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**PSYCHOPHYSIOLOGICAL ANALYSIS OF PROFESSIONAL  
ACTIVITIES OF WORKERS IN PRE-PENSION AGE**

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***Abstract***

The actuality of the problem under investigation is conditioned with the qualitative peculiarity of development of Russian management. The paper is aimed at social-psychological analysis of professional activities of workers in pre-pension age. At present time, the pension reform in Russia, introduction of which has started, has gained a social significance and public resonance. This problem discussion in the society has rather an emotional and subjective nature. As for objective scientific studying of pre-pension workers engagement in professional activities, they are a few, notwithstanding that the practical demand for studying of this problem from part of our society does exist. The interrelation of workers' physiological parameters with their psychological and social characteristics reveals the existence of a single structure, which can become effective in the conditions of Russian companies' business. The social transformations in the society, the intensive informatization and digitalization of professional activities in the modern Russian organizations have formed additional obstacles and psychological barriers for majority of citizens and especially so for ones of pre-pension age. The latter ones have not only to master the new computer-based and informational technologies but also to activate their best psychophysiological resources. In the paper, the attention is paid to the social-psychological and physiological potential of the workers of pre-pension age, their regulative abilities and professional skills. The materials of this article can be useful for organizations chiefs and HR-managers as here social-psychological horizons are revealed of effective management of people of pre-pension age in the digitalization era.

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**Keywords:** Behavior, pre-pension age, worker, development, digitalization, personal growth.



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## **1. Introduction**

Since recently among the population, the pension reform in Russia gained the special popularity, the social significance and the public resonance. In main, though this discussion in the society is quite emotional, however it has a subjective nature and involves mixed social reactions. On one hand, the reason of such people's behavior is conditioned with the social stereotypes and constant patterns; on the other hand, those reactions reflect persons' attitude to labor and professional activities. Initially in Russia, the pre-pension age was defined as a period of a worker's social-psychological preparation to pension-supported time, to the oncoming "untroubled rest" (Karsayevskaya, 2007).

For majority of Russians, the external compulsive shift of goals and ways of those goals achieving got a stress and frustration factor. The previous stability of their life world turned into instability and the prospects of their existence became vague. As the result, they had to apply additional psychical efforts for this state correction and stabilization. Due to the aroused in the society social situation, the actual demand has been formed for a psychological analysis of this phenomenon and its further scientific working out.

## **2. Problem Statement**

The conducted survey of the scientific literature shows that unfortunately, objective researches of pre-pension workers' professional activities are a few and, besides, they do not cover the full social panorama of this phenomenon (Yermolayeva, 2002; Green, 2017).

## **3. Research Questions**

One of purposes of this research consists in consideration of the said above problem in the context of the modern conditions of the society's development, its digitalization and informatization. Also here, the special attention is paid to the specific peculiarities, qualitative uniqueness of the social adaptation and professionalization of the would-be-soon pensioners. The necessity is pointed out to take their psycho-physiological qualities and abilities into account. Also, realization ways of their professional potential are defined.

## **4. Purpose of the Study**

According to the pension reform in Russia, the pre-pension age is determined in age of 55-59 at women and 60-64 at men and represents a special social-psychological state of a person, when he/she finds him/herself in conditions of an emotional waiting and preparation to the pension time (Pryazhnikov, 1999). For the person, this process gathers an emotional significance & intensiveness and is conditioned with complicated cognitive operations and contemplations. These activities result in selection of personal life strategy of behavior and making decision in relation of his/her social position or status. In many ways, this period in individual life becomes a turning point and a time of a crisis as here, crisis-related social, psychological and physiological changes are going on (Malkina-Pykh, 2005; Robnett & Chop, 2009).

The scientific meaning of the terms "pension time" and "pre-pension age" foresees several sides of their analysis and cognition. From point of view of ordinary perception most often, the pension time is

understood as a certain age of an individual, when a person turns out to be free of working practice and mandatory labor (Karsayevskaya, 2007), while the pre-pension age becomes for him/her a reflection of an emotional anticipation and cognitive waiting for oncoming changes. In accordance with the latter, a person develops relevant strategies of his/her social behavior and reacting. The change of the pension age in Russia resulted in the following situation: the majority of people getting prepared to their retirement with the pension support were pinned down to the frustrating fact of further continuation of their working practice.

The concept “pre-pension age” was officially introduced in Russia since 2018. This term was enshrined in legislation in the course of the pension reform discussion taken place in 2018. According to the new Law, the pre-pension age is considered to be the age starting with 5 years before a retirement including that on reimbursement terms (i.e. before time). Thus, according to the legislation, persons are provided with the oncoming pension along with recognition of their inability, i.e. impossibility for them to perform working and professional actions. Namely here, the society’s attention focus is re-brought to those specific psycho-physiological changes and disorders that become a barrier for a worker’s productive activities.

From philosophical position, the pension time arrival represents not some specific age of a person but rather a certain stage of life including personal worldview attitudes, social position, working activities and state of health (Amosov, 2004). For a person, the oncoming pension time represents a special psychical state, when a possibility emerges to realize a personal wisdom of his/her accumulated life experience. In connection with it, an individual can prepare him/herself to the pension time starting long before his/her passport age, while staying quite able to work, socially successful and effective.

As for the psychological side of the pre-pension age of a person, it reveals the qualitative peculiarity of individual functional states, emotional feelings and contemplations (Stuart-Hamilton, 2006). Together they indicate that in this period of daily-living-activities, the qualitative transformation is going on of a lot of psycho-physiological structures. Upon that, there change not only individual physiological parameters but also psychological ones, life strategies of behavior and that of social reacting. The new social position of a person foresees the necessity for him/her of emotional and cognitive regulation of his/her state, psychological adaptation to the changed conditions of his/her life (Krasnova & Leaders, 2002). In connection with this at a person, a mixture is observed of his/her reactions, actions and behavioral acts conditioned with the same life situation. The individual presentiment and anticipation of the oncoming pension can be connected with would-be cessation of his/her active working professional activities, which mean arrival of uncertainty, prospects intangibility and obscurity of the existence itself. At the same time in the period of the maturity accumulated during the life to the very moment of the retirement as a rule, an individual reaches certain social and personal successes, feels himself realized professionally and obtained a desired status and public position. So at a person, a formation is going on of the social-psychological paradox including both positive sides and negative turmoil about his/her new public position. All this taken together results in emergence of the stable psychological pattern of an “aged” person (Antsyferova, 1996).

Both in scientific-theoretical works and empiric researches, the authors propose different definitions of the concept “aged person”. On one hand, this is “a person starting to become old”; on the other hand, this is a person in the “period of life after his/her maturity, when the organism’s physical

weakening is going on” (Karsayevskaya, 2007; Robnett & Chop, 2009). So in the pre-pension age, a person stays socially active and legally capable but along with it, the society starts limiting him/her in many aspects including professional ones. Accordingly, on him/her, objective requirements are imposed conditioned by specific physiological indicators. The investigators believe that the emerging dynamic psycho-physiological phenomena are featured with a predominance of destructive processes over constructive ones (Alperovich, 1998; Green, 2017).

At the same time in E. Erikson’s psycho-genetic theory, while considering senility and pre-old age in the context of age-related periodization, the author pointed out that some alternativeness exists of this period of life (Erikson, 1985). He attracted readers’ attention to both positive and negative sides of the psychical development of a person, of changes of his/her social position and status. In respect of senility, he preferred leaving duality of its outcomes, which is determined with a nature of passing of personal life previous stages. An elderly person finds him/herself being caught in a conscious choice of his/her leading goals, priorities and values that will be a reflection of his/her progressive/regressive transformation. In whole, such a choice allows typifying senility as both an age of development & potential possibilities and an age of diminishment & degradation (Erikson, 1985). In respect to this choice, a person’s main kind of activities is determined and the latter can be orientated either on his/her personality conservation (and then keeping and development of his/her social connections) or on insulation, individualization and “survival” as an individual. Both versions of ageing are subjected to psychological laws of adaptation notwithstanding that they provide the person with different quality and even duration of life.

Unfortunately, in the scientific literature on gerontology, among the described versions of ageing, the most in-detail worked out one is the destructive version, when the age-related changes manifest themselves in the special organism’s re-construction with conservation of few adaptive functions (Alperovich, 1998; Robnett & Chop, 2009). This adaptation strategy means a cardinal re-construction of the basic structure of physiological processes regulation with the purpose of keeping, supporting and increasing of the individual life duration. This way, the transformation runs of a subject’s “open” system into a “closed” isolated structure. The author attracts attention to general decrease of person’s interests and ambitions toward the external world, egocentrism, loss of emotional control, accentuation of some of individual peculiarities and evening-out of others (Alperovich, 1998). In many ways, these changes can be conditioned with the self-absorbedness of elderly person’s interests. As a result, the inability of an elderly person to do anything for others causes at him/herself an inferiority feeling aggravated with his/her irritancy and demonstrated desire to isolate him/herself from the social environment (Yermolayeva, 2002).

Unlike the destructive concept of ageing, a positive relation to psychical and social state of an elderly person in the pre-pension period of his/her life consists in his/her active life position, which means an actualization and switching on of protective adaptive mechanisms (Krasnova & Leaders, 2002). In this case, the ageing does not become an indicator of organism’s total diminishment, i.e. here along with emerging involitional processes at a subject, dynamic processes of transformation and conversion are observed. The matter is that a qualitative re-construction is going on of subject’s both organism and psychic with conservation of his/her main adaptive and social functions. This way, a person of pre-pension age does not lose his/her main psychological features as after finding him/herself on the new

stage of the life way, he/she unfolds successfully his/her inner potential and realizes his/her inner regulative abilities. It is possible to say that one of the most important social missions in the modern society consist in the commitment to implement an effective psychological preventative measures for people's preparation to their retirement. As an initial step, those preventative measures should include person's awareness and emotional habituation of his/her soon-would-be new individual, social and professional status, when the fact itself of the retirement is conditioned with a change of a social-psychological position and psycho-physiological state. This process means some peculiar psychical activities of a subject, which match to his/her activeness level and ability to behavior regulation.

So the pre-pension age is determined not only by a number of lived out years or a fixation of his/her physiological state. It also indicates a social quality of a person as a subject of professional activities. In main, the calendar or passport age serves only as a basis for inhibition or permission of playing of these or those social roles by a person. In a case of a successful realization of chosen roles, it is possible to say about the effective professional adaptations of workers of pre-pension age. In connection with this, a labor process in an organization engaging such workers is necessary to be considered in relation of their sensory-perceptive, emotional and intellectual spheres.

## **5. Research Methods**

Scientific analysis of documents was used as the leading method of research. It involves the application of monitoring principles and expert analysis. In addition, the method of psychosemantics aimed at exploring the virtual space of pre-pension age users and their relationship to the process of digitalization is highlighted.

## **6. Findings**

The process of the society's intensive computerization and informatization resulted in the fact that the majority of social and professional kinds of activities grew into ones with the strongly pronounced digital nature (Wellman & Haythornthwaite, 2008). At present time, it is hard to imagine a person without an electronic assistant, which helps him/her in selection and making of a lot of decisions starting with waking-up & food intake and finishing with financial operations. In connection with this, a lot of working operations in professional activities are transformed into a digital format and acquire an absolutely other reality requiring other perception and understanding level from part of a user (Dedov & Smirnova, 2018). The formation is going on of the single informational space. As a result, the modern world turns out to be "entangled" with Internet, which creates opportunity for the informational revolution or "overall digitalization". Due to the scientific and technical progress in the cardinal way, requirements are changed to personnel's professionalism and its professionally important qualities (PIQ). Now, the advancement of computer and smartphone user and some activeness in social networks get to be natural indicators for a job seeker, so that these factors are even not discussed in resumes.

At the same time, as any other social process, the digitalization is implemented gradually and step-by-step, though quite quickly in frame of one generation. That is why, the majority of workers are educable successfully and they use actively the computers, smartphones and informational/social

networks in their professional activities. It is possible to say that actively they dive into the virtual reality, while forming their own relation and understanding about it. Developers of software for electronic systems, computers and smartphones foresee increase of their stability, reliability, effectiveness, ability to self-education and self programming in future (Wellman & Haythornthwaite, 2008). Along with it, it is considered that the absolute majority of authors and methodologists of the digitalization are representatives of the generation falling at the present time into the category of the pre-pension age. So while being an initiator of the informational revolution, the senior generation starts encountering the situation that their own product – their “baby” – erects social-psychological barriers for its engagement into the working process. Upon that, as for the digital technologies, novelties and innovations, their critical relation to their superiority and dominance results at them in formation of rigid intellect. It manifests itself in their belief that electronic assistants play only a role of help and support, so they should be controlled by a human-operator and not take a social position equal to humans’ one.

The life experience, the practical skills of professional challenges overcoming reveal the high level of professionalism and qualification level of workers of the pre-pension age (Schultz & Schultz, 2006). That is why they are able to realize complicated productive plans, which can be not in line with frames of set program and strategy of organizational behavior. Due to such creative approach, workers of pre-pension age are able to generate new technological products and be economically effective and profitable staff members for an organization (Mescon, Khedouri, & Albert, 1988). Such reacting becomes possible in virtue of the fact that those people’s professional education included ambiguity and uncertainty of ways of information and knowledge obtainment and re-processing. So “here and now”, they had to use actively their psychic creative potential and regulative functions of organism, which being taken together ensured their high professional productivity rate. As a result, the pre-pension workers’ mastery and ability to switch on adaptive psycho-physiological mechanisms became instruments allowing them being effective in working process arrangement and achievement of high productive results (Dikaya, 1996).

## **7. Conclusion**

In conclusion, it is necessary to state that the pre-pension age of workers in an organization becomes a psychological and managerial potential of a kind for both chiefs and HR-managers as it allows them not only develop and stabilize their intra-organizational culture but also find out factors of working team productivity increase. Upon that, the diminishment of some physiological parameters – for example, slowing down and reaction speed reduction – can turn out an essential plus in elderly people’s professional activities as it allows to them making an adequate assessment of arousing situation and a correct decision. Besides, their professional experience renders a support and confirmation of a chosen strategy.

The specifics and peculiarity of psycho-physiological development level of workers of pre-pension age is featured with stable and strong orientation of their professional activities, will-based regulation of behavior. For them, the main psychological characteristic is considered to be their experience and ability in overcoming of encountering external obstacles and internal barriers with use of psychological mechanisms of self-regulation (Dikaya, 1996). The perceived by them necessity of professional tasks accomplishment on the principle “we must” predetermine their pursuing of set goals. The important

indicators of their professional success are their creative approach and psychological stability to action of external harm-making factors (Dedov, 2015).

In connection with above-said for effective management of pre-pension age workers, it is recommended to pay attention to value of single psycho-physiological factors allowing their professional adaptation and high productivity in their obligations implementation. Thus, the ageing process and the pre-pension age are not a static psychical and functional state; instead, they represent the dynamic process, which is conditioned by rather positive characteristics and to the less extent by negative ones.

## References

- Alperovich, V. D. (1998). *Senility. Social-philosophical analysis*. Rostov-on-Don: SKNTsVSh. [in Rus.].
- Amosov, N. M. (2004). *Encyclopedia of Amosov. Algorithm of health*. Moscow: AST Stalker. [in Rus.].
- Antsyferova, L. I. (1996). Late period of human life: Types of ageing and a possibility of progressive development of personality. *Psychological Magazine*, 17(6), 60-71. [in Rus.].
- Dedov, N. P. (2015). The game theory, economic behavior and interpersonal meta-relationships. *Procedia Economics and Finance*, 26, 542-545. [https://doi.org/10.1016/S2212-5671\(15\)00952-1](https://doi.org/10.1016/S2212-5671(15)00952-1)
- Dedov, N. P., & Smirnova, M. E. (2018). Psychophysiological ensuring professional activity in the conditions of digital economy. *Psychology. Historic-Critical Surveys and Modern Investigations*, 7(3A), 3-10. [in Rus.].
- Dikaya, L. G. (1996). Typology of individual styles in self-regulation and stress coping. *International Journal of Psychology*, 31(3-4), 60. [in Rus.].
- Erikson, E. H. (1985). *Childhood and Society*. New York, N.Y.: W.W. Norton & Company.
- Green, B. S. (2017). *Gerontology and the construction of old age*. New York, N.Y.: Routledge.
- Karsayevskaya, T. V. (2007). *Homo ageing*. Moscow: Znaniye. [in Rus.].
- Krasnova, O. V., & Leaders, A. G. (2002). *Social psychology of senility*. Moscow: Academy. [in Rus.].
- Malkina-Pykh, I. G. (2005). *Crises of pre-senile age*. Moscow: EKSMO. [in Rus.].
- Mescon, A. H., Khedouri, F., & Albert, M. (1988). *Management*. New York: Harper Collins Publishers.
- Pryazhnikov, N. S. (1999). Personal self-identification in declining age. *World of Psychology*, 2, 111-123. [in Rus.].
- Robnett, R. H., & Chop, W. C. (2009). *Gerontology for the health care professional*. Burlington, Massachusetts: Jones & Bartlett Learning.
- Schultz, D. P., & Schultz, S. E. (2006). *Psychology and work today. An introduction to industrial and organizational psychology*. New Jersey: Prentice Hall.
- Stuart-Hamilton, I. (2006). *The psychology of ageing*. London: Jessica Kingsley Publishers.
- Wellman, B. (Ed.), & Haythornthwaite, C. (Ed.) (2008). *The Internet in everyday life*. New Jersey: John Wiley & Sons.
- Yermolayeva, M. V. (2002). *Practical psychology of senility*. Moscow: EKSMO-Press. [in Rus.].