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Interrelationship of Psychotherapy, Psychocorrection and Psychoconsultation

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⁶Candidate of Psychological Sciences, Associate Professor of the Department of Theory and Practice of Practical Psychology, South Ukrainian National Pedagogical University Named after K. D. Ushynsky ORCID ID: https://orcid.org/0000-0002-7925-0939 grekelena82@ukr.net **Abstract**: Modern neurorehabilitation is focused primarily on the restoration of speech and cognitive mental processes. considering the rehabilitation of the individual as a task of psychotherapy. The article shows that a gentle attitude, a "body image" and neurotic experiences, characteristic of most patients with organic brain lesions, significantly affect the effectiveness of neuropsychological rehabilitation. Neurorehabilitation focuses on the restoration of speech and cognitive processes, considering the rehabilitation of the individual as an object of psychotherapy. On the basis of clinical cases, it has been shown that the weakened attitude, body image changes, and neurotic experiences characteristic of most patients with idiophrenic disease affect the effectiveness of neuropsychological rehabilitation. The article examines the theoretical and methodological principles and defines the main concepts of the topic. The relevance of the article is determined by the new innovative social needs in solving problems of a psychological nature, taking into account the neurological features of human thinking. Scientific intelligence in the field of neurorehabilitation provides grounds for determining the most effective methods of psychocorrection. The purpose of the study is to determine the relationship between psychotherapy, psychocorrection and psycho-counseling based on neurorehabilitation. After studying the data, it was determined that the ischemic attack of the brain was unspecified, it was suggested that the observed neurological symptoms (disorders of speech, movements, emotional sphere) are related to residual (residual) symptoms after a transient ischemic attack, which requires a detailed study.

Keywords: Neuropsychological Rehabilitation, Personality Adjustment, Mediated Verbal Influence, Attitude to Personality, Indirect Verbal Influence.

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Introduction

In the theory of neuropsychological rehabilitation, the most developed aspect is the aspect of psychoconsultations based on an arbitrary level of mental processes by means of their intra- or intersystemic restructuring. Other methods of recovery are described in much less detail. At the same time, very few works are devoted to the role of the individual in the formation of a defect in cognitive processes. This method of psychorehabilitation as a change in personal attitude is considered, first of all, in classical works, which does not prevent practitioners from resorting to it in many situations. Thus, in psychological practice there were several cases when changing a gentle or pathological attitude of an individual was the only way to restore speech (Haletska, 2003).

In the neurological status: right-sided hemiparesis with partial loss of mobility of the arm and leg, decreased skin sensitivity and muscle tone of the right half of the body, speech impairment of the type of complex (afferent-efferent) motor aphasia. the patient does not understand speech and cannot utter a single sound, non-verbal hearing is preserved), pronounced dysphoria (restlessness, melancholy, a combination of outbursts of anger with crying). At the same time, the data of objective studies (computed tomography, electroencephalogram, ultrasound dopplerography of brain vessels) are contradictory: there is a slight decrease in blood supply in the basin of the left middle cerebral artery, diffuse changes in bioelectric activity according to the type of dysfunction of subcortical formations, foci of necrosis of brain tissues brain and hemorrhages were not noted.

In recent decades, there has been an increase in the number of diseases and injuries of the brain, which makes the rehabilitation of patients with the consequences of diseases and injuries of the brain aimed at restoring impaired functions, social contacts, returning the patient to society and to hard work, an urgent medical and social problem. Psychotherapy contributes to the formation of an active orientation of the individual to overcome the defect, the formation of an optimistic medical and life perspective; psychological correction of disorders of cognitive functions of patients contributes to the improvement of social adaptation.

One of the core directions of all rehabilitation measures is addressing the personality of the patient, addressing such qualities that can reflect a person's desire for activity and to establish their usefulness and value in society through hard work. One of the important factors of resocialization of the patient, aimed at restoring the ability to fully communicate, is the restoration of speech in patients with aphasia. A speech disorder leads to the breakdown of all mental activity, to changes in the patient's personality, his emotional and volitional sphere. At the same time, the restoration of things depends on the state of the second higher mental functions of memory, attention, and thinking. Special classes on speech restoration are conducted by a speech therapist (Shapar, 2004). In case of severe speech disorders and their total nature, first, to establish contact, the patient is involved in non-verbal forms of activity (drawing, sculpting), and imitation techniques are used. In addition to the basic individual form of classes, various forms of group speech therapy work with patients suffering from speech disorders are used. Group therapy is considered an important psychotherapeutic factor and a valuable way of developing verbal communication (Dubinina, 2018).

Special classes on the restoration of higher mental functions (attention, memory, thinking, praxis, gnosis) are conducted mainly by a psychologist. Along with individual classes for the correction of mental functions, group classes are held (visual gymnastics, vocal therapy, finger dance, pantomime, rhythm therapy, etc.). Such features determined the goals and objectives of the research.

The purpose of the study is to determine the effective factors of the relationship between psychotherapy, psychocorrection and psychocounseling.

Psychotherapy and counseling as a factor in neurorehabilitation

For the development of practical psychology, the problem of theoretical validity of clinical and psychological interventions (psychotherapy and psychological counseling) was and remains extremely important. This is connected, first of all, with the spread of various methods that are widely used in the practice of psychotherapy and psychological counseling, but often do not have any theoretical justification. But even if the method is justified by a theoretical concept, this connection is often not fully professional psychologists-consultants understood even by psychotherapists, which limits the effectiveness of these methods and the possibility of their creative use (Dub, 2020). Another reason why the theoretical validity of psychological interventions remains an actual problem is related to a number of existing, very contradictory ideas regarding, firstly, the dominance of one theoretical paradigm (humanistic) in this field, and

secondly, the possibility of forming an integrative model of psychotherapy and psychological counseling (Dvornik, 2018).

The term "intervention" implies a certain influence, penetration in order to influence a process or result. Psychological interventions are into pedagogical-psychological, divided organizationalpsychological and clinical-psychological, according to the spheres of practical activity and tasks. Analyzing clinical psychological interventions, one should dwell on the relationship of this concept with such concepts as "psychotherapy", "psychological counseling" and "psychological correction" (Vodopianova, 2008). This may be of interest not only for clarifying their content, not only from the point of view of considering these concepts as concepts of different levels, but, first of all, in connection with a clearer understanding of the role of psychology as a theoretical and methodological basis and psychological counseling, itself psychotherapy, as well as in connection with the need to recognize and accept that psychological interventions are carried out within the framework of various theoretical approaches, to some extent equivalent in their effectiveness (Zhuravlov & Zhuravlova, 2020). At the moment, there is no single definition of psychotherapy due to the presence of different approaches to understanding this term itself. The numerous definitions of psychotherapy demonstrate two main approaches: medical and psychological. Medical and psychological definitions use different terminology (medical - disease, patient, recovery process; psychological - cognition, emotions, behavior, problems, conflicts, interpersonal interaction). But the specificity of the medical-psychological approach is not related to the terminology, but to the understanding of what is fixed by this concept - the object of influence or the means of influence. It is obvious that this approach, being more traditional, still does not reveal the specifics of psychotherapy (Zhuravlov & Zhuravlova, 2020).

Another approach - psychological - in defining psychotherapy emphasizes the means of influence. It should be noted that such terms as physiotherapy, pharmacotherapy, etc., also indicate not the object, but the means of influence (physiotherapy - influence, treatment with physical means, pharmacotherapy - treatment with medications, etc.). In this context, psychotherapy is a therapeutic effect by psychological means. One of the most successful psychological definitions of psychotherapy sees it as the purposeful use of clinical and psychological methods based on certain psychological theories and aimed at helping a person change cognitions, emotions, behavior, and other personal characteristics in a direction that works for all participants. the psychotherapeutic process is most desirable

(Shportun, 2020). The definition does not indicate the theoretical principles on which the influence is based, all possible objects of influence (cognitions, emotions, behavior, personal characteristics) are listed without defining the main goal; the purpose and nature of the changes are not defined. It seems that it is impossible to give a more specific definition of psychotherapy within the framework of psychological research.

The main principles of neurorehabilitation are formulated, which, along with their importance for the theory of rehabilitation, are a practical guide for drawing up specific rehabilitation programs, including in neurology.

- 1. The principle of partnership involves cooperation between the patient and the doctor in the guiding and guiding role of the latter. Compliance with this condition makes it possible to carry out purposeful psychological preparation for rehabilitation treatment, the success of which depends on the activity of the patient himself.
- 2. The principle of diversity of efforts takes into account all aspects of rehabilitation for each patient: its basis is the implementation of medical-psychological, treatment-rehabilitation tasks under the condition of reconstruction and activation of the patient's personality.
- 3. The principle of the unity of psychosocial and biological methods of influence presupposes the use of medical and restorative measures. At the same time, the pathogenetic influence is carried out not only on the defective function, but also on the underlying pathological process, as well as on the personality of the patient with the aim of mobilizing her resources for correction of psychological reactions and secondary neuropsychiatric diseases. disorders Understanding the physiological and pathophysiological essence of the disease allows for regulatory influence on the processes of recovery, adaptation and compensation.
- 4. The principle of gradualness (transition) of the effects justifies the step-by-step appointment of restorative measures taking into account the dynamics of the functional state (Fritzsche et al., 2003).

The main tasks of the first stage (restorative therapy) are the psychological and physiological preparation of the patient before the start of active treatment and the implementation of measures that prevent the development of functional defects, disability, as well as the elimination and reduction of these phenomena. The task of the second stage (readaptation) - adaptation of the patient to the conditions of the external environment - is characterized by an increase in the volume of all restorative measures and an increase in the specific weight of psychosocial influences. The task of the

third stage (rehabilitation in the proper sense of the word) is household and social adaptation, elimination of dependence on others and, if possible, restoration of the premorbid state.

Effective factors of psycho-rehabilitation, psycho-counseling in the context of personality development

To carry out psycho-rehabilitation, it is necessary to take into account the neurophysiological features of each individual. There is also no single understanding of the term "psychological counseling." In general, psychological counseling is professional help to a person or a group of people in finding ways to solve a specific difficult or problematic situation of a psychological nature (Grunschel et al., 2018). In psychological counseling, several directions or types are usually distinguished: problem-oriented, resource-oriented, and personal-oriented counseling. It is very difficult to draw a clear line between person-oriented counseling (aimed at analyzing the personality, personal causes of problematic and conflict situations and analyzing what own behavior can prevent such situations from occurring in the future) and psychotherapy (Grunschel et al., 2016). There are attempts to separate these concepts according to the formal characteristics of the specialist and the client/patient: who conducts the intervention – a doctor or a psychologist, who is the client - healthy or sick. However, it is more appropriate to analyze the differences not on the basis of the characteristics of the client or the professional affiliation of the specialist, but on the basis of the characteristics and features of the intervention process itself and the activity of the professional (Kim & Seo, 2015).

In general, psychotherapy and psychological counseling can be considered as types of psychological, more precisely, clinical and psychological intervention. The analysis of the features of clinical and psychological intervention allows us to distinguish general and specific aspects of psychotherapy and psychological counseling.

Characteristics of clinical and psychological counseling include:

- 1) selection of means (methods);
- 2) functions (development, prevention, treatment, rehabilitation);
- 3) target focus of the process on achieving changes;
- 4) theoretical base, which is theoretical psychology;
- 5) empirical verification;
- 6) professional actions.

In rehabilitation programs at all stages it is assumed to address the personality of the patient; biological and psychosocial forms of treatment are purposefully combined. The process of rehabilitation and implementation of complex rehabilitation programs is carried out with the help of the main functional groups: functional diagnostics, biological therapy and psychosocial group (Stöber & Joormann, 2001).

The group of functional diagnostics provides for a comprehensive examination by clinical, electrophysiological, and biochemical methods; depending on the clinical indications, the group includes an ophthalmologist, an otolaryngologist, a urologist, an endocrinologist, a nutritionist, and in some cases - a therapist and a cardiologist. The group of biological therapy involves physical and reflexive methods of treatment: drug therapy, physical therapy, physiotherapy, methods of biological feedback are used. The group includes neuropathologists, physiotherapists, physiotherapists, massage therapists, acupuncturists (Stoliarchuk et al., 2021). The psychosocial group carries out psychosocial activities: psychodiagnostics, psychotherapy, occupational therapy, bibliotherapy, speech therapy, as well as social assistance, career guidance, vocational training, orthopedic and legal support. The psychosocial group includes employees of the psychotherapeutic service: a psychotherapist, a medical psychologist, a specialist in social work, and secondary medical staff. The psychosocial group can be supplemented by employees of the occupational therapy department: an occupational therapist, an occupational therapy instructor, a home rehabilitation and employment instructor, as well as a lawyer. Psychosocial work may include a bibliotherapy - a specially trained librarian who provides bibliotherapy; cultural worker who conducts cultural therapy (group work, organization of concerts, organization of sanitary and educational work with patients) (Ziegler & Opdenakke, 2018).

The recovery period of patients with the consequences of diseases and craniocerebral injuries is long, the disabling consequences of the disease largely negatively affect the self-esteem and emotional state of the patient, lead to neurotic, depressive, hypochondriacal reactions to the disease (Bäulke & Dresel, 2000). Often, patients have a pessimistic prognosis of medical and life prospects, apathy and uncertainty about the future. In this connection, there is a need to include psychotherapeutic and psychocorrective measures in the rehabilitation of patients with brain diseases and injuries.

Peculiarities of psychotherapy as an effective treatment measure

The analysis of the neurophysiological characteristics of the personality reveals the features of two types of clinical and psychological intervention. In the process of complex treatment, drug therapy, physical therapy, occupational therapy, psychotherapy, and, if necessary, classes with a speech therapist, assistance of a social worker should be carried out with all patients. In the process of restorative treatment, one of the main principles of rehabilitation is realized - addressing the patient's personality. At the same time, the consequences of suffered diseases and injuries of the brain lead to changes in the mental processes, states and properties of the patient's personality, to the distortion of self-perception and self-esteem, and are also often accompanied by psychopathological symptoms that complicate the course of the recovery process (Blunt & Pychyl, 2000). Patients go through a complex and long process of psychological rehabilitation. We distinguish stages and levels of psychological rehabilitation of patients with brain diseases and injuries.

Violations of joint-muscular sensation, tactile, pain, vestibular and proprioceptive sensitivity prevent the formation of an adequate integrative image of "I" in the initial recovery period. Along with this, there is a decentering of the image of "I", a kind of change in the body scheme focused on the disturbed functions of the body. Taking this into account, at the first stage of recovery, it is necessary to solve the task of restoring the patient's subjective perception of himself, that is, integrating the image of "I". Thus, the first stage is the stage of intrapersonal correction (Demchenko et al., 2021).

The task of the next stage is adaptation to the changed image of "I" - acceptance of oneself as it is, through acceptance by others, through microsociety. In the process of communicating with other people, social norms and relations of the psychotherapeutic environment are internalized, which strengthens the rights and affirms the patient's self-esteem by accepting the ego. So, the second stage is the stage of interpersonal correction.

At the third stage, the tasks of stabilizing the self-image, forming independent self-esteem, and increasing personal responsibility for the outcome of the disease are solved. This is the stage of stabilization of personal relationships (Kosholap & Maksymchuk, 2021).

The nature of psychological rehabilitation is also influenced by the means of rehabilitation. The entire complex of rehabilitation measures, depending on the sphere of influence, as well as tasks and methods of influence, is divided into three levels of psychological rehabilitation: psychophysiological, cognitive-psychological, and social-psychological.

1. Psychophysiological level. Restorative measures at this level are carried out, first of all, with the help of biological and physical methods of influence (drug therapy, physiotherapy, physical therapy) and are aimed at activating afferent impulses, restoring motor and sensory functions (Prots & Yakovliv, 2021).

Through proprioreception, motility can influence the psyche. The relationship between proprioception and the psyche is well known, and there is also a broad relationship between psychomotor performance and measures of memory, attention, and intelligence. The holistic activity of the whole brain is inextricably linked with the activity of the motor analyzer. The act of seeing is a visual-kinesthetic reaction, the act of listening is audiokinesthetic, and the act of feeling is tactile-kinesthetic. This indicates the mandatory presence of sensory processes of feeling reflex movement in response to irritation of the analyzers. Thus, physiotherapy and occupational therapy are important for restoring not only motor but also mental functions. At the same time, the mechanisms of more precise control and regulation of motor, vegetative, and mental functions are included, the neurohumoral interaction of various organs is established, and the consequences of prolonged hypokinesia are reduced. All this contributes to the strengthening of afferent impulses, the removal of spilled inhibition, the development of new conditioned-reflex connections, motor stereotypes, compensation of impaired functions.

For patients with disorders of elementary motor functions in the first stages of rehabilitation, perhaps the most important thing is freedom from dependence and forced help from others. Restoration of household skills leads to increased self-esteem and confidence in the restoration of other skills and impaired functions. To do this, the physical therapy system includes teaching self-care (turning over in bed, sitting down, standing up and transferring to a wheelchair or chair), and then walking skills. Nurses of treatment departments, rehabilitation offices at home, as well as relatives of the patient teach the second group self-care skills: eating, personal hygiene, dressing, etc. Various tests of varying complexity are used to consistently train the patient in self-care activities, as well as to record the quality, their performance, and range (Dykan & Pakharenko, 2021). Activation of motility

affects mental functions, helps to restore them and create a more adequate self-image. The psychophysiological level of rehabilitation is a lot mu solves the task of intrapersonal correction - restoration of the subjective image of "I". The preferred method of psychotherapy aimed at correcting the self-image is individual psychotherapy, in the process of which the patient's self-image is integrated through identification with a psychologist and psychotherapist.

2. The cognitive-psychological level is aimed, first of all, at the restoration of cognitive processes. The means of influence include occupational therapy, the development of household skills, which contribute to the education of stability, switching and distribution of attention; strengthening of operational, short-term and long-term memory, improvement of constructive thinking, generalization, abstraction, training of verbal communication. Special speech recovery classes are conducted by a speech therapist; classes on the restoration of higher mental functions (memory, attention, thinking, praxis and gnosis) are conducted by a psychologist.

Occupational therapy with patients contributes to the manifestation personality qualities, the development and strengthening communication skills, especially when engaging in group work. In the structure of rehabilitation measures, occupational therapy is included in the patient's activation program. This is the initial stage of the transition to more complex occupational therapy classes. Occupational therapy has an activating effect on the psyche of the patient. Contributes to the reconstruction and reconstruction of labor institutions, carries out retraining of patients who have lost their former specialty, in professions available due to their health status. In addition to the psychotherapeutic value, therapeutic work promotes the mobilization of the body's hidden capabilities, activates its compensatory processes. Occupational therapy stabilizes emotionality, stimulates initiative, increases resistance to fatigue; creates opportunities for communication, develops a sense of cooperation and group responsibility.

3. Socio-psychological level. Rehabilitation is aimed at the manifestation and strengthening of social contacts. The sphere of influence is the personality of the patient. The task of this level is the formation of rehabilitation norms in the patient's mind and the creation of a psychotherapeutic environment. Psychotherapeutic norms of the treatment environment provide for the creation of a therapeutic perspective, increasing the patient's own responsibility for the outcome of the treatment, increasing his internality, expanding the empathy zone. Implementation of tasks of this

level is carried out in the process of communication, by internalizing the relationships of others. The entire service staff of the rehabilitation clinic: doctors of all specialties, psychologists, psychotherapists, speech therapists, occupational therapists, bibliotherapy, physical therapy, massage therapists, nurses, etc. guides of the norms of the psychotherapeutic environment in the process of treating the patient. Psychotherapeutic environment also becomes the environment of patients and their relatives, oriented in the spirit of rehabilitation tasks. Thus, at the socio-psychological level, the tasks of interpersonal correction-adaptation to the changed image of "I" are solved through communication. A properly formed therapeutic psychotherapeutic environment, in general, solves the task of correcting the socio-psychological level. In cases where more targeted correction is needed, it is better to use group psychotherapy conducted by specialists.

Psychotherapeutic methods are used to help stabilize self-esteem, focus on yourself (your body image, your movements, your thoughts and moods). They are aimed at the transition from self-perception to the representation of oneself, one's bodily self, to the formation of a stable independent self-image and self-control. Autogenic training, Eriksonian self-suggestion techniques, relaxation and other meditative techniques, as well as behavioral methods using methods of attention stabilization and self-help are used (Kornosenko & Khomenko, 2021).

It should be noted that the levels of rehabilitation operate simultaneously, and in the process of individual rehabilitation, the patient's personality passes through these levels sequentially. The active inclusion of means of influence of one or another level on the patient depends on the correct assessment of the state of safety of his personality and the need for specific correction. The inability to adequately assess oneself and one's condition is accompanied, as a rule, by significant disturbances in the features of attention, memory, and thinking, which leads to an inadequate attitude to the disease, to an incorrect assessment of the prospects for recovery, and to a decrease in motivation for treatment.

Conclusions

Restorative treatment of patients with the consequences of brain diseases and injuries is hindered by disorders of higher mental functions (memory, attention, thinking, praxis, gnosis, speech). Cognitive disorders in stroke occur more often with extensive lesions of the white matter of the brain (leukosis) or high lobes, disorders of frontal-striatal connections. An important task is the early diagnosis and treatment of cognitive disorders, as

well as their prevention at the stage of early rehabilitation. One of the main tasks is the restoration of higher mental functions (memory, attention, calculations, thinking, praxis, gnosis). First, a pathopsychological and neuropsychological study was conducted; the extent and localization of damaged and protective functions were investigated.

In the traditional medical approach, psychotherapy is interpreted as treatment of the soul (psyche). The most common definition of psychotherapy in our country considers it as a system of therapeutic influence on the psyche and through the psyche on the human body: psychotherapy is an influence on the psyche, in other words, psycho is an object of influence. At the same time, the specifics of the means of influence are completely ignored. With this understanding, psychotherapy becomes a part of psychiatry, and a rather limited one, since the therapeutic effect on the psyche can be carried out with the help of other means, in particular, pharmacological or surgical, which, of course, is not psychotherapy.

On the basis of numerous studies, the stages and levels of psychological rehabilitation in the process of psychological treatment of patients with the consequences of brain diseases and injuries have been identified. Timely completion of these stages and levels contributes to more successful restoration of impaired functions. Psychotherapy and psychological correction contribute to the formation of a positive attitude towards treatment and the disease, the active inclusion of the patient in the rehabilitation process - in other words, the passage of psychological rehabilitation.

References

Bäulke L. and Dresel M. (2000). Procrastination in higher education courses. A Multivariate Two-Level Analysis of Higher-Education Course Characteristics Relating to Academic Procrastination. University of Augsburg, Germany. https://psyarxiv.com

Blunt A. and Pychyl T. (2000). Task aversiveness and procrastination: A multi-dimensional approach to task aversiveness across stages of personal projects. Personality and Individual Differences, 24. https://www.scirp.org/(S(lz5mqp453edsnp55rrgjct55))/reference/ReferencesPapers.aspx?ReferenceID=2256136">https://www.scirp.org/(S(lz5mqp453edsnp55rrgjct55))/reference/ReferencesPapers.aspx?ReferenceID=2256136

Demchenko I., Maksymchuk B., Bilan V., Maksymchuk I., and Kalynovska I. (2021). Training future physical education teachers for professional activities under the conditions of inclusive education. BRAIN. *Broad Research in*

- Artificial Intelligence and Neuroscience, 12(3), 191–213. https://doi.org/10.18662/brain/12.3/227
- DubininaK. (2018). Prokrastynatsia iak problema psykholohii osobystosti studenta [Procrastination as a problem of psychology of the student's personality]. Scientific journal of the National Pedagogical Drahomanov University. http://enpuir.npu.edu.ua/bitstream/handle/123456789/21528/Dubinina.pdf?sequence=1&isAllowed=y
- DubV. (2020). Osoblyvosti prokrastynatsii studentiv [Features of student procrastination]. Problems of the humanitarian sciences. Psychology, 47, 53–66. http://phsps.dspu.edu.ua/article/view/229345
- Dvornik M. (2018). Prokrstynatsia v konstruiuvanni osobystisnoho maibutnoho: monografia [Procrastination in the construction of personal future: a monograph]. Institute of Social and Political Psychology of the National Academy of Pedagogical Sciences of Ukraine. Imeks-LTD. Kropyvnytskyi. https://lib.iitta.gov.ua/711403/1/Dvornyk Mon 2018.pdf
- Dykan, V., Pakharenko, O., Saienko, V., Skomorovskyi, A., & Neskuba, T. (2021). Evaluating the efficiency of the synergistic effect in the business network. *Journal of Eastern European and Central Asian Research, 8(1),* 51–61. DOI:10.15549/jeecar.v8i1.646 (Web of Science)
- Fritzsche B., Young B. and Hickson K. (2003). Individual differences in academic procrastination tendency and writing success. Personality and Individual Differences, 35.

 https://www.sciencedirect.com/science/article/abs/pii/S019188690200369
 0
- Grunschel S., Patrzek J., Klingsieck K., and Fries S. (2018). "I'll stop procrastinating now!" Fostering specific processes of self-regulated learning to reduce academic procrastination. *Journal of Prevention & Intervention in the Community*, 46(2), 143–157. https://psycnet.apa.org/record/2018-09785-004
- Grunschel S., Schwinger M., Steinmayr R., and Fries S. (2016). Effects of using motivational regulation strategies on students' academic procrastination, academic performance, and well-being. *Learning and Individual Differences*, 49, 162–170. https://psycnet.apa.org/record/2016-38367-017
- Halets'ka I. (2003). Samoefektyvnist' u strukturi sotsial'no-psykholohichnoyi adaptatsiyi. Visnyk L'vivs'koho universytetu. Ser. "Filosofs'ki nauky". Vyp. 5. 433–442 s. https://www.academia.edu/45081034/%D0%A1%D0%B0%D0%BC%D0%BE%D0%B5%D1%84%D0%B5%D0%BA%D1%82%D0%B8%D0%B2%D0%BD%D1%96%D1%81%D1%82%D1%8C %D1%83 %D1%81%D1%82%D1%80%D1%83%D0%BA%D1%82%D1%83%D1%80%D1%96 %D1%82%D1%81%D0%BE%D1%86%D1%96%D0%B0%D0%BB%D1%8C%D0%BD%D0%BE%D1%97 %D0%B0%D0%B4%D0%B0%D0%BF%D 1%82%D0%B0%D1%86%D1%96%D1%97
- Herasymiv T. (2009). Osobystist' ta problemy yiyi sotsializatsiyi. Forum prava. 3. 156-161 s. <a href="http://www.irbis-nbuv.gov.ua/cgi-bin/irbis_nbuv/cgiirbis_64.exe?121DBN=LINK&P21DBN=UJRN&Z21IDBN=LINK&P21DBN=LINK&P21DBN=UJRN&Z21IDBN=LINK&P21DBN=UJRN&Z21IDBN=LINK&P21DBN=UJRN&Z21IDBN=LINK&P21DBN=UJRN&Z21IDBN=LINK&P21DBN=UJRN&Z21IDBN=LINK&P21DBN=UJRN&Z21IDBN=LINK&P21DBN=UJRN&Z21IDBN=LINK&P21DBN=UJRN&Z21IDBN=LINK&P21DBN=UJRN&Z21IDBN=LINK&P21DBN=UJRN&Z21IDBN=LINK&P21DBN=UJRN&Z21IDBN=LINK&P21DBN=UJRN&Z21IDBN=UJ

- Kim K. and Seo E. (2015). The relationship between procrastination and academic performance: A meta-analysis, Personality and Individual Differences, *82*, 26–33. https://psycnet.apa.org/record/2015-17006-010
- Kornosenko, O., Khomenko, P., Taranenko, I., Zhamardiy, V., Shkola, O., Tolchieva, H., Saienko, V., Batieieva, N., & Kyzim, P. (2021). Professional competencies as a component of professional training of a fitness trainer-teacher in higher education institutions. *Journal for Educators, Teachers and Trainers, 12(1)*, 72-81. DOI: 10.47750/jett.2021.12.01.010 (Web of Science)
- Kosholap A., Maksymchuk B., Branitska T., Martynets L., Boichenko A., Stoliarenko O., Matsuk L., Surovov O., Stoliarenko O., and Maksymchuk I. (2021). Neuropsychological bases of self-improvement of own physical health of future teachers in the course of university education. BRAIN. *Broad Research in Artificial Intelligence and Neuroscience*, 12(3), 171–190. https://doi.org/10.18662/brain/12.3/226
- Prots R., Yakovliv V., Medynskyi S., Kharchenko R., Hryb T., Klymenchenko T., Ihnatenko S., Buzhyna I., and Maksymchuk B. (2021). Psychophysical training of young people for homeland defence using means of physical culture and sports. BRAIN. *Broad Research in Artificial Intelligence and Neuroscience*, 12(3), 149–171. https://doi.org/10.18662/brain/12.3/225
- Shapar V. (2004). Psykholohichnyy tlumachnyy slovnyk / V. Shapar. Kharkiv: Prapor, 640 s. https://library.udpu.edu.ua/library_files/427530.pdf
- Shportun O. (2020), Peculiarities of leadership manifestation in the youth social group. Revista Românească pentru Educație Multidimensională 12(1) Sup. 1, 304-329. https://doi.org/10.18662/rrem/12.1sup1/237
- Stöber J. and Joormann J. (2001). Worry, procrastination, and perfectionism: Differentiating amount of worry, pathological worry, anxiety, and depression. *Cognitive Therapy and Research*, 25, 49–60. https://psycnet.apa.org/record/2001-17763-004
- Stoliarchuk O., Serheenkova O. and Kohanova O. (2021). Dynamika akademichnoi prokrastynatsii studentiv [Dynamics of academic procrastination of students]. *Personality psychology*, 26. http://habitus.od.ua/journals/2021/26-2021/25.pdf
- Vodopianova N. and Starchenkova E. (2008). Syndrom vyhorania [Burnout syndrome: diagnosis and prevention]. Saint Petersbourg, 207–239. http://kingmed.info/media/book/3/2930.pdf
- Zhuravlov O. and Zhuravlova O. (2020). Osoblyvosti somatyzatsii osib z riznym rivnem prokrastynatsii [Features of somatization of persons with different levels of procrastination]. Collection of scientific works: Theoretical and applied problems of psychology. Severodonetsk, 23–32. http://dspace.snu.edu.ua:8080/jspui/bitstream/123456789/4137/1/2%2852%29">http://dspace.snu.edu.ua:8080/jspui/bitstream/123456789/4137/1/2%2852%29">http://dspace.snu.edu.ua:8080/jspui/bitstream/123456789/4137/1/2%2852%29">http://dspace.snu.edu.ua:8080/jspui/bitstream/123456789/4137/1/2%2852%29">http://dspace.snu.edu.ua:8080/jspui/bitstream/123456789/4137/1/2%2852%29">http://dspace.snu.edu.ua:8080/jspui/bitstream/123456789/4137/1/2%2852%29">http://dspace.snu.edu.ua:8080/jspui/bitstream/123456789/4137/1/2%2852%29">http://dspace.snu.edu.ua:8080/jspui/bitstream/123456789/4137/1/2%2852%29">http://dspace.snu.edu.ua:8080/jspui/bitstream/123456789/4137/1/2%2852%29">http://dspace.snu.edu.ua:8080/jspui/bitstream/123456789/4137/1/2%2852%29">http://dspace.snu.edu.ua:8080/jspui/bitstream/123456789/4137/1/2%2852%29">http://dspace.snu.edu.ua:8080/jspui/bitstream/123456789/4137/1/2%2852%29">http://dspace.snu.edu.ua:8080/jspui/bitstream/123456789/4137/1/2%2852%29">http://dspace.snu.edu.ua:8080/jspui/bitstream/123456789/4137/1/2%2852%29">http://dspace.snu.edu.ua:8080/jspui/bitstream/123456789/4137/1/2%2852%29">http://dspace.snu.edu.ua:8080/jspui/bitstream/123456789/4137/1/2%2852%29">http://dspace.snu.edu.ua:8080/jspui/bitstream/123456789/4137/1/2%2852%29">http://dspace.snu.edu.ua:8080/jspui/bitstream/123456789/4137/1/2%2852%29">http://dspace.snu.edu.ua:8080/jspui/bitstream/123456789/4137/1/2%2852%29">http://dspace.snu.edu.ua:8080/jspui/bitstream/123456789/4137/1/2%2852%29">http://dspace.snu.edu.ua:8080/jspui/bitstream/123456789/4137/1/2%2852%29">http://dspace.snu.edu.ua:8080/jspui/bitstream/22880/jspui/bitstream/22880/jspui/bitstream/22880/jspui/bitstream/22880/jspui/bi
- Zhuravlov O. and Zhuravlova O. (2020). Neiro psykholohichni mekhanizmy rozvytku prokrastynatsii [Neuropsychological mechanisms of procrastination development]. *Psychology: reality and prospects, 14.* https://prap.rv.ua
- Ziegler N. and Opdenakke M. (2018). The development of academic procrastination in first-year secondary education students: The link with

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metacognitive self-regulation, self-efficacy, and effort regulation. Learning and Individual Differences, 2018, 71–82.

https://www.sciencedirect.com/science/article/abs/pii/S104160801830068