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PSYCHOLOGICAL STRESS AND ITS IMPLICATIONS IN HUMAN ACTIVITY

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ABSTRACT:

IF, ON A RATIONAL, LOGICAL-COGNITIVE LEVEL, THE VAST MAJORITY OF PEOPLE WHO COMMIT ANTISOCIAL ACTS CAN ADOPT A FULL MANIFESTATION OF WILL, IN DEFENSE AGAINST THE ACCUSATIONS BROUGHT, ON THE LEVEL OF EMOTIONAL EXPERIENCES AND PSYCHOPHYSIOLOGICAL REACTIONS, VOLUNTARY SELF-CONTROL REMAINS INEFFECTIVE FOR MOST PEOPLE.

THE PSYCHOLOGICAL STRESS TO WHICH A PERSON IS SUBJECTED WHEN ASKED QUESTIONS ABOUT THE ANTISOCIAL ACT COMMITTED CAUSES THE BODY TO RELEASE HORMONES, AS WELL AS A CHAIN OF CHEMICAL REACTIONS, WHICH RESULT IN PHYSIOLOGICAL CHANGES OBSERVED IN RESPIRATORY RATE, BLOOD PRESSURE, PULSE AND RED, CONCOMITANT WITH EMOTIONAL STATES CORRELATED WITH THE DENIAL OF THE TRUTH AND THE STATE OF FEAR FELT BY THE OFFENDER TOWARDS THE POSSIBILITY OF FINDING OUT THE TRUTH.

JUDICIAL METHODS AND TECHNIQUES, BOTH NEW AND OLD, EXPLOIT PRECISELY THIS SCIENTIFICALLY SUBSTANTIATED POSSIBILITY OF RECORDING CHANGES IN THE BODY OF THE SUBJECT BEING TESTED, IN RESPONSE TO A CERTAIN STIMULUS, WITH A CERTAIN INTENSITY.

KEY WORDS: PSYCHOLOGICAL STRESS, EMOTIONS, MANIFESTATIONS, POLYGRAPH, SIMULATED BEHAVIOR

INTRODUCTION

The foundations of psychological stress are complex and can be approached from several perspectives. Thus, psychological stress represents a state of tension, strain and discomfort, determined by affective agents, with negative significance, by the depression of motivational states (needs, desires, aspirations) or by frustration, by the difficulty or impossibility of solving problems.

In this context, we can conclude that psychological stress is a complex psychosocial phenomenon that arises from the person's confrontation with different items, situations, tasks that are perceived as difficult, painful or of great importance for the person in question.

The triggers of psychological stress, both denigrated and stressed, can be divided into different categories as follows:

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- Social stressors – this category of factors includes external factors resulting from the impact of the individual on social structures and processes (role conflicts, globalization, urbanization, etc.)
- Life events – this category includes major events in a person's life (death of a loved one, divorce, rape, etc.) or minor events that have a certain intensity that trigger a strong emotion in the person (everyday events/problems).
- Individual factors play an important role in generating and maintaining psychological stress. The way a person perceives and interprets a situation, depending on their personality and coping style, can generate a certain degree of psychological stress.

To any action of external factors that affect the body, the human body responds to stress, so that the body's response to stress involves complex interactions between the nervous system, the endocrine system and the immune system.

Thus, the body releases stress hormones, namely cortisol and adrenaline, to cope with the situation.

All the neurochemical reactions that take place throughout the body show whether it has simulated behavior or not, in relation to certain given circumstances.

PSYCHOPHYSIOLOGICAL INDICATORS FOR DETECTING INSINCERITY

Millenary empirical observation has highlighted the generally known fact that whenever the truth is hidden by telling a lie, this fact is accompanied by a whole procession of inner feelings and the embarrassing feeling of guilt. "In the effort to hide the truth, have we not felt on some occasions a sudden increase in the heartbeat, a rush of blood to the cheek, an uncontrollable impulse to swallow, or other such phenomena resulting from the team on the possibility that the lie will be discovered? and have we not met with many occasions in which we could detect the lies of other people through various manifestations such as blushing, contracting the lips, narrowing the eyes, avoiding looking the questioner "straight in the eye", a special monotony of the voice, a "forced laugh", a counter-question of "who, me, the movement of questions?" showing a state of awkwardness, increased activity of the "Adam's apple" and many other reactions of a similar nature?" [1]

Particularly frequently, such manifestations are encountered in the field of forensic psychology, concretely reflected in the work of criminal prosecution, of listening to the accused and criminals. In the vast majority of cases, they, taking advantage of the lack of decisive evidence and weaving reasoning with aspects of plausibility, thwart the discovery of the truth and the fair resolution of cases.

If on a rational, logical-cognitive level (that of the dialogue between the investigator and the criminal), the latter's manifestation of will to defend himself against the accusations is fully developed, unhindered, sometimes giving him victory, the same thing is not possible in the sphere of emotional experiences and reactions without psychophysiological control [2].

"The person who committed a crime, during interrogation, is in a state of strong emotional excitement, especially when there is a real danger of making known facts that he wants to hide."

A strong emotional reaction causes changes in blood pressure, heart rate and speed, breathing (change in rhythm), and electrodermic reaction. These changes can be recorded on special devices, and the deviations that occur can then be analyzed." [3].

THE PSYCHOPHYSIOLOGICAL MECHANISM OF PRODUCING EMOTIONAL STATES

In committing a criminal act (theft, rape, tax evasion, bodily harm, murder, etc.), the active subject participates with his entire being, mobilizing his entire volitional and cognitive-affective potential for criminal success.

The implementation of the decision to commit the antisocial act is preceded by a series of processes of analysis and synthesis and a struggle between motives, the deliberation and the executive acts deeply involving the entire personality of the individual. This makes the criminal act not remain as a random, peripheral acquisition of the offender's consciousness, but to integrate into it in the form of a stable informational structure with specific affective-emotional content and charge, with a well-differentiated motivational role. The assimilation of the act takes place at the moment of its commission, in the process of perception and direct action with objects and phenomena in the surrounding (criminal) environment and the sedimentation of their meanings in the adaptive experience in relation to the criminal situation.

Psychologically, the objects, beings or phenomena perceived by the offender during the commission of the crime (breaking tools or instruments, weapons, victim, witnesses, the spatio-temporal context of the crime, etc.), depending on their physico-chemical properties (intensity, shape, size, color, spatial disposition, victim's resistance) or their effects (scream of pain, shout, sound of gunshots, etc.) determine positive or negative emotional experiences and reactions of the subject.

Subordinating themselves to the informational characteristics of the act, the components of the corresponding affective experience are associated, integrating as a component of the individual or categorical image about the criminal act, according to the psychological principle according to which the stabilization and organization of the image system also implies the stabilization and organization of their affective substrate.

Polygraph techniques, indirectly approaching the subject's level of consciousness, seek to highlight whether he faithfully and honestly reports "what he knows", that is, the content elements of the "subjective reality" he carries in his level of consciousness (time and place elements related to the act, the mode of operation and the circumstances that triggered the criminal behavior).

Emotional states arise from the moment the suspect is invited to give information related to the crime and, in general, they have the following dynamics in manifestation:

A. The initial state of awareness of the danger (in the case of a culprit) of being identified and unmasked introduces the human body, as a self-regulating system, into a state of heightened vigilance (alarm) [4]. This initial state has a diffuse, general, global character, with involuntary triggering and realization, preparing (through the mechanisms of psychophysiological self-regulation) the organism to counteract the danger. In the case of an innocent person, as a rule, emotional states are poorly highlighted, generally having a sthenic, positive character, motivated by curiosity and interest in the purpose of chemistry in front of the investigator. They are also realized through involuntary, reflex psychophysiological mechanisms and have a general diffuse character, being poorly highlighted.

B. Once the suspect begins questioning, the awareness of the informational message of the questions addressed to him/her results in the cognitive plane of this involuntary re-actualization of the objective-affective informational moments that accompanied the commission of the act, by triggering the functional reaction of the intentional and laissez-faire memory. Due to the surprise factor and the unpredictable element of the questions,

representations about the acts appear suddenly, untimely, surprising the unprepared analysis and decision compartment, in deficit of data and logical subassemblies in the face of the imminent danger of unmasking. At the same time, the affective characteristics, emotional states and experiences that accompanied representations about the act flood the plane of consciousness, dominating it, by virtue of the inefficiency of voluntary control over them. At this level, emotional experience is integrated into the primary structure of instincts (the instinct of preservation), the awareness of the danger of exposure triggering the experience of a state of fear (sometimes sudden blockage of a motor function), with a well-defined and distinct character from a specific danger (resulting from the content of the informational message of the questions) and accompanied by strong neurohormonal discharges triggered by reflex.

C. A powerful source of genesis of emotional states is (along with "fear of detection", especially after the stimulus card test) the conflict that appears on a cognitive level and in the decision-making process, between the domain of knowledge information that substantiates the true situation and the intentional domain that substantiates the lie.

Consciously concealing the truth requires a voluntary effort, which triggers emotional states that are easily detectable in psychophysiological parameters. If denying the truth is possible in the verbal plane of the dialogue (during the investigation, freedom of conscience is not limited in any way), this is not possible in the plane of neurovegetative reactions, where the conflict takes on proportions, cortical instants leading, through subordinate structures, the centers of the vegetative system towards imbalances of the risk of adapting to successive situations and individual reactions. Starting from these fundamental scientific data (in the Romanian specialized literature, Ion Ciofu, within the Institute of Psychology of the Academy, imposed himself through research on simulated behavior), the polygraph technique does nothing more than detect emotion indirectly by detecting general activating reactions, which involve both central and peripheral physiological mechanisms.²

Therefore, there are direct correlations between psychic life and cardiovascular changes. The acceleration of the heart rate during emotion was well known long before the problem was scientifically analyzed (Bykov). Experimentally, tachycardia was ensured during the application of a battery of tests that introduced a state of stress (Thiessen), while waiting for an electric shock (Kransogorski), even if the wait extends for tens of minutes (Lundberg), establishing that the time immediately before, as well as after that action of waiting for a noxious stimulus, anxiety stimulates the noxious. The emotion of fear, of dread is, therefore, linked to cardiac interception, a relationship perfectly expressed by the clinician Brown: fear is an "essential property of the cardiac psyche". Another parameter of the heart's activities during emotion is the vascular changes. Observations, first clinical (Psonic), have established

²“These reactions can be identified because they are transmitted by a special part of the nervous system. We can say that the human nervous system has two components. One somatic, responsible for the transmission of nerve impulses to the somatic muscles and the posture of the skeleton. Another, older and relatively independent of the central nervous system, the autonomic or vegetative, which deals with subconscious vital activity. We breathe, the heart beats, digestion takes place, hormones are eliminated in the bloodstream that passes through the body, the temperature is regulated, the pupil dilates or contracts, without any conscious adaptation... these changes include flushing or pallor of the face, excessive sweating, increased heart rate, dry mouth, many visceral sensations and others” [5, p. 78]

that a dilation of cerebral blood vessels occurs during affective states of any kind (Franck), in pain and shame (Mosso) or in anxiety (Negel) ³.

At the same time, emotion is also accompanied by an increase in blood pressure. Related to the activity of the cardiovascular system, we also mention the glandular effects detectable in emotion. In strong emotion (anger) there is an activation of the sympathetic nervous system, accompanied by an excess of adrenaline. As a result, a whole series of physiological reactions occurs that prepare the body to cope with the situation (Canon, Funkenstein); breathing becomes deeper, the heart rate more frequent, blood pressure increases, blood flow to the heart and muscles occurs, the processes in the alimentary canal decrease, etc.; the liver dilates and secretes sugar supplies into the blood, and the latter coagulates more quickly (Ruch, Bykov). In psychological tension, such as that caused by fear, various hormones are secreted in addition to adrenaline: noradrenaline, serotonin, acetylcholine, which, together, constitute a mechanism of “vegetative agitation” (Kreindler).

Emotions cause electrical changes in the skin, both in electrical resistance and potential, through the autonomic nervous system.⁴ Since the first researches on the application of the galvanic skin technique (Pierron, Campbellman), it has been established that the relationship between emotion-resistance and electric potential depends not only on the novelty of the body's excitation, on the nature of physical or intellectual effort, but also, to a very large extent, on the affective states in which the electrodermal resistance (ED)⁵ is particularly active. Using a polygraphic method, potential changes were obtained in relation to the emotional charge of the stimulus word (Kreindler). Parallel to the electrodermographic reaction, an intensification of the activity of the sweat glands occurs. In emotion, palmar sweating is especially present. This can be effectively detected in emotional stress (Funk Hausser) [7, pp. 38-39; 75].

MODIFICATION OF NORMAL BREATHING CHARACTERISTICS UNDER THE INFLUENCE OF EMOTION.

Choking, swallowing air, panting, and difficulty breathing are among the changes in breathing that can occur with emotion. The sympathetic system's impulses dilate the pulmonary bronchi, increasing the exchange of oxygen and carbon dioxide.⁶

Usually, after a false response by the offender, in the respiratory rhythm trace, either one or two rapid waves with an increased amplitude are highlighted, or the breathing is blocked for a moment or takes on a scalar-like character (what polygraph operators call "stepping").

³“Sympathetic impulses can cause rapid heartbeat. They can cause constriction of blood vessels... and the acceleration of heart rate and constriction of blood vessels can increase blood pressure” [4, pp. 334–336]

⁴“Psychogalvanic responses have been used in all psychological research tests targeting emotional conditions or measuring emotional reactions to stimuli” [4, pp. 334-336]

⁵ “Together with other recordings, RED contributes to a better operational definition of emotion. What can be surprised is the correlation between electrodermal activity and the intensity of the emotion, less its quality. However, some differences appear depending on the quality of the emotion; the shortening of the latency time and the increase of the RED amplitude in “wonder” and “surprise”; the increase of the latency period and the decrease of the amplitude for states of tension. Ax finds higher values of skin conductance in the emotion of anger than in that of “fear”. Chevanes highlights the intervention of unconscious defense mechanisms that subjectively reinforce stimuli with low affectogenic value reflected by RED”. – [6, p. 262].

⁶“CA Ruckmick makes in 1934 a review of studies on breathing, noting the change in various emotional states: the respiratory rate would increase in the case of a pleasant stimulation and would decrease in the case of an unpleasant one. Benussi claims that the inspiration-expiration ratio is significantly increased before the true response compared to the falsified one, during several respiratory cycles. Conversely, after the statement of the truth, the I/E ratio is somewhat lower than after the statement of the lie” [7, pp. 38-39, 69, 72, 75]

During the investigation, the experienced officer can, of course, discover and expose the simulated behavior of the offender, using impeccable logic and cracking his defensive system by highlighting the contradictory and sometimes absurd nature of some statements that belong to him. Also, the range of questions that surprise the offender, subjecting him to unpredictable reasoning and generating a characteristic behavior in mimicry, gestures, intonation, only provides a series of clues that highlight uncertainty and attempts to mislead. Although this investigation sometimes gives good results, the discovery of simulation is uncertain in some individuals, in others it is even impossible, due to an increased self-control in the external manifestations of the simulated behavior, the functioning through some training or through habit in recidivist, hardened offenders. Therefore, the most used and safest way for detection is to probe the simulation through physiological indicators, especially those that highlight non-apparent behavior.

The consciousness of guilt, of fear, mobilizing an emotional state that can be masked with difficulty, determines the individual to react emotionally whenever an object is presented to him or a word is understood in connection with the committed crime. The cardiac indicator and the other vegetative indicators react openly and visibly, even if the offender does not actually lie, but only conceals the truth, trying to elude the efficiency of the test, to defeat it ("to beat the test"). The effort to conceal is, however, useless. As Mandsley well proves, sadness (as one of the manifestations of emotion), if it does not manifest itself in tears, forces the internal organs to "cry" instead.

The lie detector (polygraph) exploits precisely this fundamental scientific possibility of recording the physiological changes detected in respiratory rate, blood pressure, pulse and RED, simultaneously emotional states correlated with the denial of the truth and the state of fear felt by the criminal towards his possible unmasking.

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