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Improving the Mental and Physical Capabilities of University Students in the Context of Using Art Therapy

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Abstract: *The article discusses the effectiveness of using art-therapeutic techniques in work with students, aimed at improving the mental, physical capabilities of university students, building a student team and developing emotional stability. The concepts of "social group" and "student body" are considered. The author of the article proves that the implementation of such a pedagogical condition as involving students in art therapy programmes leads to positive outcomes, which indicates its effectiveness. Faculty members are expected to play an important role in enhancing students' positive moods by keeping them away from bad moods and encouraging them to focus only on good academic performance to achieve optimal academic results. Art therapy classes can help students to better understand themselves, their emotions and reactions to stress, and to develop skills of emotion regulation. The article establishes that art therapy can be an effective intervention for university students, fostering emotional stability and improving mental well-being through a structured, safe, and creative setting for the exploration of emotions and thoughts.*

Keywords: *efficiency; implementation; self-expression; improvement; opportunity.*

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1. Introduction

In the West, teachers began employing art therapy in the 1940s to assess challenges in articulating cognitive and emotional experiences. As a branch of expressive therapy, this approach allows individuals to explore and express their emotions symbolically, facilitating emotional insight and development.

Researchers, psychologists, and higher education professionals worldwide have examined the role of art therapy in fostering the mental and psychosocial development of university students.

Voloshyna (2013) asserts that increasingly, art therapy is viewed as a means of progressive psychological support for students, promoting the development of a healthy and creative personality and facilitating the practical implementation of personal socialisation processes, such as adaptive, corrective, mobilising, regulatory, rehabilitative, and preventive processes.

Yalanska & Atamanchuk (2019) noted that "training in the visual arts and the development of the creative potential of the individual proved to be positive, which contributed to the use of art therapy techniques by specialists of traditional psychological directions and universities". Currently, this approach is recognised as a psychotherapeutic practice targeting affective states rather than pathological conditions, and it can be applied without requiring particular creative or artistic abilities, while also facilitating the regulation of these states.

Familiarisation with art therapy techniques allows students of educational institutions to apply them in their future professional practice. According to practitioners in the field, art therapy promotes positive emotional experiences in students, counteracts apathy and lack of initiative, and encourages the development of an engaged and active outlook on life.

Duong, Stargell, & Mauk (2018) identified that a key issue in contemporary professional education is the design of pedagogical and methodological support, encompassing the introduction of novel approaches to enhance the learning system, elevate instructional quality, advance scientific cognition, and promote the development of both general cultural and professional competencies among students.

The purpose of the article is: to consider art-therapeutic techniques and methods of improving the capabilities of university students; to analyse the development of emotional stability in university students through art therapy; and to substantiate the formation of a student team and positive emotional state by means of art therapy. The empirical study was aimed at investigating the impact of art therapy practices on improving the mental and physical abilities of students in higher education institutions.

Art therapy provides students with opportunities to better comprehend their emotions and reactions to stress and to cultivate effective emotion regulation strategies.

2. Art Therapy Techniques and Methodologies to Improve the Capabilities of the University Students

The integration of art-therapeutic techniques in higher education enables the enrichment of psychological and pedagogical approaches, the diversification of instructional methods and organisational practices, and promotes the regulation of students' emotional well-being alongside the development of their mental and physical abilities.

Art-therapeutic techniques can be used to recognise intra- and interpersonal conflicts in groups of university students, crisis states, stress, and psychosomatic disorders. It should be noted that such practical classes are important for first-year students who go through a period of adaptation to higher education, and the pedagogical activity in such a mode promotes successful adaptation and harmonisation of interpersonal relations in small social groups, as well as the formation and improvement of communication competence.

Price & Swan (2020) noted that the culture of communication is considered as a multilevel and multifunctional system of interaction. In this regard, this category is characterised as a psychological and pedagogical phenomenon reflecting the worldview of the individual and the level of their professional development. The culture of communication includes: the ability to express

one's opinion meaningfully, grammatically correct manner (orally and in writing), using different sources of information; the ability to navigate in sociocultural situations; self-determination in society; the ability to correctly recognise the personal characteristics and emotional states of other people; the possession of self-regulation techniques, empathic skills and abilities, basic strategies, tactics of conflict resolution and avoidance.

Jung, Isaeva, & Vishtalenko (2018) suggested that art therapy techniques are a method of training these competencies, as well as a means of free self-expression and self-discovery. Teaching in this format should create an atmosphere of trust, high tolerance, and attention to the inner world of the student. The process of free creativity provides emotional relief, brings joy to all participants, and requires from the teacher to possess pedagogical skills and high psychological culture.

In contemporary circumstances, events in economics, politics, and family often give rise to psychological problems and worries, which are not easy to cope with individually. In the pace of continuously running affairs, people often forget to take care of their peace of mind and mental health. The development of emotional stability is one of the real problems in psychological science and practice.

According to Sknar (2012), the creative product resulting from students contributes to a positive mood. Working individually, students create a projection of what gives them joy and pleasure.

After performing the exercise, students share their impressions and present their creative product in a public performance. The drawing technique is used in courses such as *Psychology of Communication and Interpersonal Relations*. Students are divided into three groups and work in subgroups to create their own "island", identifying the roles, and functions of the project participants in the overall drawing. This creative process focuses on the ability to socialise, demonstrate micro-group management skills, communicate without conflict, and find compromise.

Mandala drawing is another facet of art technique that instructors use in their hands-on classes to enhance the mental and physical abilities of university students. It is a symbolic representation of a person's inner world, a circular image, drawing in a circle (Voznesenska, 2015).

At the current stage of development of psychology, mandala drawing is used as a possible form of projection of the unconscious through which one can learn more about oneself. A mandala drawn on paper reflects the mental state of its creator.

This represents, through drawing, a reflection of the surrounding social reality and its modelling, as well as an expression of attitudes towards it. It has been established that drawing develops sensorimotor coordination, as it requires the coordinated involvement of many mental functions, activating specifically the figurative thinking associated with the right hemisphere, and the abstract-logical thinking, associated with the left hemisphere. When working with this technique, the instructor draws the attention of university students to the fact that when drawing, a person works with the dominant hand on their conscious mind, and with the subdominant hand on their unconscious.

Art-based interventions can serve to modulate psycho-emotional states during both the introductory phase and ongoing professional activity. The practice of drawing mandalas and interpreting visual expressions facilitates self-understanding, emotional expression, and the release of negative affect (Sarita & Sonia, 2015).

Collage is a visual art therapy technique in which different and heterogeneous materials are applied to any surface. The work is done in small groups. The aim of the class is to develop ideas and consolidate knowledge on the topic, methods, and the classification of historical epochs. The work is done with the help of handouts, followed by a public presentation of the topic. Participants will receive scientific publications on the topic of the class.

Students are given the following tasks: to familiarise themselves with the article material; to highlight the most important points; to isolate important information and present it with the help of a collage; to convey the result of the joint activity to their peers in a clear, understandable, and accessible oral presentation. All students in the small group can participate in the presentation,

followed by a group discussion. Collaboration is successfully used in classes on the subject of *Psychology of Health and Healthy Lifestyle*. A group of students is divided into subgroups and receives structured guidelines for carrying out the work.

The following materials can be used to carry out the method: magazines, pens, scissors, glue, paperboard, coloured paper, plasticine, pieces of fabric, etc.

The teacher does not set any limits to the students' imagination in using the available materials. The process is divided into several stages: brainstorming (idea generation and ability to make decisions together); distribution of roles in the group (leader, designer, administrator, etc.); realisation of ideas in the team (creative and technical work of selecting images and placing them on the board for collage). At the end of the project, the group shares their reflections on the work done, expressing their feelings and insights. University teachers note that the collage technique fulfils a developmental, educational, and sociocultural function, contributing to the group cohesion and collective understanding of healthy lifestyles.

Modelling is considered to be the creative means of self-expression and a psychotherapeutic “tool” for self-therapy. This technique is more labour-intensive and has a positive effect on psychophysiological processes.

The use of art-therapeutic techniques in practical classes represents a complementary process. For students, it facilitates optimal adaptation, fosters positive emotional experiences, and promotes learning through integrated cognitive and emotional engagement, thereby increasing interest in the application of psychological methods. For teachers, it provides opportunities to exhibit pedagogical skill, creativity, and derive professional satisfaction (Sanders, 2013).

Here are some examples of how art therapy is used in universities: individual art therapy sessions, where students can work with an art therapist in individual sessions to explore their emotions, thoughts, and experiences; group art therapy sessions, where students can participate in group sessions to connect with others and create together.

Art therapy can be integrated into various academic disciplines, such as psychology, pedagogy, and social work, thereby enriching students' learning experiences. Additionally, it is particularly valuable for students with disabilities, mental health conditions, or other special needs, providing targeted interventions that support emotional well-being and personal growth.

Nolan (2013) maintains that art therapy can be an effective method to improve the mental and physical abilities of university students. Statistically, students who participated in group art therapy sessions had lower levels of stress and anxiety, as well as higher levels of self-awareness and self-esteem than those who did not participate in these sessions.

3. Developing Emotional Stability in University Students through Art Therapy

There is a rising prevalence of emotional disorders among university students, which profoundly impacts both psychological and physiological health. As a consequence, there are difficulties in adaptation to new conditions of everyday life, disharmony of interpersonal, family relations, stress reactions, and so on. Emotional responses are inherent to human experience, and for certain individuals, emotional outbursts function as a means of discharging psycho-emotional tension. Each person reacts to events differently, with some responding adaptively and others experiencing frustration and difficulty coping.

Student life presents multiple emotional challenges, including academic demands, examinations, financial pressures, and social stressors, which may lead to heightened levels of stress, anxiety, and depression. Engagement in art therapy can assist students in regulating emotions such as anger, anxiety, and sadness, while promoting resilience to stress and adversity (Nerubasska, Palshkov, & Maksymchuk, 2021).

Art therapy groups facilitate social connection among students and help mitigate feelings of loneliness. By engaging in artistic activities—such as drawing, collage, or poetry—students can explore and articulate their emotions, documenting their thoughts, feelings, and experiences in a reflective, creative manner.

University students may listen to music, play musical instruments, or sing to express their emotions and relieve stress. Van Lith et al. (2021) argue that art therapy can be a valuable tool to help students develop emotional stability and improve their mental well-being.

An emotionally unstable personality tends to exhibit anxiety, nervousness, and depression. Such individuals tend to experience insecurity and, when placed in a stressful situation or criticised, they have difficulty regulating their emotions.

The use of art therapy in classes has distinct features and characteristics: it actualises the inner potential of a person, forming the basis for positive personality development. During individual art-therapeutic work, attention is directed to the individual inner world, their own thoughts, emotions, feelings, and desires.

According to Ilchenko (2013), art therapy methods are based on the belief that the “ego” of a person is reflected in visual images whenever they spontaneously create: draw, paint, sculpt, etc. This process does not require special abilities, but relies on elementary artistic means. During the creative process, the student should not worry about the beauty and perfection of the images created but rather the process of liberation from negative feelings and experiences. In the process of creating an artistic product, students turn to the symbols of the individual and collective unconscious - the deep symbols of personality. While creating a product, young people encounter not only their own inner world, but also the outer world. This interaction has powerful therapeutic potential, contributing to successful individualisation and socialisation.

In educational settings, art therapy serves as a vehicle for student personal development. It provides the conditions necessary for cultivating key professional and personal competencies, guided by Rogers’ (2021) triad: congruence (authenticity, openness, and self-trust), acceptance (recognition of others’ individuality and potential), and understanding (empathic insight into others’ emotional states). Art therapy sessions integrate innovative techniques with personality-focused interventions, while group work enhances sociability, openness, and mutual trust.

The use of art therapy with university students allows them to better understand themselves and their inner world, which is reflected in the formation of professional competencies of future psychologists. It can be argued that the inclusion of art therapy for the psychologists' education meets the fundamental human need for self-actualisation - the discovery and improvement of capabilities, the establishment of individuality, and the unique way of being.

University students involved in art therapy demonstrate reduced susceptibility to negative emotion-inducing factors, improved regulation of asthenic emotions, and increased emotional stability. This method contributes to the reduction of vulnerability, isolation, negativism, and promotes the growth of emotional balance. Art-therapeutic interventions positively affect emotional states, supporting the regulation of negative experiences, promoting the development of communication skills through engagement with personal creations and social interaction, and fostering a heightened sense of personal significance.

4. An Empirical Study on Improving the Mental and Physical Abilities of Higher Education Students in the Context of Art Therapy

To ensure scientific validity, standardised methodologies adapted and validated in international practice were employed: 1) Schulte tables, a classical test for assessing attention stability and switching, applied according to the modification recommended by the European Federation of Psychologists’ Associations (EFPA) (2024); and 2) the “Mnemotech” method for evaluating short-term memory capacity (Caplan & Stern, 2017).

The methodologies were implemented in three stages: 1) prior to the commencement of the art therapy intervention (baseline); 2) after four weeks of sessions (intermediate assessment); and 3) upon completion of the eight-week course (final assessment).

The empirical study was aimed at investigating the impact of art therapy practices on improving the mental and physical abilities of university students. The primary aim was to

determine the efficacy of regularly applied art therapy in promoting cognitive performance (attention, memory, and reasoning) and enhancing the psychophysiological health of youth.

To achieve this goal, the following tasks were set: to theoretically substantiate the possibilities of art therapy in the educational space; to develop an art therapy intervention programme; to empirically study the dynamics of changes in cognitive and physical indicators; to conduct a quantitative and qualitative analysis of the results.

A sample of 50 students (aged 17–22) from one of Ukraine's higher education institutions was formed and randomly divided into two groups: an experimental group (25 people) that underwent art therapy and a control group (25 people) that studied in the usual manner without additional interventions.

The art therapy programme, which was implemented over a period of 8 weeks, included:

- colour therapy (working with colour associations);
- drawing on the theme of emotions;
- body-oriented art therapy (physical activity through creative exercises);
- music therapy sessions (listening to and creating musical fragments);
- free artistic self-expression.

Data collection methods also included participant questionnaires, observation of changes during classes, and expert assessment by a psychologist and programme trainer.

The collected data were processed using statistics methods (Student's t-test), which made it possible to establish the reliability of differences between indicators before and after the introduction of art therapy measures.

5. Art Therapy as a Means of Forming a Student Community and Promoting a Positive Emotional State

One of the most important components of work with university students is the formation of teams. It is in the university years when the socialisation skill is laid down: such as initiative, idealism, creativity, purposefulness, which emphasise and shape the individuality of each individual.

Art therapy is a powerful tool for team building, offering students a safe and creative space for self-expression, communication, and collaboration, which can lead to improvements in the following factors: art therapy can help students feel more connected to each other by creating shared experiences and common goals; it can help students communicate better with each other, both verbally and non-verbally; it can help students develop empathy by understanding different perspectives and experiences; it can improve the conflict resolution.

Here are some examples of how art therapy can be used in team building: collaborative art projects (students can work together to create collaborative works of art such as murals, collages, or theatre productions); individual art therapy (students can participate in individual art therapy sessions to explore their feelings and experiences in a creative way). The vast majority of negative emotions lead to disorganisation in mental activity, depletion of mental resources, leading to emotional instability.

In a student group there are dynamic processes of structuring, formation, and change of interpersonal relations, distribution of group roles, as well as emergence of leaders. In modern educational practice, there is a rising interest in art therapy, which is being actively advanced both internationally and within our country.

Group cohesion contributes to the creation of new creative ideas and social connections.

The formation of a student team is necessary for the realisation of formal goals:

- 1) to meet the educational goals set by the institution;
- 2) to manage the student group;
- 3) to create any project, startup, etc.

In addition, the formation of a student collective is necessary for the realisation of informal goals:

- 1) to rally students into a collective for informal interaction;
- 2) to improve the socio-psychological climate in the life of the student group;
- 3) to form the spirit of competition among student collectives
- 4) to develop primary socialisation skills;
- 5) to build psychological confidence.

Art therapy is currently considered one of the gentle yet effective methods used in the work of psychologists and educators. Its proposed methods are universal and can be adapted to different tasks: from solving problems of social and psychological maladaptation of individuals with special health conditions to the development of human potential, using various forms of creative activity in order to express a mental state.

Malchiodi (2003) stated that “art therapy uses a set of corrective exercises concerning general physical development, emotional development, speech (verbal) development, which in general has a positive effect on social progress, and also positively affects the communicative skills of a person, their ability to resolve conflicts and interact in a team”.

Art therapy develops creative and imaginative skills and creates a positive emotional state in children, adolescents, and adults within the group. The directions of art therapy are based on the specifics of different types of art. Art techniques offer teachers broad opportunities for integration into pedagogical activities. Their use supports the development of key cultural and professional competencies among university students, such as critical analysis of worldviews and social issues, commitment to self-improvement, proficiency in public speaking and debate, application of management methods, organisation of collective work, and the capacity for responsible decision-making in pluralistic contexts.

Emotions have an intrinsic motivating value in the learning process. It should be noted that the emotional factor is especially important for disciplines of the humanities disciplines, especially foreign language, because learning takes place in situations of communication with a partner, and communication can be emotionally coloured.

Kumar et al. (2021) note that “the formation of positive emotional states of students by means of art therapy is one of the conditions for the effective formation of their health-preserving competence”. This condition embodies the principle of positivity. Experienced emotions change the composition of subjective experience, shape evaluations that determine the attitude to perceived objects, situations, and behaviours.

According to Liebmann (2004), “the systematic use of art therapy elements in classes is highly effective for creating emotional comfort”.

Art therapy is one of the promising approaches in pedagogical work, based on the integration of musical activity and therapy (music therapy) and visual activity and therapy (isotherapy) (Martínez-Vérez et al., 2024). The term “therapy” in pedagogy is regarded as the preservation of mental health. Art therapy is characterised by an abundance of various techniques, types, ways, and directions of its implementation. The basis of this therapy is free creation, self-expression of a person, active participation of everyone in the creative process, and the need for systematic and continuous organisation of classes.

Innovative art therapy methods demonstrate high effectiveness in developing cognitive functions (attention, memory, thinking), reducing psycho-emotional stress, and improving the overall somatic condition of students.

Neurographics as a means of cognitive mobilisation is a method that activates associative thinking, spatial imagination, and visual coding of information. Drawing certain lines and shapes promotes concentration, reduces mental fatigue, and harmonises the psycho-emotional state. The method can be easily integrated into breaks in work or study.

Body-oriented art therapy is an approach based on a combination of physical exercises, body movements, drawing, and breathing exercises. It activates both hemispheres of the brain, improves neuromuscular control, and relieves tension in the body that builds up during long periods of sitting while studying. At the same time, students develop awareness of their bodies and movements, which has a positive effect on physical endurance.

Musical-visual integration is the combination of auditory (music) and visual (drawing, colour) stimuli that leads to cross-modal stimulation of the brain. This promotes the synchronisation of the brain hemispheres, improves concentration, and reduces anxiety levels. During such exercises, students can interpret their emotions through colour and sound, which strengthens emotional intelligence.

An artistic diary in the form of reflection on learning is a method that allows the combination of creative expression, learning material, and emotional states. Not only does it promote memory development, but it also allows students to organise their own internal space. Art journals can be used as visual notes or psycho-emotional diaries for self-development.

Digital art therapy uses digital tools (tablets, mobile apps, artificial intelligence platforms) to create images as part of self-discovery. These techniques are accessible because they combine familiar digital interfaces with deep internal processes. This method is particularly effective for visualising goals, overcoming procrastination, and developing abstract thinking.

With the help of these methods, interpersonal and intrapersonal conflicts, crises, anxiety, stressful states, and psychological traumas are successfully worked through and further resolved.

Currently, there is an active development of the art therapy method—new directions appear, reflecting the changes occurring in the psyche of modern people and individuals in general.

6. Conclusions

The introduction of art therapy techniques in the educational process of universities allows for the expansion of psychological and pedagogical approaches, as well as to diversify pedagogical technologies and forms of organising work with students, and contributes to the regulation of the psycho-emotional state and the improvement of students' mental and physical capabilities.

The system-organisational process within the framework of counselling and art therapy applied on the basis of requests helps students to realise their problems and find ways to solve them.

In this article, art-therapeutic techniques and methods of improving the capabilities of university students were examined, the development of emotional stability in university students with the help of art therapy was analysed, and the formation of student teams and positive emotional state by means of art therapy was substantiated.

In the article, it is proved that the use of art therapy method allows one to form a positive attitude towards the surrounding world, to acquire skills of choice and decision-making, to learn adequate ways of reacting in problematic and stressful situations - it creates all conditions for improving the quality of his educational and professional activity.

Analysing the advantages, it can be concluded that art therapy techniques are "soft" and have a universal psychotherapeutic and psycho-corrective influence on the personality of university students. Drawing therapy, or isotherapy, arouses the greatest interest in practical classes with students.

References

- Caplan, J. P., & Stern, T. A. (2017). Mnemonics in a nutshell: 32 aids to psychiatric diagnosis. *Current Psychiatry*, 7(10), 27–32. https://cdn.mdedge.com/files/s3fs-public/Document/September-2017/0710CP_Article2.pdf
- Duong, K., Stargell, N. A., & Mauk, G. W. (2018). Effectiveness of coloring mandala designs to reduce anxiety in graduate counseling students. *IAFOR Journal of Arts & Humanities*, 8(1), 27–39. <https://doi.org/10.22492/ijah.8.1.03>
- European Federation of Psychologists' Associations. (2024). EFPA model for the review, description and evaluation of psychological and educational tests: Test review form and

- notes for reviewers (Version 5.0).
https://www.efpa.eu/sites/default/files/2024-11/2024-11-18_test-review-model_draft-for-consultation.pdf
- Ilchenko, I. S. (2013). Art-terapiya [Art therapy]: Textbook for students. *Visavi Publishing and Printing Center*. <https://moodle.znu.edu.ua/mod/url/view.php?id=107384>
- Jung, N., Isaeva, T., & Vishtalenko, O. (2018). Features of anxiety in university students and features of correction by art-therapy. *Bulletin of Taras Shevchenko National University of Kyiv. Series: Psychology*, 2(9), 91–94. [https://doi.org/10.17721/bsp.2018.2\(9\).23](https://doi.org/10.17721/bsp.2018.2(9).23)
- Kumar, G., Feng, A. P., Kua, L. E. H., & Mahendran, R. (2021). The art of remediating age-related cognitive decline: Art therapy enhances cognition and increases cortical thickness in mild cognitive impairment. *Journal of the International Neuropsychological Society*, 27(1), 79–88. <https://doi.org/10.1017/s1355617720000697>
- Liebmann, M. (2004). Art therapy for groups: A handbook of themes and exercises. *Brunner-Routledge*.
<https://www.taylorfrancis.com/books/mono/10.4324/9780203420720/art-therapy-groups-marian-liebmann>
- Malchiodi, C. A. (2003). Handbook of art therapy. *The Guilford Press*.
https://www.researchgate.net/publication/257053298_Handbook_of_Art_Therapy_Cathy_A_Malchiodi_Ed_The_Guilford_Press_New_York_and_London_2003_461_pp_US_4800_harcover
- Martínez-Vérez, V., Gil-Ruiz, P., & Domínguez-Lloria, S. (2024). Interventions through art therapy and music therapy in autism spectrum disorder, ADHD, language disorders, and learning disabilities in pediatric-aged children: A systematic review. *Children*, 11(6), Article 706. <https://doi.org/10.3390/children11060706>
- Nerubasska, A., Palshkov, K., & Maksymchuk, B. (2020). A systemic philosophical analysis of the contemporary society and the human: New potential. *Postmodern Openings*, 11(4), 275–292. <https://doi.org/10.18662/po/11.4/235>
- Nolan, E. (2013). Common ground of two paradigms: Incorporating critical theory into current art therapy practices. *Art Therapy*, 30(4), 177–180. <https://doi.org/10.1080/07421656.2014.846205>
- Peace Paper Project. (n.d.). *Peace Paper Project*. <http://www.peacepaperproject.org>
- Price, E. W., & Swan, A. M. (2020). Connecting, coping, and creating: An expressive arts group for first year college students. *Journal of Creativity in Mental Health*, 15(3), 378–392. <https://doi.org/10.1080/15401383.2019.1685924>
- Rogers, C. (2021). Client-centered therapy: Its current practice, implications, and theory. *Mariner Books*.
- Sanders, J. (2013). *Art therapy – a review of methodology* [Unpublished master's thesis]. St. Catherine University, Sophia. https://sophia.stkate.edu/msw_papers/257/
- Sarita, & Sonia. (2015). Academic stress among students: Role and responsibilities of parents. *International Journal of Applied Research*, 1(10), 385–387. <https://www.allresearchjournal.com/archives/2015/vol1issue10/PartF/1-10-3-925.pdf>
- Sknar, O., & Rebrova, K. (2012). Art-tekhnika «kolazh»: diahnostychnyy i terapevtychnyy potentsial [Art technique “collage”: Diagnostic and therapeutic potential]. In *Art therapy space: Legacy of a decade*, 125–137. Kyiv. <https://evnuir.vnu.edu.ua/bitstream/123456789/19059/3/61-54-56.pdf>
- van Lith, T., Cheshure, A., Pickett, S. M., Stanwood, G. D., & Beerse, M. (2021). Mindfulness-based art therapy study protocol on determining efficacy in reducing college stress and anxiety. *BMC Psychology*, 9, 134. <https://doi.org/10.1186/s40359-021-00634-2>
- Voloshyna, M. (2013). Art-terapiya u roboti zi studentamy v period adaptatsiyi do navchannya [Art therapy in the work with students during the period of adaptation to study]. *Psychologist*, 13–14, 107–112.

https://pedagogy.lnu.edu.ua/wp-content/uploads/2016/10/art-therapy_Adaptaziya-pershokursn-118-121.pdf

- Voznesenska, O. (2015). Vykorystannya mandaly v mediaosvitnikh zanyattiyakh [Use of mandala in media education classes]. In *Art therapy space: Collection of scientific articles, 1*, 22–30. Kyiv. <https://mediaosvita.org.ua/book/vykorystannya-mandaly-v-mediaosvitni/>
- Yalanska, S., & Atamanchuk, N. (2019). Art-ecopsychopractice in the educational space. In *Proceedings of the 1st International Scientific Conference Eastern European Conference of Management and Economics*, 266–269. Ljubljana School of Business. <http://reposit.pntu.edu.ua/handle/PolNTU/6830>