

PARAMETERS OF CREATIVITY IN MODERN PSYCHOTHERAPEUTIC PRACTICE

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Abstract. The principal purpose of the study is to determine and compile the main parameters of creativity and creative thinking that affect psychotherapeutic practice. To achieve this goal, the methods of sequencing influence were applied, which allowed offering our methodological approach to the issue of determining the parameters of creativity and creative thinking that are all suitable for the practice of introducing psychotherapeutic activities. Also, the method of expert analysis was used, and by conducting online interviews and polling leading experts in the field of psychotherapy, a list of the most important parameters of creativity that take place in psychotherapeutic practice was determined. As a result, the set goal was achieved, and it was determined which parameter of creativity has the greatest value and influence on psychotherapeutic activity. The study is of practical value since this methodological approach is flexible and can be applied in the practice of a psychotherapist. The study has limitations and they only relate to the psychotherapeutic activity in Ukraine.

Keywords: creativity, parameters of creativity, psychotherapeutic, psychotherapeutic practice.

Introduction

In modern scientific literature, creativity is defined as an activity, the result of which is the creation of a qualitatively new product, one that is distinguished by uniqueness, originality, and socio-historical uniqueness (it is noted that creativity is a specific property of a person, and therefore without a creator-subject, then there is a creative personality, it cannot be carried out) (Holm-Hadulla, 2020).

Creativity and creative thinking is very special scientific area that includes diverse scientific research, research, and analysis that are interesting and influences ours too. For

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example, Wallace and Gruber (1989), and Sternberg (1988) laid the foundations for the characteristics of creativity and its impact on the work of people in the last century. Of course, times are different now and therefore the parameters of creativity are different.

Creativity has different sides and understanding how to use it correctly and how to get creative thinking in the right direction is an arduous task. Cropley et al. (2010), and Cropley et al. (2014) have addressed this issue. We, of course, took into account their research results when determining the main parameters of creativity for psychotherapeutic practice in general.

In fact, creativity is a very versatile phenomenon and has a lot of specific features. Interesting in this context is the study by Holm-Hadulla (2013), which identifies some of the features of the dialect in this aspect. James (2015), looked at how creative approaches can be used to manage specific groups of people. Of course, this cannot be ignored when conducting your own research, especially when it comes to the activities of psychotherapists, who must feel all this and show creativity precisely in dialects and on the verbal level when there is a place and time for this.

In general, creativity research takes place in different directions (Meshkova & Enikolopov, 2020; Khalid et al., 2020; Kalpokas et al., 2020) and therefore, one should look for special areas of human activity where this creativity is difficult or very specific to apply.

At the present stage of the development of the suite, highly professional creative specialists are needed in connection with the rapid changes in the socio-economic sphere of public life in each country. The question arises of a radical change in the system of training future professionals, which should focus on the challenges of everyday life and provide for their productive solution in the future. First of all, this concerns specialists in the social and humanitarian sphere, who handle a favourable psychological climate in society. At the same time, psychotherapist will certainly be involved in solving precisely these complex problems to provide appropriate assistance to various segments of the population and timely prevent predicted deviations in the psychosocial development of persons of different sex and age.

Each case is deeply unique, therefore, in psychotherapy, it is important to develop a creative approach in order to choose an individual method of working with each. It is creativity that is of great importance in the work of a psychotherapist. But it often happens that a specialist is very squeezed. He is afraid or does not know how to show his creativity, which invariably affects the quality of his work. In our study, we will look at the factors that block the psychotherapist's creativity.

Globally, according to Kalpokas et al. (2020), is the factor due to which the therapist turns from adaptive and creative in the process of his professional activity into stuck and monotonous. This is because very strong attention is paid to the theory and the formal side of psychotherapy. The specialist tries to do everything as written in the textbook. Of course, psychotherapy has a solid theoretical foundation. Each specialist, first of all, must have good theoretical training on which the methods of the particular school in which he works are based. It is not so important what it is: gestalt therapy, what humanistic direction or cognitive-behavioral therapy, but there should be a theoretical basis, foundations. Problems begin when a specialist is afraid to go a little beyond the scope and adjust the theory for a specific person. Instead, he adjusts the person to the theory. With all due respect to science, we work with people, not machines. So, the specialist needs to be a little more adaptable and malleable where possible.

The professional activity of a psychotherapist is largely based on knowledge of the psychological essence of processes and phenomena, broad intuition, reflection of personal life experience, active search for innovative approaches and innovative technologies, cognitive and personal initiative, highly developed intelligence, as well as on the creative potential of the individual.

In psychological terms, today scientists identify several main areas of the place and manifestation of creativity in professional activity and the professional thinking of a practicing psychotherapist, namely (McLeod & Sundet, 2020):

- 1) even more revealing is the role of creativity in formulating a problem and a professional request for clients, in the formation of professional goals and their formulation and forecasting the possibilities of implementation, that is, their implementation and constructiveness in solving the client's problem;
- 2) creativity is manifested in the productivity and quality of solving professional psychological problems (for example, in resolving conflicts). The key skill of a psychotherapist is precisely in the originality of thinking, non-traditional and innovative point of view of a specialist, in a combination of originality, constructiveness, and the reality of implementing a solution, and, finally, in the originality and uniqueness of any “constructive vision” of any, sometimes even complex and (at first glance) hopeless problems;
- 3) creativity is of particular importance in the innovative context of solving professional psychological problems, namely: in the formulation of professional diagnoses, their interpretations, the collection of material for the diagnosis, the use of professional techniques and psychotechnologies of psychocorrection, their updating and combination, in the psychotherapist's ability to find new solutions, technologies, alternatives, and, in general, the need for creativity and professional innovation.

Psychotherapeutic practice is a very special place and there is no way to do it without creative thinking, since the cases that psychotherapist face in their work can be so hopeless that only a creative approach will help.

The features of psychotherapeutic practice and how it is closely related to creativity and non-standard approaches were investigated by McLeod and Sundet (2020), and Doerr-Zegers and Stanghellini (2013), and that is why we have chosen just such a direction of research.

Psychotherapeutic practice and creativity are concepts that complement each other and together give a positive and desired effect. Exploring the works of Bochkova and Meshkova (2019) and Harris et al. (2013), we can see how the parameters of creativity and creative thinking affect the activity of a psychotherapist and how important it would be to investigate this issue in detail.

The development and integration of the psychotherapist's creative abilities in his practice have been considered by scientists for several years already, for example, Holm-Hadulla (2020). In his research attempted to create an integrated psychotherapeutic model, which is based on interdisciplinary research of creativity.

In their subsequent research, Holm-Hadulla and Wendt (2020), explored the benefits of using the dialectic of order and chaos in psychotherapeutic practice, thereby introducing more and more creativity into routine psychotherapy.

In turn, Shubina (2017) in her study attempted to solve problematic moments of psychotherapeutic practice with the help of creative thinking. Thus, creativity plays a significant role in psychotherapeutic practice and requires constant improvement.

Psychotherapeutic practice suffers greatly from a lack of innovation and creativity, which is why we chose this spectrum of research. Ardito and Rabellino (2011), and Fonagy and Luyten (2019), considered how psychotherapeutic practice works now and there are problems, however, in contrast to similar studies, we strive to understand how you can use creativity while understanding that not all types and parameters of creative thinking have the desired effect in practice.

Creativity is one of the key factors in the professional development of the thinking of a practicing psychotherapist, is a unique constitutive education on the verge of the personal and intellectual spheres of a person, and is simultaneously a manifestation and indicator of the level of a person's creative potential.

Consideration of creativity as a process and as a professionally important quality makes it possible to identify both the ability to create and the conditions that facilitate and stimulate this process and the development of the indicated property, and also allow us to evaluate the results of the productivity of professional thinking in the context of the creative potential of the specialist's personality (Glăveanu, 2011).

Despite the significant scientific contribution and significant developments in this area of research, it is currently unclear which parameters are suitable for psychotherapeutic practice of conducting activities and which of them in general have a significant impact and how to calculate it, so we devoted our research to this unresolved issue. Thus, the determination of the parameters of creativity is a determining factor in the further professional development of a practicing psychotherapist. The above literature review shows that a large number of scientists have already tried in researching this topic, so our goal is to conduct further research in this area.

With this in mind, the main goal of the study is to determine and summarize the main parameters of creativity and creative thinking that affect psychotherapeutic practice.

1. Methodology: research objectives and participants

Our research is based on the use of several methods that helped to implement the planned ideas. First of all, it should be indicated what we are trying to do:

- determine the main parameters of creativity that affect the psychotherapeutic practice of the psychotherapist's activity, and
- arrange these influence parameters in such a way as to understand which ones have the greatest influence.

So, first, it is necessary to determine the basic parameters of creativity that affect psychotherapeutic practice. The initial data was obtained through a survey. Thanks to the analysis of the literature, we were able to understand from previous studies how in scientific and practical works it was determined which parameters of creativity are most significant. In order to narrow down the range of questions in the process of conducting our research and survey, to detail and concretize the questions during the interview.

It should also be noted that the axes of creativity parameters are difficult to capture in one study, so we attempted to highlight the most important.

For this, in addition to a detailed analysis of scientific and practical literature, we applied the method of expert analysis and were involved in the survey several professional psychotherapists from Ukraine and Poland to conduct this analysis (Table 1). Thus, the subjects of the study are psychotherapists who underwent the survey process. The research was conducted by the method of expert analysis. Given the current situation with the pandemic in the world, interviews were conducted via the Internet (video chats, e-mail). All specialists are psychotherapists working in Ukraine and Poland. For the study, experts were selected who refer their practice to the school of psychoanalysis. The reason for choosing this branch of psychotherapy was that it is the most popular in Ukraine, in Poland this branch of psychotherapy is also quite common. The age of psychotherapists was in the range of 20–40 years. All of them had higher medical or psychological education. They all specialize in counseling adults. The reason for choosing such a group of experts was the need to take into account the opinions of both practicing psychotherapists and psychotherapists, who are mainly engaged in educational practice. All participants had an idea and were informed about the basic concept of the study and the so-called “skeleton” of the article and its idea.

The interview was conducted in the form of a dialogue, thus it can be considered unstructured. Since the parameters of creativity are extremely subjective, the definition of the latter cannot be reduced to specific questions. During the interview, the respondents confirmed the feasibility of highlighting a separate parameter in the specialized scientific literature and later became a powerful basis for conducting research. After the interview, the most frequently mentioned parameters were highlighted and grouped. The main qualitative method for analyzing the data obtained during the interview was content analysis, which made it possible to identify the main seven parameters of creativity. It should also be noted that in addition to the expert analysis carried out, we also took into account the results of scientific and practical research by leading scientists, who also highlighted

Table 1. Characteristics of the conducted expert analysis in order to determine the main parameters of creativity that affect the psychotherapeutic practice (source: created by authors)

Expert type	His activities and work experience	The question that was asked and discussed
7 current practicing psychotherapist	Active psychotherapeutic practice (more than 5 years of experience)	Highlight and describe the main parameters of creativity and creative thinking that, in your opinion, affect psychotherapeutic practice today
7 psychotherapist who have completed their practical activities and are spreading at the university	Active teaching activity (more than 5 years of experience)	
7 acting psychotherapist, in parallel and spread at the university	Active psychotherapeutic practice and teaching (more than 5 years of experience)	

the parameters of creativity obtained both during their own theoretical analyzes and after expert assessment.

The analysis of the received answers took place in several stages:

- 1) The stage of obtaining data, their analysis, processing;
- 2) Analysis of results;
- 3) Summarizing the results, showing the results to the respondents, and agreeing on the final list of parameters.

2. Determination of the key parameters of creativity of psychotherapeutic activity

As a result, we got seven key parameters of creativity that affect psychotherapeutic activities in Ukraine and Poland today (Figure 1):

- 1) The psychotherapist's ability to identify and shape an existing problem in a way that was understandable to the patient and did not cause panic (A_1). An important role is played by how the psychotherapist presents and forms the problem that his patient describes. A creative approach is needed here since different statements and conclusions can scare him away;
- 2) Flexibility as a parameter of the ability to produce a variety of ideas (A_2);

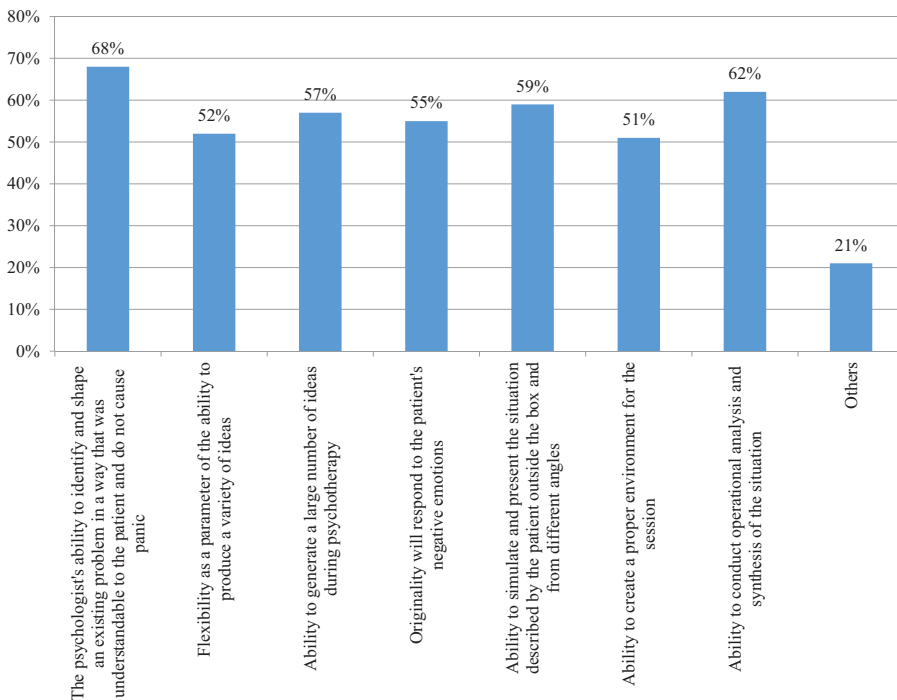


Figure 1. The results of the answers received from experts in percentage ratio with the allocation of a larger number of selected parameters (source: created by authors)

- 3) Ability to generate many ideas during psychotherapy (A_3). It is equally important how many ideas a psychotherapist can come up with during a session;
- 4) Originality will respond to the patient's negative emotions (A_4);
- 5) Ability to simulate and present the situation described by the patient outside the box and from different angles (A_5). How the psychotherapist reacts to the phenomena described by the patient depends on and can have a creative approach, which is manifested in his answer and how he gives certain details of the description;
- 6) Ability to create a proper environment for the session (A_6);
- 7) Ability to conduct operational analysis and synthesis of the situation (A_7).

2.1. Method of analysis of results

As it can be seen from the listed parameters, we assigned each of them a certain A (A_1 – A_7), this is necessary for the method that we applied in the course of our research in order to determine which effect of each of the listed parameters of creativity is the most significant for psychotherapeutic practice. This is the methodology of hierarchical ordering of factors of influence on the object of research by applying the theory of graphs and form a graph of connections.

It should be emphasized that the hierarchy formed and all the described connections between the 7 parameters of creativity are an attempt to combine the obtained evaluative/empirical data, as a result of the interview together with theoretical considerations obtained from the analysis of scientific and theoretical literature.

The graph is a non-empty set of points and a set of segments, both ends of which belong to a given set of points.

When depicting graphs in figures or diagrams, segments can be straight or curved; the lengths of the segments and the location of the points are arbitrary.

Points are also called vertices (nodes of the graph), segments are called edges of the graph (arcs). The vertices of the graph in the figure are usually distinguished with circles or squares, if only because the intersection points of the edges are not always taken as the vertices of the graph.

Vertices that do not belong to any edge are called isolated. The vertices are usually denoted by capital letters of the Latin alphabets (A) and sometimes by numbers.

We can speak because of the application of graph theory, about the possible impact and our research is the application of the methodology in such a way that it is rather a demonstration of the methodological approach that we have formed, therefore it is more of a theoretical nature and a display of possibilities for empirical.

Examples of graphs are a subway diagram, a diagram of railways or highways, structural formulas of molecules, plans of exhibitions, *etc.* In a word, diagrams and plans (or maps) without specifying scales, showing only the connections between objects belonging to them (Balogh et al., 2000).

In fact, in order to display through a graph the connection between the parameters of creativity (and this is necessary in order to further simulate their influence on psychotherapeutic activity), we use the theory of graphs. In modern scientific and practical

activities, the graph of connections is already a general concept and through it, you can describe almost any events or objects, which allows you to apply effectively it to our situation.

Thanks to the theory of graphs and the formation of the graph of connections, we are able to calculate and show the relationship of parameters and calculate which of them have the greatest impact on psychotherapeutic activity.

Also, using reachability matrix (the reachability matrix of our graph is a binary matrix of the transitivity closure of the parameter relation; the reachability matrix stores information about the existence of paths between the vertices of the digraph) and graphical methods, we could visualize all this in the research results.

The data was collected qualitatively and turned into a percentage to display collection statistics. As for the application of the proposed mathematical methodology to the parameters, they all received their own mathematical designation and then everything went according to the rules of the chosen method.

3. Research results

So, let us say that the set of parameters of creativity and creative thinking, determined by us with the help of expert analysis and research of scientific and practical literature, can represent a certain set: $A = \{A_1, A_2, A_3, A_4, A_5, A_6, A_7\}$. Thus, we will select a subset of the most important parameters of creativity from this set ($A_1 \in A_2$).

To begin with, it follows the treadmill of the A_1 creativity parameter (the psychotherapist's ability to identify and shape an existing problem in a way that was understandable to the patient and did not cause panic) and the possible interrelationships between it we represent as a directed graph, shown in Figure 2.

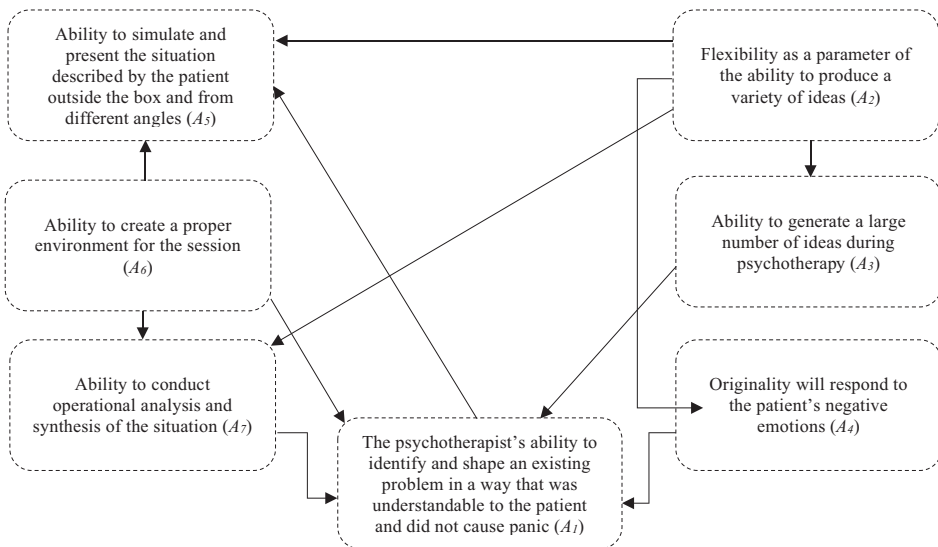


Figure 2. Graph of connections between the parameters of creativity and creative thinking in psychotherapeutic practice (source: created by authors)

Let us explain that at the vertex shown in Figure 2 are the elements of the subset A_I , arcs connecting adjacent pairs of vertices (A_i, A_j) , for which the connection is defined. This relationship demonstrates the so-called dependence of one parameter of creativity on another (this can be seen from the arrowhead).

Taking into account the established graph of connections, it is necessary to form a binary dependence matrix a for the set of vertices A_I (1):

$$a_{ij} = \begin{cases} 1, & \text{if criterion } i \text{ depends on the criterion } j \\ 0, & \text{if criterion } i \text{ do not depends on the criterion } j \end{cases} \quad (1)$$

We place the matrix a of 7×7 elements in the Table 2, adding to it an information row and a column with the names of the parameters of creativity and creative thinking we have defined (Table 2).

Based on the matrix a (Table 2), we construct an attainability matrix for the parameters of creativity we have defined. We form a binary matrix $(I + A)$, where I is the identity matrix. As a result, the reachability matrix must satisfy the condition given in formula (2):

$$(I + A)^{k-1} \leq (I + A)^k = (I + A)^{k+1}. \quad (2)$$

The actual construction of a binary matrix is reduced to filling in a Table 3 similar to the one given above, the binary elements of which are determined according to the following rule in formula (3):

$$b_{ij} = \begin{cases} 1, & \text{if from } i \text{ can go in to } j \\ 0, & \text{in another way} \end{cases} \quad (3)$$

Table 2. Binary dependence matrix for certain parameters of creativity (source: created by authors)

Ability to conduct operational analysis and synthesis of the situation (A_7)	1	0	0	0	0	0	0
Ability to create a proper environment for the session (A_6)	1	0	0	0	1	0	1
Ability to simulate and present the situation described by the patient outside the box and from different angles (A_5)	0	0	0	0	0	0	0
Originality will respond to the patient's negative emotions (A_4)	0	0	0	0	0	0	0
Ability to generate many ideas during psychotherapy (A_3)	1	0	0	0	0	0	0
Flexibility as a parameter of the ability to produce a variety of ideas (A_2)	1	0	1	1	1	0	1
The psychotherapist's ability to identify and shape an existing problem in a way that was understandable to the patient and did not cause panic (A_1)	0	0	0	0	1	0	0
	(A_1)	(A_2)	(A_3)	(A_4)	(A_5)	(A_6)	(A_7)

Table 3. Reachability matrix for certain parameters of creativity (source: created by authors)

Ability to conduct operational analysis and synthesis of the situation (A_7)	1	0	0	0	0	0	1
Ability to create a proper environment for the session (A_6)	1	0	0	0	1	1	1
Ability to simulate and present the situation described by the patient outside the box and from different angles (A_5)	0	0	0	0	1	0	0
Originality will respond to the patient's negative emotions (A_4)	0	0	0	1	0	0	0
Ability to generate many ideas during psychotherapy (A_3)	1	0	1	0	0	0	0
Flexibility as a parameter of the ability to produce a variety of ideas (A_2)	1	1	1	1	1	0	1
The psychotherapist's ability to identify and shape an existing problem in a way that was understandable to the patient and did not cause panic (A_1)	1	0	0	0	1	0	0
	(A_1)	(A_2)	(A_3)	(A_4)	(A_5)	(A_6)	(A_7)

Note that the vertex A_j is reached from the vertex A_i if there is a certain path in the graph presented in Figure 2 that leads from the vertex A_i to the vertex A_j . In this case, we can say that the top is reachable. We denote the subset of such vertices by $S(A_i)$. Similarly, the vertex A_i is the predecessor of the vertex A_j if it reaches its vertex. Let the collection of predecessor vertices form a subset $P(A_j)$.

Finally, a cut of subsets of reachable and predecessor vertices, that is, a subset (4):

$$R(A_i) = S(A_i) \cap P(A_i). \tag{4}$$

Further, there are peaks that are not reached from any peak of the set A_1 , they also form a certain level of priority of certain parameters of creativity referred to these peaks. An additional condition in this case is to ensure equality (5):

$$R(A_i) = P(A_i). \tag{5}$$

The pleasure of the actions presented by us forms the first level – this is the least essential level for psychotherapeutic practice. For its formation, according to the preliminary matrix, we form the following that in the Table 4.

The second column of Table 4 is the numbers of the unit elements of the corresponding rows of the access matrix, the third is the numbers of the unit elements of the columns of this matrix. Equality (5) holds for A_2 – flexibility as a parameter of the ability to produce a variety of ideas and A_6 – ability to create a proper environment for the session. According to the hierarchy analysis method, these parameters A_2 and A_6 belong to the lowest priority level of influence on psychotherapeutic practice. Further Table 4 we remove lines 2 and 6, and in the i -th columns we delete numbers 2 and 6. We get Table 5, which is the basis for calculating the second iteration of finding the numbers of the parameters of creativity that determine the next level.

Table 4. Calculation table for building a model of ordering of the main parameters of creativity for psychotherapeutic practice (source: created by authors)

7	A_1, A_7	A_2, A_6, A_7	A_7
6	A_1, A_5, A_6, A_7	A_6	A_6
5	A_5	A_1, A_2, A_5, A_6	A_5
4	A_4	A_2, A_4	A_4
3	A_1, A_3	A_2, A_3	A_3
2	$A_1, A_2, A_3, A_4, A_5, A_7$	A_2	A_2
1	A_1, A_5	A_1, A_2, A_3, A_6, A_7	A_1
I	$S(A_i)$	$P(A_i)$	$S(A_i) \cap P(A_i)$

Table 5. Calculation table for building a model of ordering of the main parameters of creativity for psychotherapeutic practice (source: created by authors)

7	A_1, A_7	A_7	A_7
5	A_5	$A_1, A_5,$	A_5
4	A_4	A_4	A_4
3	A_1, A_3	A_3	A_3
1	A_1, A_5	A_1, A_3, A_7	A_1
I	$S(A_i)$	$P(A_i)$	$S(A_i) \cap P(A_i)$

In the second iteration, equality (5) is fulfilled for A_3 – ability to generate many ideas during psychotherapy, A_4 – originality will respond to the patient’s negative emotions, and A_7 – ability to conduct operational analysis and synthesis of the situation. These dimensions of creativity define the next level. Therefore, in Table 5 we delete rows 3, 4, and 7, and in the 2nd and 3rd columns – numbers 3, 4, and 7.

In order not to reflect subsequent calculations, we can say that A_1 will occupy a high level – the psychotherapist’s ability to identify and shape an existing problem in a way that was understandable to the patient and did not cause panic and A_5 – ability to simulate and present the situation described by the patient outside the box and from different angles.

Having placed all the parameters of creativity at certain levels, we get a model (Figure 3) that imitates the priority of their influence on psychotherapeutic practice.

Determining the parameters of creativity, we used a matrix of paired comparisons, which at first glance looks complex, but when fully understood, is simple and effective in practice. The built dependency matrix is associated with the presented Figure 2 and reflects that there is a relationship between parameter A_1 and other parameters of creativity. If such a dependence exists, then the factor is designated by the number 1, if not, then 0. Based on this, binary matrices are formed, namely, on the main existing dependency matrix. Here, according to the presented formulas (2–3), whether the connection with the vertices of certain parameters is already determined. The vertex A_i is reached from the vertex A_j if there is a path in the graph (Figure 3) that leads from the vertex z_i to the vertex A_i . Such a top is called reachable.

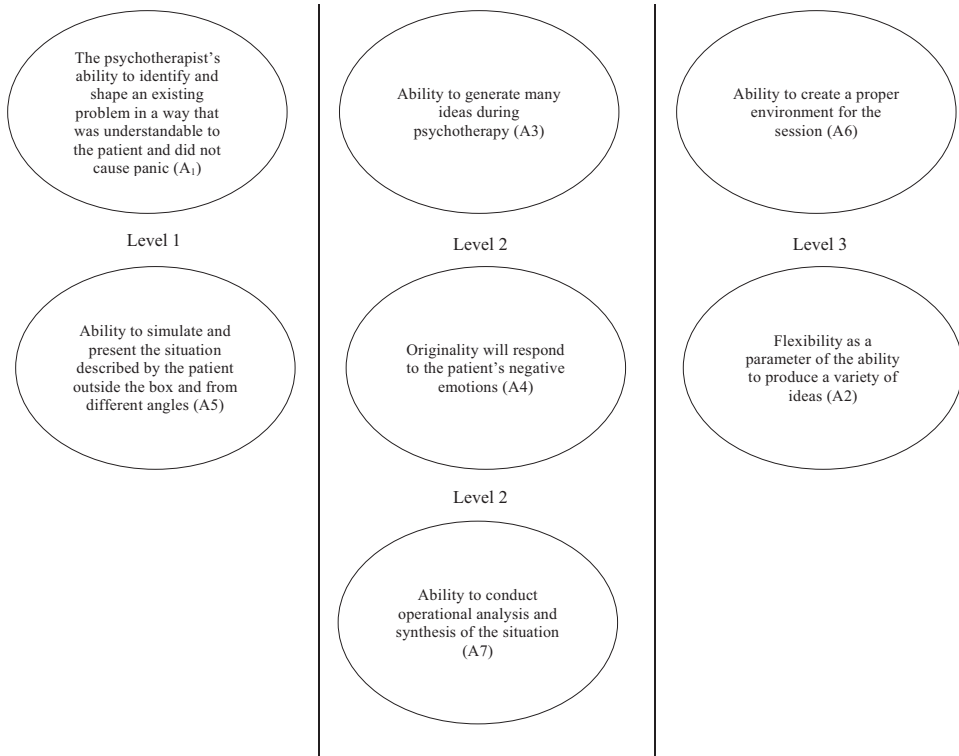


Figure 3. Hierarchy model of the importance of the influence of creativity parameters on psychotherapeutic practice (source: created by authors)

Denoting the subset of such vertices by $S(A_i)$. Similarly, the vertex z_i is the predecessor of the vertex A_i if it reaches its vertex. Let the collection of predecessor vertices form a subset $P(A_i)$. The vertices that are not reached from any of the vertices of the set A_1 , the remaining ones, determine a certain level of the hierarchy of priority of the creativity parameters assigned to these vertices. If the level is fulfilled according to (4), then they are removed from the calculation table in accordance with the following table is formed without them. Ultimately, having arranged the parameters at certain levels, we will get a hierarchically structured model, which is shown in Figure 3.

Thus, our theoretical and analytical studies and the application of the method of expert analysis in nutrition with a graph of connections made it possible to develop oriented graphic models and a matrix of attainability, demonstrating the connections between the parameters of creativity, and became the basis for ordering them according to the level of influence. Because of the application of the above methods, we can conclude that parameters “The psychotherapist’s ability to identify and shape an existing problem in a way that was understandable to the patient and did not cause panic (A_1)” and “Ability to simulate and present the situation described by the patient outside the box and from different angles (A_5)” are the most influential on creativity in psychotherapeutic practice. The result obtained is average for psychotherapeutic practice in Ukraine.

Discussion

Determining the main parameters of creativity and creative thinking in psychotherapeutic practice, one method of expert analysis is not sufficient, and therefore we took into account the scientific and practical literature in this aspect. Scientists and their works such as Widiger and Crego (2019) have identified a number of species and classifications and may be useful for other studies in this matter. However, we are a kind and a feedback between the research methods to apply and therefore it is, on the contrary, not only literature but also methods of survey and expert analysis should be used. This is also the difference between our study.

Discussing the results of the study, it should be noted that the development of creativity and creative thinking in various layers of people and in various fields of their activity was considered by a significant number of scientists, but our contribution has differences.

The professional activity of a psychotherapist provides for the solution of non-standard problem situations where you need to apply your own creative abilities. Therefore, these abilities are of great importance for the psychotherapist, who works with unexpected, uncertain situations for him, for the solution of which it is necessary to apply creativity, ingenuity, intuition. The prospects for this study are the preparation of a program for the diagnosis and development of creativity as a professionally significant property of the personal maturity of a future psychotherapist. Considering this, and today a large number of scientists are working in this field. For example, McLeod and Sundet (2020) in their research attempted to solve complex and stalemate moments in psychotherapeutic practice with the help of creative approaches. And in our opinion, creativity in itself cannot be a situational characteristic of a psychotherapist, and in the absence of its constant development, during the existence of a stalemate, there will be no formation of a creative solution to a specific problem, but only the use of template methods of solution. In this case, it has nothing to do with creativity.

We are impressed by the scientific position of Kryshchanovych et al. (2021), who investigated the problems of creative thinking in psychotherapist students (see Shandruk, 2015). We decided to consider psychotherapeutic activity and practice, that is, a more practical aspect and how creativity and creative thinking affect practice. Note that Kryshchanovych et al. (2021) combined their own ideas with certain mathematical methods. Our method is also mathematical in nature and it is not new, but for the study of creativity it is new and this is our difference from other articles.

The parameters of creativity were also studied by Marion (2012), who in his work actualized the importance of ranking the influence of various parameters of creativity. This provided a powerful foundation for our research. But in his work, this ranking was purely subjective, while we applied mathematical formulas.

Determining the main parameters of creativity and creative thinking in psychotherapeutic practice, one method of expert analysis is not sufficient, and therefore we took into account the scientific and practical literature in this aspect. Scientists and their works such as Widiger and Crego (2019) have identified several species and classifications and may be useful for other studies in this matter. However, we are a kind and feedback between the research methods to apply and therefore it is, on the contrary, not only literature but also methods of survey and expert analysis should be used. This is also the difference between our study.

Interpreting the study, we can say that the main goal of the study is to form a methodological approach to determine the potentially most influential parameters of creativity, which, as already noted in the introduction, are currently critically important for psychotherapeutic practice and are not developing well enough in the modern realities of higher education.

In our opinion, the novelty lies in the fact that we have formed a new methodological approach to determining the most influential parameters of creativity in modern psychotherapeutic practice. This approach presupposes the application of the already existing methodology of hierarchical ordering in a new area for determining the parameters of creativity.

Conclusions

The requirements for specialists in the profile of a psychotherapist are significantly increasing in terms of their readiness for professional practice in new conditions and the ability to professionally perform creative work. In this regard, the system of training a psychotherapist and specialists requires a radical transformation, which involves the widespread use of innovative and productive forms, methods, and means of developing their professional creative abilities to realize their creative potential both in school and in the future working life.

As a result, the goal was achieved and it was determined which parameter of creativity has the greatest significance and influence on psychotherapeutic activity. Thus, using graph theory, we have identified the main parameters of creativity in psychotherapeutic practice. The research is of practical value since this methodological approach is flexible and can be applied in the practice of a psychotherapist. The research has limitations, and they concern only psychotherapeutic activity in Ukraine and Poland.

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