



New Art Therapy Technology - Quilling

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Abstract

This research work aims to study the main features of quilling technology in art therapy, as well as its impact on group and individual consciousness. The study's methodological approach was the search and theoretical analysis of thematic literature studying the quilling technique of art therapy, as well as art therapy in general. In this article, the theoretical method, the method of comparative analysis, as well as the method of pedagogical experiment were used. As a result of the scientific research, the technology of art therapy as such was analysed, and its components and influence on children and adults were studied. Also, after performing a pedagogical experiment, the influence of quilling technology on students of Al-Farabi Kazakh National University was studied, and the results were analysed. According to the results of the pedagogical experiment, quilling art has a positive effect on individuals, as well as on the general mood of the group, and the use of the quilling technique as an art-therapeutic tool brings positive changes to the psychosomatics of an individual and a group in general. This research work is of practical importance in the study of the art of quilling as an art-therapeutic method in the development of fine motor skills in the hands of adults and children, as well as the improvement of the psychological state after psychological traumas of various kinds.

Keywords: arts and crafts; art of quilling; art pedagogy; artistic design; art therapy

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INTRODUCTION

Art therapy occupies one of the leading places in both the psychological and pedagogical practice of teachers and therapists around the world. Quilling as an art has existed since the 16th century, and as a mass hobby, it has spread since the 90s of the last century. Quilling has been used in art therapy from the beginning of its creation, like any other art. The importance of quilling technology in the key of art therapy lies in the fact that the quilling technique is a universal link for

the education and rehabilitation of people of different ages. Therefore, studying the area of influence of quilling technology is an important part of research in the field of art therapy. Art therapy today is an integral part of the education and development of children in school lessons, in kindergarten, and in the office of a child psychologist. Researchers G. A. Kasen and A. B. Aitbaeva (2019) argue that art was used to heal the soul and body in ancient times – in Ancient Greece, Egypt, Mesopotamia, China, and India. Like priests in their time, healers, philosophers, and today, teachers

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and therapists use art therapy to influence the human psyche; with the help of various types of art, they resolve interpersonal and intrapersonal conflicts, problem states, and psychological traumas of a person. As a professional activity, art therapy began its development in connection with psychotherapy after the Second World War in the United Kingdom. Over time, it began to be used in pedagogy, which gave rise to art pedagogy as a self-sufficient direction in education.

The researchers M. Joseph and L. O. Bance (2019) expressed their opinion on the application of art therapy, which is that visual art therapy for sexually abused children can have a very real effect. Joseph and L. O. Bance (2019) created thirteen modular interventions that combined art therapy with self-compassion theory and shame resilience theory, as well as compassion-focused therapy to develop an intervention program for girls who have been sexually abused and to increase self-compassion and reduce shame about trauma. It must be agreed that such a strategy for the use of art therapy and the art of quilling as art therapy techniques, positive results based on art therapy practices say that the use of art therapy, quilling, in particular, is successful in this sphere of influence of therapists.

Researchers H. Barrett, S. Holttum, T. Wright (2021), who studied the theory of art therapy for people suffering from psychosis and their response to art, argue that creativity provides clients of art therapists with a space to express, as well as store their feelings, needs, desires, and fears in art work. This approach may help start a dialogue and allow them to change their attitude towards their work and themselves. Creativity, quilling in particular, helps people who desire it to express in non-verbal and bodily form what an art therapist can later explore through a therapeutic dialogue.

According to researchers J. Hu et al. (2021), art therapy and quilling, in particular, as methods of non-verbal psychotherapy and art pedagogy, serve not only

as an auxiliary means of diagnosing certain diseases but also, in turn, are useful therapeutic methods. Such methods help children and adults open up to a teacher or a doctor and share personal feelings, views, and even experiences that a child or an adult is experiencing. I. Orlenko and O. Balbuz (2022), who studied the impact of art therapy in developing and training groups on introspection and self-attitude, argue that art therapy is the key to self-knowledge, which is achieved by comparing oneself with other people and deep introspection, which creates the basis of an emotional-valuable self-attitude. It is important to understand that the art of quilling or other art therapy techniques exists for self-improvement and knowledge of oneself and others, which a person strives for throughout his life.

This study aims to study the effect of quilling technology on the mood and general tone of the group and individuals in conjunction with other art technologies.

METHOD

The methodological basis of this research work, which studied the universal technology of art therapy – quilling or paper rolling, was the following methods: the method of comparative analysis and the method of pedagogical experiment. Using the comparative analysis method, it was possible to compare the mechanisms of influence of quilling techniques in different situations and in different areas of pedagogy and therapy that require or allow the intervention of art therapy. Also, in this scientific article, the method of pedagogical experiment was used, as a result of which the influence of quilling technology, as a universal art-therapeutic method, on students of different courses of Al-Farabi Kazakh National University was studied. In the work on this scientific article, a lot of information sources of Kazakh, Russian, and American origin were used, which formed the basis of the theoretical part of this work on the study of quilling technology. This scientific work, in which the art of

quilling was explored as a new technology of art therapy practice and a pedagogical tool with universal spheres of influence and application, was carried out in three successive stages.

At the first stage of this scientific research article, an extensive system analysis of information was collected and carried out, which, in turn, helped in shaping the main research problems of the quilling technology of art, as well as in highlighting the spheres of influence and application of this technology of art therapy in practical classes art educators.

During the second stage of work on the article, the work of researchers who helped shape the future development of art therapy practice through quilling technology was considered. Also, at this stage of the study, a pedagogical experiment was conducted on the basis of the Kazakh national Al-Farabi Kazakh National University, which showed the impact of the new quilling art therapy technique on the perception of themselves and their own self-esteem. The experimental group included 100 people aged 22 to 24 who were students of different courses at the time of the pedagogical experiment. The experiment was conducted on the basis of Al-Farabi Kazakh National University. Classical pedagogical experiment methods were used, including observation of the subjects. The method of analysing the works and answers that the participants entered into the Wessman-Ricks emotional state questionnaires was also used to assess thinking. Also, at this stage of the work on the article, in addition to quilling, other art therapy technologies, such as music therapy and colour therapy, were used.

Upon completion of the experiment of this scientific study, a qualitative assessment of the results was carried out, in particular, an analysis of the work using quilling technology and the assignment of each work of the subject to the categories of diversity of thinking, as well as positive or negative perception. During the third stage of this study, an analysis of the work was performed in the experimental group

to calculate the degree of self-perception by students and their emotional state using group therapy based on the synthesis of quilling technology and colour therapy. During the last stage of the research work, the results that were formed during the work on the research topic were summarized.

RESULTS AND DISCUSSION

Art therapy, in its original form, is a form of psychotherapy which is expressed through artistic means. At its core, the art of art therapy is a very appropriate kind of activity for the development of children, which allows hearing their voices and understanding their needs (Desmond et al., 2015), as well as an auxiliary element for restoring the mental health of adult members of society. Moreover, through artistic expression, people gain more knowledge about themselves, developing their self-esteem as well as necessary social skills. It is important to remember that art therapy's primary goal is to harmonize all spheres of life of both a child and an adult through the development of understanding and the ability to express themselves and self-knowledge. There are many types of art therapy, besides quilling, which are actively used in the practice of developing children and adults (Figure 1).

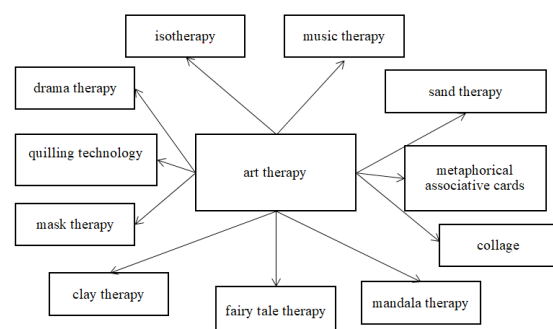


Figure 1. Types of art therapy
Source: (Kalka & Kovalchuk, 2020)

Let's consider all these types of art therapy separately and start from the very beginning – fairy tale therapy, because all children love fairy tales, and it is them that

children hear for the first time, getting acquainted with the outside world with the help of experience gained from favourite fairy tales. Fairy tale therapy is of particular importance for preschool children with severe speech disorders. In such cases, in children with persistent lexico-grammatical and phonetic-phonemic disorders, the spontaneous formation of speech skills is either impossible or disharmonious, and fairy tale therapy will help here. Despite the fact that the development of speech in a child with severe speech disorders is slow and peculiar, in the education system of the 21st century, for the education and development of such children, much attention is paid to the use of a variety of modern technologies that contribute to the most effective correctional and developmental work, that is, fairy tale therapy and other creative techniques, including quilling. In addition to fairy tales in childhood, parents often sing lullabies and funny songs that kids like. Using music and songs, parents calm their children, and in adulthood, music helps them experience difficult moments and enhances joyful moments. But music therapy itself, by and large, is defined as the science-based use of music for therapeutic purposes. It is not as easy and simple as it seems at first glance because it should be noted that music therapists use in their practice the so-called "musical interventions" substantiated by science to fill the spiritual, mental, physical, and emotional needs of a person who turned to a music therapist (Li et al., 2021). With the help of music therapy, both a child and an adult can be both calmed and motivated – the main thing is to choose the necessary type of activity in a music therapy environment.

In a world where there is a huge lack of communication for several reasons, including the coronavirus, drama therapy is one of the most requested art therapy technologies. This kind of therapy involves acting out certain plot touches, which is an integral part of human life (Hood, 2022). The direction of mask therapy in the art-therapeutic environment is the projection

of a person's internal state outward with the help of a mask, which alleviates stress, clamps, and other problematic conditions of a person. Metaphorical associative maps are a popular therapeutic tool among modern practical psychologists and psychotherapists. This method involves using images and texts that affect a person's consciousness, after which he fills them with his own special content. First, metaphorical cards help the therapist understand his client's request and contribute to a deeper understanding of the client's life situation, a look at himself and his life problems from a different angle (Borodulkyna, 2018).

The next type of art therapy is mesotherapy, that is, visual activity, which also has a large field of influence on the psychological component of therapeutic sessions. It should be noted that the most commonly used forms of fine arts are drawing, painting, and photography. In the case of fine art in the form of drawing, illustration, painting, collage, photography, and sculpture, it is used not only as a tool for clinical intervention but also as a diagnostic tool, which gives fine art a universal and innovative character and distinguishes it from other modalities of art therapy (Novo et al., 2021). The essence of collage as an art therapy technique is to create images by combining various photographs, newspaper or magazine clippings, fabrics, coloured paper, wood, wire, and rope, which captivates and relaxes both a child and an adult. Sand therapy in art therapy involves the use of water, sand, stones, shells, and plants. The very process of this type of therapy reduces anxiety in both children and adults (Shariat et al., 2015). Clay therapy also helps to fight anxiety, but it only involves working with plastic materials, that is, with clay. Working with clay stimulates creative thinking and positive emotions (Rankanen et al., 2022).

Mandala therapy, on the other hand, with the help of circular round images, diagnoses and explores the individual's inner world. This type of therapy has important properties for art therapy and is not as common as others. Some research

chers recommend modernizing this type of art therapy with a traditional Kazakh ornament, which carries the sacred values of the national cult, which will not only provide psychological assistance but will also become a lever towards understanding the national heritage and culture (Bukeshova, 2022). All in all, - quilling therapy, historical examples of which have never been considered a "main art form" but have survived to this day (Blake, 2010). New technology of art therapy - quilling is a part of art pedagogy that teachers should use in their lessons in schools where children with special educational needs study. The concept of art pedagogy began to be used by teachers relatively recently, but its usefulness is clear to everyone today. Initially, art pedagogy studies the laws of upbringing and development of a child with the help of art, and this symbiosis of pedagogy, art, and psychology provides an opportunity for a teacher to educate, educate, and develop individuality through art, including people with developmental problems or people with disabilities (Mirzaeva et al., 2021). First of all, creative expression is an effective therapeutic tool for traumatized children, as they convey their emotions and thoughts through non-verbal means, which is creativity and art therapy (DiSunno et al., 2011).

Quilling is one of the most affordable and effective ways to teach art to children and adults because it is of great importance for the development of constructive thinking, as well as their creative imagination and artistic taste. Quilling, as a new art therapy technology, can help even when using the technique with children with cerebral palsy (CP). In spite of everything, art therapy, and fine arts, in particular, have a wide range of properties, means,

and technologies, which in turn contribute to the development of the potential of children with disabilities to neutralize physiological disorders with the help of imaginative thinking and perception. Quilling technique, as art therapy, helps the child to understand their intellectual and emotional personality traits through work in the field of art; a child with CP is gradually "included" in a full-fledged social and emotional life of society. And even though it is generally accepted that art is practiced for the most part, children's art therapy helps not only kids but also older people. Many studies of art therapy treatment of depression in the elderly (Kokun et al., 2011) have shown that drawing and other types of art therapy forms help with depression and can reduce depression, anxiety, and symptoms.

Using the new quilling technology, an experimental study was carried out on the basis of Al-Farabi Kazakh National University. 140 students were invited. A total of 100 out of 140 students gave verbal consent to participate in the experiment. The age of men and women in the study group ranged from 22 to 24 years. Before the beginning of the experiment, the participants were given the V.A. Mozart piece "Little Night Serenade," then they were given Wessman-Ricks emotional state questionnaires (Table 1), where the subjects had to record changes in the emotional background from 1 to 10 at the beginning, after the first stage, at the end of the experiment.

Next, the participants were asked to choose one colour of quilling paper from three primary colours - red, green, and blue. Thus, the group was divided into two parts, by which the initial colour was chosen. The study group included subjects who chose red, and the control group - cal-

Table 1. Table of self-assessment of the emotional state according to the Wessman-Ricks method

| Calmness-anxiety | | | | | | | | | | Energy-fatigue | | | | | | | | | |
|------------------|---|---|---|---|---|---|---|---|----|------------------------------|---|---|---|---|---|---|---|---|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Rise-depression | | | | | | | | | | Self-confidence-helplessness | | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

Source: [19].

mer green and blue. As a result, the following situation has arisen. Red was chosen by 55% of the group (55 people, including 40 women and 15 men). Green was chosen by 25% of the group (25 people, including 12 women and 13 men), and blue by 20% of the group (4 people, including five women and 15 men). After each of the 100 participants chose a colour and was assigned to their group, they were asked to choose one more colour – black or white. After this stage of the experiment, the following situation was formulated (Table 2). In the future, the participants in the experiment had the right to use any amount of paper for quilling, but only the colours chosen earlier.

Next, the participants in the pedagogical experiment were asked to choose a theme for an impromptu quilling figurine, which should reflect the author's feelings at the time of creation through two colours. The proposed topics could display love, anger, contemplation, and so on without disclosing them. Thus, with the help of two colours, the studied students proceeded directly to art therapy using the open-form quilling technique. The open-form quilling technique involves rolling paper without gluing on a sheet of paper – a piece of paper is twisted and simply bends depending on the shape of the curl – inward or outward. During the art therapy process, students actively communicated with each other in groups and outside the groups. Observing the course of the experiment, the authors of this scientific article claim that the quilling therapy technique, supported by verbal and non-verbal components, improved the tone of mood even

in skeptical participants, and they showed a desire to change the initial choice of colour and mood of the constructed figure, which was also reported in the questionnaires, received earlier.

After 10 minutes after the beginning of the active phase of the experiment, the subjects were asked to choose one colour from the three main ones again. The general picture of mood and atmosphere among the participants changed qualitatively. Those participants who previously chose saturated and bright colours preferred calm and airy ones. According to the results of the repeated experiment, only 15% of the group (15 people, including 7 women and 8 men) chose the red colour. Green was chosen by 45% of the group (45 people, including 35 women and 10 men), blue – 40% of the group (40 people, including 15 women and 25 men). Then the procedure was repeated in relation to black and white colours and the choice of subjects with further work in the quilling technique. L. Beethoven's 4th movement of Symphony No. 9 "Ode to Joy" was included in this research stage. At the end of the experiment, the participants were asked to demonstrate their figures and explain the reasons for one or another scheme's creation after the first and repeated stages of the experiment using the quilling technique.

According to the answers and observations over the course of the experiment, the following conclusion was made. The active red colour in the first stage of the experiment was chosen by 55% of the test audience, which shows a negatively minded part of the participants, and this percentage is 40% higher compared to the second

Table 2. Selected colours by the participants of the pedagogical experiment and their percentage

| Main colours | Colours | | | | | |
|-------------------------------------|-----------------|-------|-----------------|-------|-----------------|--------|
| | Study group | | Control group | | | |
| | Red | | Green | | Blue | |
| | 55% (55 people) | | 25% (25 people) | | 20% (20 people) | |
| Additional colours | Black | White | Black | White | Black | White. |
| Number of people who chose a colour | 38 | 17 | 4 | 1 | 3 | 1 |
| | 38% | 35% | 20% | 5% | 15% | 5% |

Source: compiled by the authors.

part. Many of the participants who, during the quilling therapy, expressed a desire to change their colour preference were precisely from the first group of subjects who initially chose red. Analysing the data obtained from the questionnaire, which used the Wessman-Ricks method of self-assessment of the emotional state, it can be argued that the symbiosis of art therapy techniques, namely quilling, music therapy and colour therapy, have favourable qualities that have a positive impact on the emotional component of human consciousness. Calculating the integral indicator of the emotional state of the subjects, the following formula was used:

$$ES = (I1 + I2 + I3 + I4) / 4, \quad (1)$$

where: ES is an integral indicator of the emotional state, I1, I2, I3, and I4 are individual indicators according to the corresponding scales.

According to the results of this experiment, the indicator of the emotional state before therapy averaged 1-3 points in the study group and 4-5 points in the control group, which is characterized as a very bad and worsened mood, respectively, disinterest of the participants, and a depressed state. After the first active stage of the experiment in the quilling technique, the emotional tone of both groups of students improved – the subjects began to request other colours, became more animated, and became more interested in the lesson. According to the questionnaire, both students stopped at 6-7 points, which is interpreted as a good emotional state of the participants. After changing the colour of materials for quilling therapy, as well as changing the atmosphere, which gave “Ode to Joy” by L. Beethoven, the subjects of both the study and the control group were on 8-10 points of the school of emotional state, which confirms the positive impact of quilling as art therapy technologies in interaction with other art therapy techniques.

With the help of quilling technology, students focused their emotions on therapy and directed them in a positive

direction. It was possible to achieve the best results against their emotional background by complementing quilling therapy with musical accompaniment, and colour preferences of the subjects, and the verbal component, . Thus, at the end of the experiment, it was concluded that with the help of art therapy, the group tone of the mood of the therapy participants was adjusted. For students of the Al-Farabi Kazakh National University, visual activity using quilling technology in integration with colour therapy and music therapy is a form of correction of the mood and tone of the participants in the experiment according to external indicators, data obtained from the questionnaire, as well as uniting the group into a single whole.

At the moment, art is not just entertainment or aesthetic recharging but an important part of the psychological and pedagogical world. Not complicated exercises of art therapy technology to hone the fine motor skills of the child’s hands help to activate his thinking develop speech, and, in addition, quilling activates all thought processes. Thus, art therapy technologies can affect children and adults who require stimulation of the body’s physiological functions. Scholars studying traditional art in art therapy A. Arslanbek et al. (2022) argue that when studying art therapy, it is important to understand the therapeutic value and significance of such practice and how it can be used in therapy. Some art practices that therapists and educators use as a form of art therapy have therapeutic qualities that can be used by a large part of the population, which is so influential in the popularity of this type of therapy.

Researchers S. Khedekar et al. (2018) studied the issue of quilling therapy for children. According to researchers, in introductory quilling classes, children begin by twisting pieces of paper to make flat objects, and only after some time do they move on to making three-dimensional figures. It is important to note that the principle of repeatability of actions in this case is cumulative, which will speed up work in the future. Hand activity in a child

with special educational needs improves joint range of motion, increasing muscle strength while reducing functional disability. Manual actions with the hands and fingers have already proven their effectiveness, and the very involvement of the child in the creative process can not only help improve hand motor skills but also increase the child's self-esteem, prevent painful suffering, and keep the baby interested in the therapeutic regimen in order to have a long-term perspective in the fight against the disease. The effectiveness of art, in particular art therapy technique, as a therapy for poorly developed fine motor skills in a child can be explained by the fact that quilling includes fine bimanual finger dexterity, gross motor skills, strength, trunk stability, hand-eye coordination and creative abilities (Ciasca et al., 2018). Thus, working with this technique is a big plus for both children and the elderly since, in connection with the creative process, attention and the ability to concentrate are trained.

According to the researcher of correctional and pedagogical work of a dermatologist using art therapy, V. A. Bilan (2018), creativity is an important method of healing a child, harmonizing it, and, not least, it causes positive emotions in both children and adults, which in turn enriches the cognitive consciousness of a person. Using art therapy in raising a child or as one of the methods of correction, a person learns to create a more confident image of himself as a person, strengthens his self-esteem, becomes confident, and learns empathy. With the help of quilling or other creative therapeutic technique, a person's emotional and cognitive spheres are corrected, which is very important for the development and knowledge of oneself and the world. From this, the conclusion emerges that the child in the process of art therapy in quilling technology, where fine motor skills are involved, begins to accumulate experience in the movement of hands already in the very process of twisting the paper, that is, the subject of examination while playing with it.

In the study, Regev and L. Cohen-Yatziv (2018), where they studied the effectiveness of art therapy with adults, the authors' results should be noted in this regard. According to the study, the art therapy effect on people improves the ability to cope with difficulties, and this is a known fact. But, the fact that it reduces depression and fatigue in cancer patients undergoing chemotherapy also improves the quality of life of women undergoing breast cancer treatment should be noted. According to a study by D. Regev and L. Cohen-Yatziv (2018) individual non-long-term art therapy is beneficial for women with breast cancer. art therapy is used for children and adults with numerous requests for emotional, physical and mental self-balance. When using art therapy under the supervision of a specialist, a wide range of improvements can be achieved and the expected effect or result in therapy can be obtained as a result of this form of treatment.

According to C. A. Malchiodi (2015), in his study of creative intervention with traumatized children, traumatized children very often feel helpless in situations, confused or ashamed, and, as a result, afraid to trust others or their own environment. In such cases, art therapists must develop a productive and positive relationship with these children to enable them to revisit the painful experience, overcome their memories, give them meaning, and find hope for the best. Art therapy is effective not only for children and adults but also for the elderly, as well as J. DeLucia and B. Kennedy (2021) and for veterans. Researchers have studied the use of art therapy for veterans who are experiencing the transition from military service to civilian life. Such a transition is associated with social, emotional, and physical changes, which art therapy and quilling successfully cope with.

When studying how quilling and art therapy affect people diagnosed with psychosis or schizophrenia, one should pay attention to the work of S. Holttum et al. (2021), who explored the path of becoming art therapists who provided therapy to people diagnosed with psychosis. As

a result of the work of S. Holttum et al. (2021), through constant interaction with art, in this case, the art of quilling, and an art therapist who supports the path of recovery, they can both get stuck, detach, and develop. In most cases, people prescribed art therapy develop and open up to their therapist and the world through creativity and communication with the art therapist. But what is important in this case is that the training of art therapists makes the therapists themselves quite stable and flexible in their professional skills. The process of art therapy helps not only patients but also the therapist himself, and this is a big plus for both art therapy and quilling in general. It must be remembered that building a good relationship between the art therapist using quilling and not only with patients is essential for the results of various types of therapy.

Today, art therapy is moving online and becoming digital, which increases the percentage of people interested in this practice. Researchers S. Haywood and B. Grant (2022) studied the dynamics of “virtual” influence on image and art in art therapy practice and argue that the practicality of promoting art therapy on the Internet is a great success factor for art therapists. Researchers propose a new role for digital technologies in art therapy, a new trend in digital art therapy. Quilling, as a new technology of art therapy, is an important part of two areas of science at once – it is pedagogy and psychology, not counting the usual art, which interests researchers in a thorough study of quilling and its ability to influence psychological as well as psychosomatic processes.

CONCLUSIONS

Today, art therapy has gained particular importance in the world of pedagogy and psychology since modern methods and approaches to traditional issues of psychosomatic origin require modern and creative solutions. Studying quilling as one of the new techniques in the art therapy practice of therapists and teachers in

an inclusive educational environment, this study seeks to understand both pedagogical and psychological knowledge of this issue thoroughly. This article analyses the main types of art therapy, as well as the integration of the experience of art therapists through the development of quilling art in the modern psychological segment of the development of rehabilitation of children who have received traumatic experiences and adults who require the necessary therapy, and also studied ways to use quilling therapy, as art therapy technologies. A pedagogical experiment was also carried out on the basis of Al-Farabi Kazakh National University, as a result of which the influence of quilling therapy on the general mood of a group of 20 people was studied. Based on the results of this art-pedagogical experiment, a positive effect of the quilling technique on individual individuals and the general mood of the group and its cohesion was established. Thus, the article’s authors claim that the use of art therapy and quilling techniques, in particular, has a positive value for the creative release of students of Al-Farabi Kazakh National University. The quilling technology and its characteristics, which are positively expressed when used in the pedagogical and psychological aspects, are successful based on the results of the experiment.

Summing up this scientific work, paying attention to the importance of the obtained results for art therapy in general is necessary since quilling, as a new art therapy technique, has an important role in an inclusive environment for both children and adults. According to the results of the performed scientific research, it should be noted that the studied areas of application of the new technology of art therapy – quilling, have great prospects for expanding the area of influence since the creative restoration of both the psychological and physiological components of a person is being actively studied and has a large area of influence, which increases the importance further research on this topic. Studying the problems of using quilling as a new technology of art therapy, that

is, the main components of human creative activity, which are continuously associated with the psychosomatic dimension, it is important to note the need to continue further research in connection with the rapid development and introduction of art therapy in the psychological and pedagogical environment. Future researchers are encouraged to delve into the issue of expanding the use of this industry in the art therapy direction, as well as analyse the development of quilling technology in art therapy in the future.

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