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NOTES AND SHORTER COMMUNICATIONS

The assignment of subjects to disease prone personality types: a comment on Schmitz (1992)

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Summary—In this paper the assignment procedure is discussed which has been used in the study of Schmitz (1992; *Personality and Individual Differences, 13,* 683–691) investigating the relation between the personality types of Grossarth-Maticek and Eysenck and various physical complaints. One of the fundamental principles of any typology is the derivation of a clear set of assignment rules. It is argued that in the study of Schmitz such a set of rules is not specified, and that the information provided on the classification of subjects is too confined, which complicates the interpretation of the reported results.

INTRODUCTION

Grossarth-Maticek and Eysenck (Eysenck, 1991; Grossarth-Maticek & Eysenck, 1990; Grossarth-Maticek, Eysenck, Vetter & Schmidt, 1988) have reported findings from the Yugoslavia and Heidelberg studies which strongly support the role of personality as an important factor in the onset of chronic diseases. They have proposed a personality typology in which six disease specific personality types are distinguished (Grossarth-Maticek, 1989; Grossarth-Maticek & Eysenck, 1990), which are for example, related to the onset of cancer or coronary heart disease.

A serious criticism of these studies concerned the classification of the *S*s in the respective types. As Derogatis (1991, p. 241) states it, "one of the most demanding exercises in the development of any typology is the derivation of an algorithm for assignment to type membership". In the personality typology of Grossarth-Maticek and Eysenck, clear, uniform rules are lacking for assigning *S*s to a certain type. Instead, several assignment rules were used that are more or less restrictive. Using the German version of the short form of the Personality Stress Inventory (PSI), the Short Interpersonal Reactions Inventory (SIRI), Grossarth-Maticek (1989) classified *S*s according to their highest score. In this way, the maximum number of persons can be classified, but it is reasonable to expect that these groups are fairly heterogeneous, for persons with quite different profiles on the six scales can belong to the same type. Another way of classifying *S*s was reported in Grossarth-Maticek and Eysenck's (1990) paper, according to which *S*s were assigned to a certain type if they had a score of 10 on one of the types along with scores lower than 2 on the other types. This assignment rule results in homogeneous groups, the so-called 'pure types'. The disadvantage of this method is that only a very small proportion of the sample can be classified. The lack of a set of clear, uniform rules complicates the interpretations of the findings linking personality types to disease.

Recently, Schmitz (1992) has reported findings from a cross-sectional study which support the results of Grossarth-Maticek and Eysenck. In this study, the long version of the PSI was used to assess the six personality types. Schmitz applied a rather different rule compared to the two mentioned above, i.e. assigning persons to a type if their score fell in the highest quartile of a particular scale. This alternative rule seems to have several advantages over the two rules described above. The strict rules to derive pure types are liberated, which increases the proportion of *S*s classified, whereas the thus derived groups are, to a certain degree, homogeneous.

However, in this study the classification problem is also ignored. Although Schmitz did mention that some *S*s of the sample could not be classified because they had scores which did not fall into the highest quartile of any of the six types, he did not comment on *S*s who had scores in the highest quartile of more than one scale. Furthermore, neither the exact number of *S*s classified was specified nor the number of persons per type. Based on our own data we will illustrate the importance of providing full insight in the results of the classification procedure.

METHOD

Subjects

Data were collected in a random sample of 2663 men from the northern part of The Netherlands, by means of a mailed questionnaire. Age ranged from 30 to 70 years with a mean of 47.1 and a standard deviation of 11.6. The same questionnaire was also administered to 148 male patients in the same age group with the diagnosis myocardial infarction (MI patients).

Material

The Dutch version of the SIRI was used to assess the six personality types (Grossarth-Maticek, 1989; Grossarth-Maticek & Eysenck, 1990). This questionnaire contained 70 items, 10 for every personality type, with the exception of Type4. This

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Table 1. Number of *S*s with scores in the highest quartile of N scales

	Number of *S*s	
Number of scales	Sample	Patients
0	937 (39.1%)	41 (30.4%)
1	720 (30%)	47 (34.8%)
2	387 (16.1%)	20 (14.8%)
3	213 (8.9%)	18 (13.3%)
4	102 (4.3%)	9 (6.7%)
5	34 (1.4%)	
6	5 (0.2%)	
	2398 (100%)	135 (100%)

Missing cases were excluded.

personality type was represented by 20 items, which were either formulated positively (Type4a) or negatively (Type4b). In the present analyses, the negatively formulated items of Type4 were left out because of the weak psychometric quality of this scale (Sanderman, Ranchor & Bouma, submitted).

RESULTS AND DISCUSSION

The same assignment rule was applied as in the study of Schmitz (1992), that is, *S*s were assigned to a certain scale if their scores fell into the highest quartile of that particular scale. To be sure that types were more or less homogeneous, the number of times the *S*s had scores in the highest quartile of more than one scale was examined. Since an increased homogeneity can be expected in a group of patients, the classification of MI patients was also considered. The results are depicted in Table 1.

With respect to the random sample, it appears that less than one third of the *S*s (30%) fell into the highest quartile of *only one of the six types* (disease specific *S*s). Furthermore, a rather large proportion of *S*s (39.1%) had scores below the highest quartile of any of the six types. Finally, about 30% had scores in the highest quartile of more than one scale (multiple high scoring). The table also shows that the proportions for the three categories of scoring are roughly the same for the group of MI patients. Thus, even in a group which is expected to be homogeneous with respect to an outcome variable, a considerable part of the *S*s scored high on more than one type, which seems to be inconsistent with the assumptions on disease specificity of the personality typology of Grossarth–Maticek and Eysenck.

If the problem of multiple high scoring is not recognized, *S*s are artificially assigned to the types, which will eventually result in misty findings. Since this problem has been neglected in the paper of Schmitz, it is unclear how the findings linking personality types to physical complaints should be interpreted. Unless the assignment rules are clearly specified, and unless insight in the results of the typology assessment is provided, the scientific value of that paper cannot be evaluated.

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