuroticism and meaning of life. For all three criminal subgroups and for the criminal populations as a whole, meaning of life decreases as a function of a rise in neuroticism.

Table 1. Meaning of life (PIL) in three criminal subgroups broken down into four levels of neuroticism

Level of neuroticism	Adult males		Females		Young prisoners		Total criminal population	
	N	PIL M (SD)	N	PIL M (SD)	N	PIL M (SDC)	N	PIL M (SD)
Low (0-24)	15	5.81 (0.82)	4	5.70 (0.86)	4	4.72 (1.4)	23	5.56 (0.99)
Low-Moderate (0-36)	32	5.39 (0.85)	13	5.27 (0.75)	15	4.59 (0.9)	60	5.16 (0.9)
Moderate-High (25-48)	43	4.65 (9.2)	17	4.78 (0.68)	27	4.11 (0.88)	87	4.51 (0.9)
High (37-48)	26	4.41 (0.98)	8	4.43 (52)	16	3.82 (0.88)	50	4.22 (0.91)

Correlations were also calculated between meaning of life (PIL) and the extraversion scale of the Eysencks' MPI. Results showed that in the sample as a whole there was virtually no relation between these two measures ($r = -0.02$). This finding was replicated in an examination of the breakdown for both criminals and non-criminals. (In both cases $r = 0.06$).

DISCUSSION

Neuroticism and meaning of life

The finding which shows a clear negative correlation between the level of neuroticism (measure of personality anxiety) and the PIL score (meaning of life) confirms the hypothesis that both

striving for meaning in life and the presence of an existential purpose are primary forces which strengthen the self and enable it to overcome the burden of instability. This supports Frankl's (1970, p. 119) claim that the existential substance which the individual builds is not a defence mechanism, reaction formation or sublimation but a fundamental factor which influences human psychological processes.

The direction of the neurotic individual toward the task of becoming fully aware of his mission in life and toward a sharpening of his instincts, so that he may fully appreciate the importance of this task will, according to Frankl, help strengthen the self and thereby diminish the influence of his anxiety. The individual's awareness that to search for meaning in human existence in general, and in one's own existence in particular, helps bring about the emergence of the self from the narrow borders within which it was confined. This strengthening of the self gives a feeling of confidence and enables the individual to neutralize the negative effects of anxiety. The set of values that the individual builds up satisfies the quality which makes life worth living. This striving for meaning, if fulfilled, creates stability.

Extraversion and meaning of life

No correlation was found between PIL and level of extraversion. The influence of other variables (parents' ethnic origin, birth order, sex, age, values, political beliefs) was also examined. In every instance there was no significant correlation. This verifies the claim that no 'ogenic solutions have little connection with innate characteristics such as extraversion (Eysenck, 1977). In a previous study based on Eysenck (1970) Eysenck and Eysenck (1969) and others, we found that the level of extraversion and neuroticism could be an auxiliary factor in anticipating criminal behavior (Addad, in press). No such connection was found between extraversion and meaning of life in the present investigation.

Criminal solutions as meaning of life

Although prisoners in this study were found to have significantly lower meaning of life (PIL) scores than the non-criminal subjects investigated, the negative relationship between neuroticism and meaning of life emerged consistently across both groups and in every sub-group of criminals examined. Nevertheless, the negative correlation documented in the criminal population was -0.52 , whereas the relationship of these two variables among the non-criminal subjects was -0.33 . The differences, then, between criminals and non-criminals cannot be overlooked. The lower meaning of life scores and higher neuroticism scores among criminals can be interpreted as a stronger expression of inner emptiness or existential vacuum among the criminals.

This population which displayed active criminality (most of the prisoners had long criminal records), perhaps filled the existential vacuum by substituting criminality. It could be that the aspiration for control, for power, a sense of ability on the one hand, or the search for pleasure on the other hand, was realized in criminal behavior, and became a substitute for the missing existential meaning. Frankl believes that "The sexual libido gets out of control in an existential vacuum" (1970, p. 130). The frustrated aspiration for existential meaning is offset by the the striving for power and sexual compensation.

Some criminals probably find a substance that acts as an existential anchor in criminality itself, while others find in it the meaning of their lives. Criminality sometimes gives the individual power, and at the same time fills his life, thus giving it meaning. This same conclusion is reached by reading diaries of criminals, especially the books of Jean Genet (1949, 1952, 1963, 1964). It could be that meaning of life among criminals stems from their association with the criminal world. It is clear that this should be examined in depth in a separate study.

CONCLUSIONS

The meaning of life expresses an individual situation and therefore lacks a single definition. Frankl explains this as follows: "The meaning of life is different for each individual, each day, each hour. That is why the essence is not in the meaning of life in general, but in the particular meaning of life at a given moment." (1970, p. 132). The score that shows the meaning of life of the individual expresses the subjective perception of the examinee. It is reasonable to assume (pers. commun.,

Yona Cohn) that the subject must be capable of introspection in order to complete the questionnaire, and no-one can guarantee that all the subjects have this or a similar capacity. Generally the capacity for introspection is influenced by factors such as sex or age, but in a closer examination we did not observe any such influence on the correlation between PIL and neuroticism. Neither was any relation found between the age or sex of the subject and the PIL score. Similarly, it might be assumed that social rank would be correlated to some extent with regard to whether the future as compared to the present would be referred to as a significant time measure.

There are situations where it would be reasonable to assume that an individual's orientation towards the future would be affected. For the prisoner, for example, the future is often focused entirely on his release from prison, since this event is so meaningful as to control his entire concept of the future. We did not, however, find evidence of this assumption in the present study.

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