PILOT STUDY ON THE ROLE OF PSYCHOSOCIAL AGGRESSION IN A SAMPLE OF COPS AND ROBBERS

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Introduction

The humans begin to learn about the social world through the “game” and “competition”.

Children playing take on different roles. During the game of “cops and robbers”, for example, each of them interprets the role of policeman first and then the role of a thief, or vice versa, so learning the social significance of each of these roles.

The purpose of this pilot study is to examine these two categories of individuals, cops and robbers, two different choices, two alternative ways of understanding their own lives with the aim to verify whether and in which of these two categories there is a higher level of aggression.

For this purpose we measured the ratio of 2nd to 4th digit length of the right hand (2D:4D ratio) that reflects the level of androgens during the prenatal life(1,2).

Recent studies support that prenatal androgens may influence the development of the brain, increasing its sensitivity as a result of the effects of circulating testosterone(3,4).

These effects may include an increase confidence in themselves(5-7), search persistence(8,9) and the risk of preference(10,11), as well as the supervisory intensified and reaction times, this would lead to a different response also approaches emotional-behavior of the various brain structures involved.

Moreover, in order to assess the impact that aggression could have in two different categories, cops and robbers, we investigated the levels of stress as well as the levels of mood.

Materials and methods

Thirty adult male subjects, aged between 29 and 59 years, of which 15 subjects belonged to the police and 15 were thieves serving a sentence of imprisonment, agreed to participate the study.

ABSTRACT

Stress-related diseases are a feature of contemporary society, capable to exert a significant influence on the quality of life and job performance. In this society, so rich in stressful conditions, increased aggression is a characteristic of the individual that can be expressed in different levels.

The aim of this study was to evaluate, the levels of stress and aggression in two very different categories of individuals, cops and robbers, in order to emphasize probable differences possible.

Key words: Cops, robbers, stress, digit ratio.
These individuals were chosen through a random selection process carried out within the territory of the province of Catania.

The instruments used to evaluate the mood’s levels was the Profile Of Mood States (POMS) and the Stress Measurements du Psychologique (MSP) and Digit ratio.

The POMS was designed in 1939 by Douglas M. McNair, of Boston University School of Medicine, in collaboration with Maurice Lorr and Leo F. Droppleman.

The version we used is based on the results of a study for the Italian adaptation of the tests performed by Farnè et al. in 1989. POMS measures six factors and six mood states: Tension Anxiety (T), Depression-Depression (D), Anger-Hostility(A), Vigor-Activity (V), Fatigue-Inertia (S), Confusion-Bewilderment (C).

The Total Mood Disturbance (TMD) score was calculated by subtracting the V score from the sum of scores for the other dimensions.

The six factors or items are especially useful to evaluate patients with psychological disorders or stress, for possible various therapeutic approaches; the test used in normal individuals is a sensitive measure of the effects of various experimental conditions. The questionnaire consists of 58 adjectives and attributive phrases which must be assigned a score ranging from 0 to 4 to which the subject had to attribute a score based on the intensity perceived by him for that particular variable state of mind in the last week.

The level of stress in participants was measured by using the Stress Measurements du Psychologique (MSP). This is an instrument made by Lemyre, Tessier and Fillon (22) that allows to provide a description of the level of psychological distress momentary individual. The test, simple and economic, consists of 49 items that refer mainly to the plans Cognitive-Affective and Behavioral Physiology. The subject must respond to each of the items present in the test, by using a 4-point Likert scale and by referring to the last 4/5 days. The indices of stress, present inside the instrument, are the result of analyses carried out on a population of healthy subjects.

The 2D:4D ratio was used in order to detect prenatal androgen, i.e. the amount of androgens to which the subject has been exposed in utero. For this purpose, the right hand of participants were photocopied and the distance between the metacarpophalangeal joint and tip of second and fourth finger was measured. It has been described that the length of fourth finger is directly related to the exposure of the fetus to testosterone: a greater length of the ring finger compared to the index finger (i.e. a low 2D:4D ratio) indicates a high amount of testosterone to which the child has been exposed during pregnancy. Peter Hurd and Allison Bailey observed that the men with the ring finger longer than the index are more aggressive and impulsive. Other studies have shown that a low 2D:4D ratio predicts success in highly competitive sports such as football, rugby, basketball and skiing.

Results

In Figure 1 it is possible to observe that the mean value of 2D: 4D ratio of cops (0.96, ± 0.02 S.D.) and robbers (0.95 ± 0.03 S.D.) doesn’t show significant differences.

![Fig. 1: Digit ratio of robbers and cops.](image)

![Fig. 2: Profile of Mood State of robbers and cops.](image)
Figure 2 shows in A the scores of the six dimensions of Profile Mood States (POMS): tension-anxiety (TA), Depression Reduction (D), anger-hostility (AH), Vigor (V), fatigue (F), and Confusion (C); no significant difference was observed between the two examined samples.

Figure 3 shows the scores obtained in the MSP test show no significant difference between robbers and cops. Further analysis shows, however, in both samples as medium level stress.

![MSP](image)

Fig. 3: Stress Measurements du Psychologique (MSP) of cops and robbers.

Discussion

The results obtained do not show any significant difference of the variables considered, aggression, stress and mood, between the two groups. In fact, the obtained data show similar values.

The lack of significant differences between the groups leads to some reflections about the relationship between social role that each of us plays and profile of his personality.

From the present results, it seems possible to conclude that to be from one or the other side of the barrier that divides those who defend the law and those who violate the law seems to depend more on environmental factors that subjects live/suffer, rather than from real differences in personality.

The results obtained from the present study must be considered as a preliminary assessment for a study of broader intervention.

It is possible to suggest of using these tests at the time of entry to periods of imprisonment (in the case of offenders), and service (in the case of policemen) and to repeat them periodically.

Finally, as a preventive measure recommend an anti-stress therapy which may be a correct and continuous practice of physical activity in order to alleviate amount of stress and to be more efficient at cognitive level.

References


