

SUBSTANTIATION OF THE OPPORTUNITY AND NEED OF PSYCHOLOGICAL EVALUATION OF THE AIRCREW PERSONNEL

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Abstract: *The psychological evaluation for the aircrew personnel with a high degree of psychic demand should be not just one of the complementary selection instruments, but also a periodically compulsory reevaluation in order to adapt to the complexity of the tasks involved in the work process. The measurement of individual differences or of the demands of various professions with the help of psychological examinations as well as the evaluation represent the scientific basis of the professional selection, the psychic acquirements being diagnosed by specific methods (tests, questionnaires and other methods). The psychological examination may catch by its complexity, significant aspects related to safety during the flight, being possible to early trace aspects which cannot be evaluated by other medical specialties, like the possible latent psychopathologies, which might lead to catastrophic accidents or events.*

Keywords: *psychological exam, psychopathology, selection, aptitude, request*

1. INTRODUCTION

In any human knowledge field, reaching objectives is conditioned by the value of the used methods. The first approach, clinical, orients the psychologist towards marking out the complexity of individual conducts, considering that each and every conduct commits the assembly of the personality factors of the individual, its own method to adapt to various situations, previous experience, systems of values... A great importance is awarded to the intentional nature of conduct, to the significances they have for the individual and for its adaptive character. The role and place of the human factor in the personnel structure in the aircrew field represent an aspect as important as that related to the technical endowment. The improvement of the personnel professionalism, as decisive factor of the work quality, is important as much as the technique and equipments became more and more complex, under the conditions the activities are developed in the more and more diverse theatres of operations. The variety of the activities or missions devolving upon the aviation during peace, in crisis situations, in actions to maintain peace or humanitarian missions, on the domestic territory or abroad, requests actively such professionals.

In many countries, the selection process of the candidates was initially oriented towards evaluating intelligence and aptitudes, considered easier to evaluate and, up to a certain moment, credited with a superior predictive value. However, step by step, the practice of psychological selection determined a contra-balancing of the interest from psycho-aptitude orientation to the evaluation of the personality structure.

In order to support and keep to the maximum the capacities of the aircrew personnel, the psychological adviser needs to know the particularities of the adjustment and self-adjustment of the human conduct, of the performance methods, so that they enter in the evaluation and reevaluation process adjusting actions for reaching high performance. The performance in adjusting an self-adjusting psychic conditions is resumed to: efficient conduct, control and mobilization of the intellectual capacities, maximum volitional employment capacity in the undertaken activities, as high as possible efficiency. Therefore, the efficient conduct is obtained by the control of the emotional sphere and proper motor mobilization, in order to respond as good as possible to the newly appeared situations. The psychological preparation for special activities mainly consists of performing the so-called prestart conditions, forms of adjustment and psycho-behavioral self-adjustment

2. PROFESSIONAL SELECTION

The professional selection continues the action of professional orientation and has the objective, depending on the requirements of the profession, to chose those candidates holding certain psychic attributes – aptitudes, temperamental features, interests – and the most proper preparation to the requirements of the concerned profession. The association of the scientific method to know the psychic attributes with studying the features of the profession is the only way to pursue for performing the selection and professional orientation activity.

Knowing the psychic particularities of the aircrew personnel begins with the psychological selection examination for employment and continues with the psychological examinations held for reevaluation or for other types of activities. The psychological examination is substantiated on standardized methods, which help to catching and discriminating personal aptitudes according to the nature of the demands specific to the investigated category, as well as to the method they react on professional performances. The information obtained are converted into psychological significances, which concur to defining the psychological profile as predictor of the professional success.

The professional selection assumes the inventory of the candidates' features, drafting predictions related to their conduct as members of the organization. In professional selection, they follow the candidates on four dimensions: the first dimension – attitudes to the psychic particularities needed to such trade. This dimension regards the attitude to the psychic attributes (skills, aptitudes, personality features) which the candidate holds and needed for successfully exerting the profession.

The second dimension is the “intrinsic motivation”. We know the special importance of the motivational factor in effectively developing any activity. As related to the work activity, the motivation has a great importance, and the companies are interested in choosing motivated persons from their interior, which is, devoted persons, loving their work, with high aspirations to come to fruition by their work.

The relationship with the work partners is the third dimension. The effectiveness of a company, especially in the aeronautic field, depends on assuring a favorable climate at the place of work, and interpersonal relations hold a key role in this regard. For such purpose, we select individuals able to develop harmonious relationships with their work partners and to avoid such persons which may lead to unwanted tensions in the social climate of the organization. Therefore, we check the rational potential of the candidate both with the colleagues from the work group, and with his or her superiors and subordinates.

The discriminatory attitudes to some candidates represent the last dimension and one of the most important. We signal frequently discriminatory attitudes in the recruitment process, the personnel hiring entities have << favorite >> categories of candidates and rejected categories.

The main psychological selection criteria are: general intellectual potential; the features of the personality structure; the psycho professional performances; personal evolution - caught in the psychological knowledge steps; the special aptitude potential. One may affirm that the psycho-aptitude profile of the aircrew personnel is concretized in the following features:

- flexible thinking, availability to become aware of the risk, under the conditions of precise evaluation of the difficulty degree of the duty, compared to the own possibilities to realize, a good learning capacity, possibilities to understand and correctly execute the indications and duties received;

- dynamic, realistic personality; quick actions and correct decisions, constancy in actions, maturity and self-control, sociability, cooperation, a good adhesion to the social and group norms, a good social understanding, emotional stability, objectivity, high tolerance when frustrated, intrinsic motivation for the profession, empathic capacities for a good interpersonal relation contributing to the group cohesion, optimism, perseverance;

- to hold a good emotional quotient

Emotional quotient is not a new concept per se, but back-grounded that of "rational quotient". The two concepts are not contradictory, but only separate. Emotional quotient is the ability of a person to understand and manage efficiently their emotions, to understand and manage with the emotions of the people around them. Emotional quotient means intelligent use of emotions in the professional and personal life. The intra- and inter-personal abilities held by emotional quotient come to complete those related to rational quotient. Emotional quotient (EQ) adds more qualities which determine us to be real people. While the IQ increases from one generation to another, the EQ has the tendency to decrease, being tightly connected to various social issues, depression, violence, delinquency, attention deficit.

- the education level – studies according to the held position.

3. THE PSYCHOLOGICAL EXAMINATION IN CASE OF HIGH RISK PROFESSIONS

In order for the risk level at the address of own or others health and safety be unacceptably high, the literature says it needs to be labeled as "direct risk". Direct risk needs to concomitantly meet a number of three conditions:

(a) needs to have a certain level of probability and severity. The severity and probability level of a risk is evaluated based on what is called "Risk evaluation matrix". The direct risk, which is unacceptable is which assumes a severity of "significant" level or higher ("critical" or "catastrophic") and, in the same time, a probability of "probable" level appearance or higher.

(b) needs to be supported by scientific evidences. There is a need for the estimated risk to be based on scientific evidence. It regards both the variables evaluated by the psychologist, and the limit level set for a certain variable. For example, the evaluation of the level of neuroticism of a person in order to estimate her or his capacity to practice in the aircraft field can only be made if there are scientific studies showing a direct connection between the work accidents in case of the flight personnel and the level of the neuroticism.

In the same time, the limit level accepted as describing the result of “fit” on a psychological variable connected to a specific incapacity needs to be set based on scientific studies; for example, in order to establish that a result weaker than 10 centime for an attention test shows major risk, there is the need for a study showing a univocal connection between such development level of attention and a certain functional disability.

(c) it needs to be based on individual evaluation. There existed as well trials to calculate the related risk based on statistic reasoning, using equations which balance the involved variable differences, but, they had no practical success.

The psychological examination in case of professions with high risk degree claims the satisfaction of previous conditions: the candidates should be under normal physical, physiological and psychological conditions; to get a good rest during the night before the examination; not to be suffering, with affective disorders etc. There needs to create a usual work atmosphere for the candidates, which means that they need to be explained the examination and the pursued aims.

The psychologist needs to be perceived by the candidates, concomitantly, available which is in permanent listening and observation position but also impartial, which is objective in the appreciations lodged. He needs to strictly meet the instructions for each and every test and to have a concern on noticing the conduct of each and every candidate during the examination, in the moments previous explanations are offered, after the settlement of each and every test, they shall pass to another and so on. Besides applying the battery of tests especially made for the professional selection of the candidates needed for a job, the psychological examination also includes the “discussion or interview for employment” which may occur after a sequence of the action to apply tests or after the end of the entire action. The conversation for employment may be more or less directive, which is, freedom may be awarded to the candidate to speak about what he considers the most important in his life and activity, and the freedom to self-examine and self-appreciate himself from various perspectives.

Some psychologists consider the nondirective dialogue as an important mean to develop the candidate’s trust in his own forces and as well to clarify his attitudes, as the understanding and respect proved by the psychologist during such dialogue create the psychological climate favorable for self-exploration and self-appreciation. It does not mean passivity from the psychologist; he thinks about the accounts of the candidate, is receptive to his statements and encourages him to self-analysis. The nondirective discussion supplies rich information, but not always essential for professional selection and last a lot, sometimes. In the “directive discussion” the candidate only answers the psychologist’s questions, formulated in advance by him and based on the following directions: biography, personality and history of personality. Plus questions related to the way their spare time is organized and their extra-professional activities, future projects etc. Practically, the two discussion features may be combined in order to adapt to each and every particular and individual case. The standardization of the discussion is not possible as the relationship set between the psychologist and the candidate under such circumstances are not predictable.

The psychological conversation or discussion allows the remedy of deficiencies of the tests, richer data being obtained related to the candidate and therefore, his objective appreciation.

There may appear, in case of professional selection, some appreciation errors, some due to the candidate: the adaptation difficulties to the conditions of the interview, the impossibility to supply useful information due to expression difficulties; others which can be due to the rigidity of the procedure adopted for the development of the conversation and finally, some appreciation errors are due to that guiding the discussion; not focused on what is significant in the candidate's conduct; not creating the favorable climate in order for the interviewed individual to react with maximum easiness and honesty; tendencies to generalize the assembly impression made at the beginning of the discussion on the candidate, on all its features.

M. Mandel summarized the qualities a good interviewer needs to benefit from: good knowledge of the job such selection is made for; to prove amiability and cordiality, but in the same time, objectivity as well; to dispose of the aptitude to know how to listen etc. It is recommended to systemically initiate the personnel which needs to appreciate the candidates by the psychological discussion held on the occasion of employment, assisting to the interviews guided by experienced persons, prevention of the "halo phenomenon", establishing the appreciation criteria etc.

Generally, the psychological selection or reevaluation tests are classified as follows: efficiency tests and personality tests. The efficiency or performance tests are subdivided into knowledge tests and aptitude tests. The latter regard the general aptitudes (IQ tests) or special aptitudes (artistic, plastic, technical etc.). The personality tests are divided in: special questionnaires related to the essential particularities of the person; conduct tests, exploration tests of attitudes and interests; projective tests.

Personality is a bio-psycho-social concept, and represents the way of being of someone, a model he related to, a behavioral style, an "objective image" we make on a subject. The psychopathological manifestations (features) have a debut manifested from teenage, sometimes even earlier, persisting to the adult period, highlighted while getting older. The personality features are constituted in the personality disorders from the moment they become rigid, unadapted, liable for the subjective alteration of the individual in social, family, professional relations, showing a net psychic suffering

The psychopathic structures of personality are represented by the psychic imbalance, characterized by the following aspects: a specific style of existence (impulsivity, instability, inadaptability, lability, mendacity, dissimulation), psycho-biographic evolution reflected by: frustrations, traumatism, deviance, disordered childhood: apathy, mania, hyper activism, running, indiscipline, accentuation of disorders during teenage by: conflicts with the teachers, authorities, parents, school failures, attending marginal groups, the first delicts, suicide, ethylic, prostitution, drug addiction, the adult's personality being marked by: persistence of instability, difficulty of professional integration, delicts, crimes, egocentrism, affective lability, not assuming liability. Delinquency is a dominant feature of the psychic imbalance which is to be concretized by committing crimes, abuse of trust, theft, vagabonding, drug consumption and traffic, usurpation of titles and positions. According to the statements of Univ. Prof. Mihai Golu, "personality is a complex and heterogenic reality", and the process of integration on the three coordinates leads to the elaboration of three interdependent functional sub-systems: temperament, character and aptitudes, adding creativity, motivation and attitudes:

- Temperament – dynamic-energetic side of personality, with physiological basis. Hippocrates defined the 4 types of temperament: sanguine, choleric, phlegmatic, melancholic.

- Character – reunites the particularities or attributes related to the relational aspect of the person with the environment, values – principles of life, related to reality.

- Aptitudes – physical / psychic attributes with a certain degree of development based on hereditary predispositions, but forming during the development of an activity leading to efficiency and performance. They can be classified in: general aptitudes (memory, attention, intelligence) and special aptitudes (music, technique, management).

- Attitudes – are the states of mental and moral preparation eased by experience, which influence dynamically the human conduct directing it in certain situations, being an adjustment mechanism both cognitive and affective.

- Creativity – reflects the upper level of thinking, and motivation is a factor of professional success, of a person's desire for existential utility.

The essential element of the personality disorder is set by the durable pattern of internal experience and conduct which deviates considerably from the expectations of the individual's culture and which, according to DSM IV:

- Is manifested in at least two of the following fields: knowledge, affectivity, interpersonal functioning, impulse control.

- this durable Pattern is inflexible and extended in most of the social and personal situations of the individual.

- it leads to significant deterioration in the social, professional field or in other important operating fields.

- the pattern is stable and long term, and its debut may be found as well in childhood or at the beginning of adulthood.

- the pattern cannot be better explained as manifestation or consequence of another mental disorder.

- the pattern is not due to direct physical consequences of a substance or of a general medical condition. The pathological accentuation of personality features (accentuated personalities: demonstrative character, hyperthymic, hyper exact, dyshtymia, cyclothymiacs, anxious...) leading to the aforementioned personality disorders.

The deviant behavior – deviance refers to the infringement of social norms; it is not limited to the legal norms, embedding all the possible deviations. This phenomenon can only be understood in a social background. Besides the negative aspect, it can be sometimes an adjusting phenomenon of social life. Deviance consolidates conformation and certifies normality, lack of adhesion to the normative and axiological model of the group, manifested by the infringement of the norms and institutional requirements. It is not a universal and homogenous behavior, varying from one group to another and from one society to another, assuming non-conformism to the social norms and compliance with a group's own norms, subculture, with a spatial and temporal evolution and a relative and cultural character. The deviant behavior can be expressed as well by suicidal behavior and addiction.

It is well known that the personality features influence the organizational behavior and, due to such reason, psychological knowledge does not find its meaning unless this is its main purpose. The personality inventory NEO PI R was built by Costa and McCrae by factorial analysis, it has 240 items, divided in 48 for each of the 5 super factors and 8 for each of the 30 facets. There are separate norms for the two genders.

The five superfactors and the 30 facets are bipolar constructs, the scores of the two heads of polarities having different and opposite significances. The factors they refer to are: neuroticism, extraversion, opening, agreeability and scrupulousness. Analyzing the relation between efficiency (training motivation, training attitude, performance and motivation during the transfer of acquisitions) and the five bipolar factors, Sharon S. Naquin and Elwood F. Holton reached the conclusion that extraversion and opening influence directly and positively efficiency and that scrupulousness and agreeability, by the agency of the variable "involvement in work", influence as well the construct.

Neuroticism indicates the general tendency towards emotional instability and living the negative effects (high scores) versus emotional stability, calm, relaxation (low scores). The facets of neuroticism are anxiety, hostility, depression, self awareness, impulsivity and vulnerability. Extraversion indicates the mainly extravert orientation (high scores) versus introvert orientation (understood as lack of extraversion). It has the following facets: warmth/enthusiasm, gregarious spirit, affirmation, activism, looking for excitement, positive quality of emotions.

Opening defines aspects as active imagination, curiosity, esthetic sensitivity, attention to experiences versus conservatory behavior, with preference towards the family. The facets of opening are: opening towards fantasy, esthetic opening, opening towards own ways of feeling, opening in the plan of actions, opening in an ideal plan, opening in the plan of values. Agreeability indicates aspects like altruism, interpersonal cooperation versus dominant, egocentric, skeptical, competitive behavior. The facets of agreeability are trust, honesty, altruism, amiability, modesty and kindness. Conscientiousness relates to self-control in the aspect of self-organizing capacity, fulfillment of duties, planning versus an easier method to fulfill duties or purposes and a lower exactness in applying moral principles. The facets of conscientiousness are: competence, order, sense of duty, desire of fulfillment, self-discipline and deliberation.

As consequence of the researches in the field, it was found that there were significant negative correlations between: anxiety and affirmation, anxiety and self-discipline; depression and affirmation, depression and self-discipline, depression and conscientiousness; hostility and amicability; vulnerability and self-discipline, vulnerability and extraversion, vulnerability and search for excitement, vulnerability and affirmation, vulnerability and gregarious spirit, vulnerability and competence, vulnerability and order, vulnerability and sense of duty, vulnerability and deliberation, vulnerability and conscientiousness; impulsivity and conscientiousness, impulsivity and self-discipline. As well, between neuroticism and self-discipline, neuroticism and deliberation, neuroticism and conscientiousness, neuroticism and affirmation.

The significant positive correlations are between trust and enthusiasm, trust and gregarious spirit, altruism and enthusiasm, altruism and gregarious spirit, enthusiasm and self-discipline, activism and gregarious spirit, enthusiasm and activism, enthusiasm and looking for excitement, enthusiasm and positive quality of emotional states, enthusiasm and esthetic opening, honesty and gregarious spirit, enthusiasm and opening, enthusiasm and agreeability, enthusiasm and conscientiousness; competence and affirmation, affirmation and sense of duty, affirmation and self-discipline, activism and self-discipline, extraversion and competence, agreeability and gentleness etc. These results give us conclusive information related to the adaptive potential of the evaluated subjects, their feedback mode in various situations, as well as information related to their personality. Hence, the need and importance of the psychological knowledge process of the employed staff.

4. FINAL APPROVAL IN PROFESSIONAL SELECTION

In order to capitalize the information obtained within the selection examination (the candidate's results at psychological tests and the information supplied by him during the interview), some psychologists foresee a global appreciation on the candidate, his "portretization", while others affirm that such features of the candidate, requested for the position he candidates for, need to be appreciated separately. An analytical profile of the candidate is built, and studying it, the psychologist may draw the conclusion if he holds the needed qualities or not, for the concerned job.

The psychologist has the right to ask from other professionals in the field of health, especially mental health, specialty consultation before the award of the qualifier for an evaluated person. In other words, under the conditions the psychologist notices or suspects the existence of affections he has no professional competence or legal permission to diagnose, he is entitled to ask for additional specialty consultation. This measure has not a punitive role, but rather supports the safety at the place of work, not only for the employee, but also for the organization.

In case of psychopathological affection identified or suspected by the psychologist, he is not entitled professionally and legally to issue diagnoses, but can only request from the occupational medicine physician a psychiatric consultation, for clarifying by medical diagnosis a founded suspicion, as well as in order to establish a specialty treatment. The psychologist is liable for the approval or opinion on the candidate, the rejected candidates do not have the moral right to ask to be clarified regarding their examination and appreciations.

CONCLUSIONS

Occupational health and security is a priority axis for the development of organizational performance. This axis is important not only as consequence of the compulsoriness to implement European law, but also as a consequence of the employers' assuming of a healthy working environment. More and more often, the health and occupational security strategies of the companies reflect ideas saying that all the accidents may and need to be avoided and that health and security represent the strategic factor for integration, professionalism and efficiency of the organization.

Work accidents, becoming subsequent deaths, are annually accounted for, at the place of work (sometimes, even at the level of the top management) and other events of such type which put health and security at the place of work on the first place. As long as such events continue to show up, the employers will and ask more and more from the specialists activating in the field of occupational health. The risk related to an activity is evaluated depending on the possible repercussions failure may have. There are positions where such repercussions are void. For example, if a secretary does not fulfill his obligations, it has no immediate negative and major results on her own, her mates' or third parties' health and security. There are, however, positions where the consequences for not fulfilling the work duties are major. For example, if a plane pilot is disabled and cannot fulfill his duties, it has a serious impact on himself, on the remaining crew, on the passengers, property and reputation of the company.

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