

THE RESULTS OF A QUESTIONNAIRE OF EVALUATION OF THE PSYCHO-BEHAVIOURAL MODIFICATIONS – PERSONALITY QUESTIONNAIRE ZUCKERMAN-KULMANN (ZKPQ) AT TWO LOTES OF WORKERS EXPOSED TO ORGANIC SOLVENTS

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Abstract: The professional exposure at industrial toxics, with aromatic smell (organic solvents type), may determine the apparition of the wish and/or a pleasure of inhalation of those substances, in some persons, with various personality traits and a certain psychological profile.

Cuvinte cheie: inhalare, personalitate, ZKPQ, predispoziție

Rezumat: Expunerea profesională la toxice industriale, cu miros aromatic (de tipul solvenților organici), poate determina apariția dorinței și/sau a plăcerii de a inhala acești compuși, la unele persoane, cu anumite trăsături de personalitate și un anumit profil psihologic.

INTRODUCTION

The aromatic industrial substances, the kind of organic solvents, have special sensorial qualities (pleasant smell) and, from this reason they may have pleasant effects on the psychic (at least in the initial stadium) and/or removal of states: pain, insomnia, fear, fatigue, etc.

THE AIM OF THE STUDY

Objective of the study was the analyze of the personality of a group of workers professionally exposed at organic solvents, from the hypothesis that some of the personality traits may influence their behaviour, regarding the voluntary consume of inhalers and/or other toxic psychotrope substances.

MATERIAL AND METHOD

We have used the personality questionnaire Zuckerman – Kulman (ZKPQ), that is based on Zuckerman's theory regarding the fundamental trait: „searching the sensation". The trait is described as being the tendency of searching sensations and new, varied, and *complex and intense*, such as *the will of assuming risks for the sake of this kind of living*[227].

The questionnaire has 89 items of content, grouped in 5 scales, such as: CIS-Impulsively searching of sensations; NA-Neuroticism-Anxiety; AO- Agresivity-hostility; ACT- Activity; SOC- Sociability, to those were added 10 more items, for a so-called *scale of "rarity"*(INF-Infrequency), designed to evidenciate the tendency of disimulating or of answering in a neglectfull and insincere. The questionnaire is standardised on the Romanian population, and its processing was done according to the accredited and accepted methods, regarding the scoring, validity and fidelity of the test.

We have administrated the questionnaire to a lote of subjects occupationally exposed to organic solvents (formed from two sublots, C and H, coming from two industrial units) and of a witness lote homogenous, without exposure to solvents or other toxic substances at the workplace.

The first lote (test) includes 72 persons professionally

exposed to varied solvents mixture (48.61% women, 51.39% men), with the age medium 38.65 years (limits between 22 and 58 years), with a duration of the exposure between 1 and 42 years (media : 20.74 years). The witness lote includes 72 subjects (35.12% women, 64.88% men) and an average of age of 38.83 years (with extreme values 18 and 60 years).

The questionnaire was autoadministrated; the average time for its completion was of 20 minutes. The processing of the data was preceded by the analyses of the answers received on the scale of Infrequency (INF) or "rarity", used to eliminate the subjects that answered with no care for the truth, inattentive or insincere. According to the applying protocole, there were taken into consideration only the scores 0, 1 și 2. The subjects with a higher score bigger or equal with 3 were eliminated. So, at the end there were left in the research 58 subjects (33 from the test lote and 25 from the witness lote).

RESULTS AND DISCUSSIONS

At the CIS scale (impulsive searching of sensations) the results indicated a number almost equal of subjects found at higher cotes, in the two lotes, 47.8% in the T lote and 52.2% in the M lote, so as the difference isn't significant between the two lotes ($p > 0.05$).

The NA scale (neuroticism-anxiety) brings considerable differences between the test lote and M lote, in what regards the values over the media (the higher level), at the test lote, the number of the subjects being double (22 subjects, representing 66.7%), in comparison with the witness lote (11 subjects, 44.0%), and the difference between the scores is statistically significant: $p < 0.05$ (table and fig. 1).

The obtained values by the processing of the answers at the scale AO (agresivity-hostility) indicates similar results between the two lotes, even with equality at the "a reduced level", where we have 14 subjects for each lote. Although, the ones in the test lote present a bigger number of subjects at the "higher" level in what regards the degree of agresivity-hostility.

The ACT scale (activity) is the scale that has the scores more closed between lotes, even if, at the test lote is observed a bigger number of subjects, at a "reduced" level, and

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at an “elevated” level, compared to the witness lote.

In exchange, the SOC scale (sociability) is the scale that has the most evident difference between the two lotes, with “p” being equal with 0.05, statistically significant. It is observed the bigger number of subjects, found in a reduced degree of sociability, from the test lote, reported to the witness lote (72.7% at the test lote and 48.0% at the witness lote) (fig.2).

Table no. 1. Table of association for the NA scale, in the two lotes

			lot		Total
			test	martor	
N-A	nivel mai redus	Count	11	14	25
		% within N-A	44.0%	56.0%	100.0%
		% within lot	33.3%	56.0%	43.1%
		% of Total	19.0%	24.1%	43.1%
	nivel mai crescut	Count	22	11	33
		% within N-A	66.7%	33.3%	100.0%
		% within lot	66.7%	44.0%	56.9%
		% of Total	37.9%	19.0%	56.9%
Total		Count	33	25	58
		% within N-A	56.9%	43.1%	100.0%
		% within lot	100.0%	100.0%	100.0%
		% of Total	56.9%	43.1%	100.0%

Figure no. 1. The distribution of the subjects for the NA scale, in the two lotes

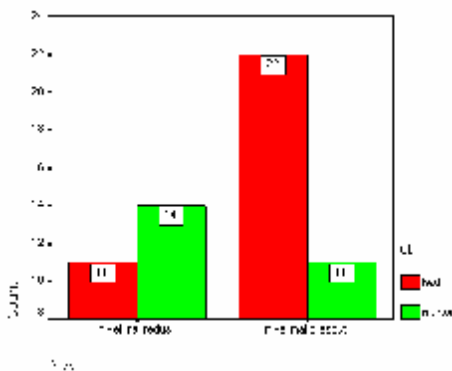
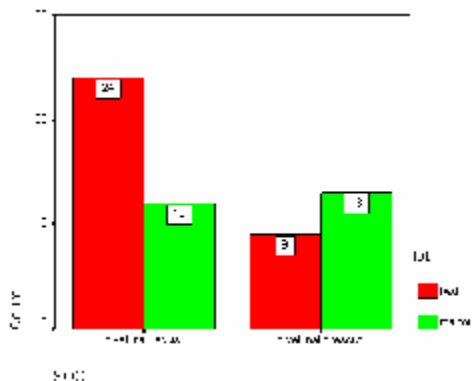


Figure no. 2. The distribution of the subjects for the SOC scale (sociability), at the two lotes



The analysis of the results in each, separate lote, shows that in the witness lote, the results are almost the same, with small differences nesemnificative between the questioned subjects.

The correlation of the scales CIS and SOC with the age proved to have statistical significance, as it comes out from the table's no. 91 and 92

CONCLUSIONS

1. At a scale of impulsive searching of sensations (CIS) it is remarked a higher number of subjects with “a reduced level” in the test lote, this fact indicating a higher degree of psychorigidity, a capacity of adaptation more difficult at the new situations, at changing.
2. The “higher” scores obtained at the scale of agresivity-hostility indicates a smaller tolerance at frustration, with various inbalances, that might associate a higher consume of toxic substances.
3. At the test lote, there are some significant differences between the subjects, at least at 3 scales: CIS (impulsive searching of sensations), N-A (nevroticism-anxiety) and SOC (sociability), those being the differences with the witness lote.
4. The correlation of the scales CIS and SOC with the age indicates the fact that the lote with the average higher age (test lote) has the most subjects scored „at a reduced level” (so less predisposed for changing and information, as for socialization).
5. The test lote subjects were in a greater number with “reduced” results at the item CIS (impulsive searching of sensations – imprevisibile situations, experiences and new, novelty sensations), but in exchange, they had higher cotes at the N-A and even A-O (agresivity-hostility) and low cotes at SOC (sociability).

All those aspects, from a psychological point of view, characterizes the inadaptated persons or with difficulties of adaptation, that have a higher index of general anxiety, that are more lonely from the social point of view, have unsolves affective issues and a tendency to emotional problems. All those characteristics may be correlated with an increased predisposition or higher rapped to the medium, for the consume of toxic substances, psychotrope, in the absence, although, of the possibility of shaping a well defined psychological profile.

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