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Nervous System

8.6 Problem Solving Strategies and Abilities in Normotensive Subjects

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Introduction: It is well known that the perceived stress is associated with both hypertension and Social Problem Solving (PS) (ability to resolve problematical situations in daily living); on the other hand, it is also emphasised that a problem solving training is able to lower blood pressure (BP) levels. However, to our knowledge, no previous study evaluated whether PS ability and strategies are related to BP levels. This study has been carried out within the National Institute of Social Previdence (INPS) at Rome, on 103 normotensive subjects (M/F=51/52; mean age = 47,7±8,8).

Methods: BP, PS abilities (2 logical reasoning tests, 2 visual perception tests and 2 visual space tests), PS style (Problem Solving Inventory – PSI, and Problem Solving Style Questionnaire - PSSQ); general mental ability (Raven's Progressive Matrices, RPM) and open-mindedness (Big Five Questionnaire, BFQ) were evaluated.

Multiple regression analyses (stepwise mode) considered the following independent variables: accuracy and speedy in performing the PS tasks and the MPR, further AM and PS scores, Body mass index (BMI), and age was included; BP (systolic and diastolic) and heart rate was selected as criteria.

Results: Results have shown a positive relationship of BP with the age (p reasoning test; finally FC ($p<0,05$).

Conclusions: In conclusion, results seem to indicate that problem solving abilities are able to predict the BP levels, even if in a few cases (logical reasoning tests) the cognitive load required to resolve the task involve an increase of physiological activation (i.e. PA), according to the Yerkes-Dodson law. On the contrary, the self-perception of PS style does not seem to represent a real PS ability indicator. It will be necessary to evaluate if the relationships found in normotensive are present in hypertensive too.