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Psychosemiotic Analysis of Parental Attitude Towards Children of Mothers Suffering from Schizophrenia[1]

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Parental attitudes towards children are one of the key categories of parenting. With the aim to investigate the attitude of mothers who have schizophrenia towards their children we used psychosemiotic approach and the procedure of biclustering. We hypothesized that there are statistically significant differences in semantic operational parameters between mothers suffering from schizophrenia or schizoaffective disorder, and a control group. 30 participants of the clinical group — mothers of children 0–18 y.o (Age (years): M=39.3, SD=7.54; Duration of psychiatric observation (years): M=10.45, SD=7.84) suffering from schizophrenia and schizoaffective disorder were recruited from patients of the women's ward of Moscow psychiatric hospital. 30 mothers of the control group were recruited according to the age of their children, similar to the age of the children's age in the clinical group (Age: M=35.06, SD=4.97). Psychosemiotic analysis was applied to the texts of the semi-structured parental essay in the incomplete-sentence form (test "Parental composition"). Statistical analysis confirmed the relevance of psychosemiotic parameters. The psychosemiotic analysis of the text with the procedure of biclustering showed that three of the lists of binary parameters: Opposition, Quality/Situation, Present/Future show regular combinations that differ in healthy and ill mothers, and the probability of accidental coincidences can be excluded. Combination "the absence of opposition, situatedness, the future time" was detected only in the texts of mothers of the clinical group. To our mind, it describes a weak parent who cannot withstand ambivalence and sees his child in the perspective of an abstract future.

[1] The datasets generated during and/or analyzed during the current study are available in the RusPsyDATA repository: https://ruspsydata.figshare.com/articles/dataset/Research_database_Psychosemiotic_Analysis_of_Non-Complete_Sentences_of_Mothers_Suffering_from_Schizophrenia/16669276, DOI: 10.25449/ruspsydata.16669276.v1

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Keywords: parental attitude, schizophrenia, psychosemiotic analysis, biclusterization.

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Психосемиотический анализ родительского отношения к своим детям матерей, страдающих шизофренией[2]

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С целью изучения отношения матерей, страдающих шизофренией, к своим детям в исследовании использованы психосемиотический подход и процедура бикластеризации.

[2] Наборы данных, созданные и проанализированные в ходе текущего исследования, доступны в репозитории RusPsyDATA: https://ruspsydata.figshare.com/articles/dataset/Research_database_Psychosemiotic_Analysis_of_Non-Complete_Sentences_of_Mothers_Suffering_from_Schizophrenia/16669276, DOI: 10.25449/ruspsydata.16669276.v1

Клиническая группа состояла из 30 матерей, страдающих шизофренией и шизоаффективным расстройством и имеющих детей 0–18 лет, находившихся на стационарном лечении в психиатрической больнице (возраст: M=39,3, SD=7,54; продолжительность заболевания: M=10,45, SD=7,84). Контрольная группа состояла из 30 матерей без психиатрического диагноза и была сформирована в соответствии с возрастом их детей, аналогичным возрасту детей из клинической группы (возраст испытуемых: M=35,06, SD=4,97). В исследовании использовалась методика «Родительское сочинение» в форме неоконченных предложений. При помощи статистического и психосемиотического анализа с использованием процедуры бикластеризации подтверждена релевантность психосемиотических параметров. Психосемиотический анализ текста с процедурой бикластеризации показал, что три бинарных параметра — Оппозиция, Качество/ситуация, Настоящее/будущее время — показывают регулярные комбинации, различающиеся у здоровых и больных матерей. Комбинация «отсутствие оппозиции, ситуация, будущее время» выявлена только в текстах матерей, страдающих шизофренией, и описывает слабого родителя, который не может противостоять амбивалентности отношения к ребенку и видит своего ребенка в перспективе абстрактного будущего.

Ключевые слова: родительское отношение, шизофрения, психосемиотический анализ, бикластеризация.

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Introduction

Parental attitude towards children is one of the critical categories of parenting. In Russian psychology, parental attitude is defined as a whole system of varied feelings towards a child, the parental behavioral stereotypes in parent-child interactions, special aspects of parental reception, and understanding of a child's personality, behavior, and actions [8]. Parenting of mothers who have schizophrenia is usually studied as the link between mental health problems and negative impact on parenting and parent-child relationship [19; 22; 23]. Lower parenting sensitivity, interactive deficits [17], difficulties in recognizing emotions and laxness style of parenting, especially in mothers with blunt affect [23], were detected in mothers with schizophrenia.

Despite many Russian-language standardized methods that have been developed to assess the emotional, behavioral, and cognitive aspects of parental attitudes towards children [2; 4], they are not intended for parents with severe mental disorders. On the

other hand, the limitation of qualitative and phenomenological methods — clinical and psychological interviews — is subjectivity and dependence on the qualifications of the specialist conducting the assessment [10; 20]. Therefore, these methods are not very popular in research.

Thereby, a psychosemiotic approach can overcome the limitations of the standard statistical studies. The foundation of the method is the idea that there is a connection between the existential picture of every person's world and their written or oral texts which can be assessed by standard means of decoding. In the process of psyhosemiotic analysis the text of the person in question becomes the object of investigation in which strictly formal parameters of the morphological, syntactic, semantic, and the plot levels are investigated [6; 5; 8; 14; 20]. In the pre-hypothesis for the suggested investigation, the choice of the parameters is chosen and considered. The validity of the parameters is checked further by biclustering [3; 5; 18]. According to this method, the outlined parameters are clustered, and then the texts containing these parameters and the corresponding meanings are also clustered. If the task has been solved successfully there appear to be a multitude of completely identical binaries which are made up of zeros and ones. There can be no accidental coincidence for these clusters [5, p. 286–301].

The first aim of the current study was to apply psychosemiotic approach investigating the attitude of mothers suffering from schizophrenia towards their children. The second aim was to examine the procedure of biclustering related to quantitative and qualitative analysis in psychology. In data mining, biclustering, two-modal analysis, or block clustering is a group of methods, when columns and lines are simultaneously clustering. The method is used as an alternative to classical cluster analysis in solving problems, where features of objects are significant within clusters [18]. We hypothesized statistically significant differences in semantic operational parameters between mothers who have schizophrenia or schizoaffective disorder, and a control group.

Materials and Methods

The study sample consisted of sixty people. Thirty participants of the clinical group were recruited from patients of the women's ward of Moscow psychiatric hospital, where they were currently hospitalized in a psychotic state. Inclusion criteria were: recent exacerbation of psychotic symptoms and a subsequent symptom stabilization, that is the psychotic symptoms "recently worsened, but now are beginning to improve" [16]; proven diagnoses of paranoid schizophrenia or schizoaffective disorder according to International Statistical Classification of Diseases and Related Health Problems 10th Revision (ICD 10), diagnoses by a medical panel of, at least two psychiatrists: attending a psychiatrist and head of psychiatrical department, with the consideration of previous psychiatrical observation; parental status; a child's age 0–18 y.o.; legal capacity; research participation consent. Exclusion criteria were: comorbid drug or alcohol dependence; severe neurological or somatic disorder.

According to ICD 10 the subjects had the following diagnoses: F 20.014 — 14; F 20.006 — 4; F 20.024 — 3; F 20.004 — 2; F 25.21 — 7. 17 women (56.6%) had a disability group (the second group in all cases) — due to the mental disorder.

Age of mothers at the time of examination: M=39.3, SD=7.54, Me=38, Min=28, Max=59. Age of mothers at the time of initiation of psychiatric observation: M=28.48, SD=5.87, Me=27; Min=16, Max=39. Duration of psychiatric observation (years): M=10.45, SD=7.84, Me=9.5, Min=6 months; Max=25 years. The number of hospitalizations in a psychiatric hospital: M=4.73, SD=3.64, Me=3.5, Min=1, Max=13.

All women graduated from a comprehensive school, twelve women had specialized secondary education, sixteen women had high education.

Age of the first child birth: M=28.3, SD=5.71, Me=27, Min=20, Max=41. Age of subjects' children: M=7.9, SD=4.24, Me=7, Min=3 month; Max=17.5 years; Lower Quart.=5; Upper Quart.=10. In three cases, participants of the clinical group had two children. We asked them to give the answers about one of them indicating the child's age. In four cases, the mothers' parental rights were restricted by the court. Twenty six mothers of the clinical group lived with their children and took part in their upbringing.

Thirty participants of the control group were a convenience sample of mothers, recruited from people familiar to the authors. Inclusion criteria were: the age of their children, similar to the age of the children in the clinical group; research participation consent. Exclusion criteria were any signs of mental or neurological disorder, and psychiatric counselling in the past. Age of mothers of the control group at the time of examination: M=35.06, SD=4.97, Me=36, Min=26, Max=45. Age of the first child birth: M=28.3, SD=2.7, Me=28, Min=24, Max=35. 7 mothers had specialized secondary education, 23 had higher education. The age of children in the control group: M=8.25, SD=4.82, Me=8, Min=3 month, Max=17 years, Lower Quart.=5, Upper Quart.=12.

Our method followed the standard procedure of the semi-structured parental essay in the incomplete-sentence form (test "Parental composition") [10]. This diagnostic procedure was proposed in the context of developing the complex of diagnostic techniques to identify the specifics of parent-child relationships taking into account the active position of the child in their construction.

The standard procedure of processing the results includes calculation of standard content list, formed in the examination of 61 mentally healthy parents of healthy children, and qualitative assessment of emotional coloring of conclusions, time perspective as appealing to past, present or future, centrality on the child, the parent or parent-child relations. The method hasn't been validated for examination of persons who suffered from mental disorders, but is often used in clinical and psychological research in practice. In a departure from the standard procedure of processing the results that is more qualitative than quantitative, to make it more objective, at the first stage, we identified each conclusion for each case with the following semantic operational parameters of four groups:

1. Agent: "Agent: Mother", "Agent: Child", "Agent: Third parties", "Non-agent. By the term Agent we understood not only the subject of the sentence in linguistic meaning, but also an active participant of the sentence. For example, in the conclusion of the first incomplete sentence of the Open scale, *"When I think about my child…"*: *"… I remember him when he was the baby"*, we defined two Agents: Mother and Child.

2. Internal predicates: “Internal predicates relating to the child”, “Internal predicates relating to the mother”. Generally, internal predicates describe a situation that doesn’t appeal to sight and hearing. It is known only to the participant of the situation and describes one’s feelings or internal activities, for example: *“I think”, “I am dreaming”, “he is feeling pain”, “he is afraid”, “he is hungry”.* In contrast, external predicates describe a situation that appeals to sight and hearing, when an outside witness can observe the situation, for example: *“he is crying”, “he is running”, “he smiles”.*

3. Time perspective: “the Past”, “the Present”, “the Future”, that was defined according to the tense and time-oriented words of a conclusion.

4. Key emotions: “Emotional coloring of conclusion”, “Negative emotional coloring of conclusion”.

Beyond that, we detected such parameters as: “Concrete conclusion” (for example: *“I wish my child… be a doctor”.* Compare with: *“I wish my child… be a man of merit”*); “Paralogical or unequal conclusion” (for example, *“I am afraid… there’ll be black corners in my room”*); “Subject of mental disorder in conclusion” (for example, *“The heaviest experience my child had to go through… were my psychiatric committals”*).

For each conclusion and case in both groups, the occurrence of the operational parameter was detected as 1, absence — as 0. As a result, we received a binary matrix that was analyzed. For each conclusion, each parameter was assessed by a group of three researchers. Their overall assessment of the parameter was taken into account. To define significant differences between samples, we used Mann–Whitney U-test. Analyses were conducted using Statistica v. 13.3. In the second stage we used qualitative analysis of conclusions. In the third stage we used a modified psychosemiotic analysis of the text and biclustering which would be described forward.

Results

Conclusions for each non-complete sentence were analysed separately with Mann–Whitney U-test. There were no significant differences ($p>0.05$) between the groups in conclusions of the sentences of the scales “The child’s main characteristics”, “The child’s positive characteristics”, “Interests and preferences”, “Situations of parent-child interaction”.

In the second and third sentences of the “Open scale” (“*Most likely, he/she…*”; “*I’ve always recognized…*”), mothers from the clinical group used more constructions with negative emotional coloring such as “something is wrong with him”, “he isn’t ok”. Also, they used more non-agent constructions, such as “laziness”, “joy”, “living interest”, while mothers from the control group used child-agent constructions, such as “my child is the best”.

In the scales “Comparative assessment” and “Ideal expectations”, mothers of the clinical group often used concrete conclusions, whereas mothers of the control group — child-agent constructions.

Internal predicates related to the child were used more often by mothers from the control group in the sentences "*I'd like my child to…*" and "*I've always dreamt my child would …*" of the scale "Ideal expectations". Internal predicates using words such as "be happy", "don't be upset".

In the non-complete sentence "I would have been glad if…" mothers from the clinical group more often used constructions with agent — third parties, such as grandparents and cousins of their child. For example: "*if he met only good people on his way who could help him, me and his grandfather would live a long life and enjoy us bringing him up*".

Significant differences in time perspective were detected in the sentence "My child is talented enough…". While mothers from the control group were oriented to the future (for example, "*to make it into college*"), mothers from the clinical group were oriented to the present.

In the scale "Fears and anxieties", mothers from the clinical group used more non-agent constructions and more internal predicates related to themselves, more conclusions with the subject of their mental disorder.

In some cases, mothers from the clinical group were unable to create the sentence according to the instruction. For example, to the incomplete sentence: "I am afraid, he/she…" we received answers: "*I am afraid, my disorder will give another pathology*" or "*I am afraid, they'll restrict my parental rights*". Mothers of the control group more often used internal predicates related to the child, such as "will be unhappy", while mothers of the clinical group talked about the child's behavior ("he'll smoke").

In the sentence "I want my child to have a greater focus on…" of the scale "Requirements", mothers of the clinical group used much more Agent: mother constructions, for example the conclusion "me" and "mother" were met in the responses of the mothers from the clinical group six times, while in the control group no such conclusions occurred.

In the scale "Causes of difficulties", mothers of the clinical group used fewer internal predicates related to the child, more non-agent constructions, more conclusions with the subject of their mental disorder.

In the sentence "The most hardship for my child was…" of the scale "Anamnesis", mothers from the clinical group more often used conclusions with the subject of their mental disorder, more Agent: mother constructions. In the sentence "When he/she's grown…" of the same scale, mothers of the control group used much more conclusions with emotion coloring. In the sentence "When he/she was small", mothers of the control group used more concrete conclusions (the results are presented in Appendix).

Qualitative analysis showed that finishing the phrase "When I think about my child, I …" — the first sentence of the "Open scale" — sixteen mothers of the control group said about their joy, happiness, smiling. For example: "*I'm getting warm as a toast and want to hug him*". Only five mothers told about some kind of sadness or worry, for example: "*I worry, where he is and what is he doing*"; "*I miss him, when he isn't by my side*". In contrast,

eleven mothers from the clinical group said about their sadness and anxiety while thinking about the child, for example: "*I am nervous*" or "*I feel sadness*".

Finishing the sentence "I don't want to …" of the scale "Fears and anxieties", five mothers from the clinical group expressed fears about their child because of their mental disorder. Other five were afraid, that their child would be "a robber" or "a druggy". Fears of mothers from the control group were much more positive and prosocial: "*I don't want him to be unhappy*", "*I don't want her to be disappointed in love*".

Finishing the phrase "I want my child to greater focus on…" of the scale "Requirements", six mothers of the clinical group said: "on me", while all mothers of the control group told about schoolwork, sports activities or reading.

The whole impression was that mothers of the clinical group more often were focused on themselves and their feelings, had misgivings about their child and their motherhood, and were worried about their future.

For a more detailed analysis of the results of the assessment, which was carried out and is a more subtle analysis than macrostatistic analysis, a modified psychosemiotic analysis of the text was used. The results of this analysis are presented as a matrix and later processed in the framework of a formal analysis of the data [1; 12] with the application of biclustering [3]. A limitation of this research is that the task to apply the formal analysis of the data to the results of the assessment was a variation of the previous research because the answers of the subjects were short (1–17 words) and non-spontaneous (the questions were asked by the researcher). The problem was solved by representing the answers of each of the respondents to the sentences "She would rather (he)..."; "I get awfully irritated when... / I don't like that he/she... / I like it when we are with my child..." in the form of a coherent text.

To finish the sentence "She would rather (he)..." the respondent is free a) to turn to his past/present/future; b) to express his supposition about the inner world of the child, his ability, his prospects which he may have in the future, etc.

Three questions "I get awfully irritated when... / I don't like that he/she... / I like it when we are with my child..." are semantically linked together. The first two questions are in semantic opposition to the third: the negative emotions contrasted to the positive emotions.

The question "I get awfully irritated..." has got additional semantic complication, and can be explained in the following way: "I am at ease; X is doing something, and I have a feeling that it is something bad; I am attacking/running away/ freezing feeling something bad, and I become calm, — or get inside of myself and continue to feel something bad, and I don't feel at ease". The hypotheses preceding the analysis were as follows. 1. The system of answers to the highlighted questions of healthy respondents differs from the system of answers of patients. 2. There should be convergences between the response systems of healthy respondents and patients because from empirical observations, examples of destructive relationships between a child and his healthy mother are aware, and we believe that the opposite can also occur.

The heuristic stage of the analyses revealed repetitions in the respondents' replies. Proceeding from these repetitions, some parameters were formed — the names of the text characteristics — some of which could be found significant for the proving or disproving the hypotheses; a part of them could be found in the formal analyses of the data which turned out to be irrelevant.

The initial list of the parameters consisted of 7 positions. At the stage of representation, the following matrix was created: the lines presented the numbered names of the respondents without marking the group (clinical or control) the respondent represented; in the columns the presence or absence of a specific parameter was recorded.

At the end of biclustering, only three relevant parameters were detected: "Grammatical time", "Quality/situatedness", "Opposition".

The parameter "Quality/situatedness" was applied to the question "I get irritated…" and showed whether any innate quality of a child ("laziness", "arrogance") or his situational actions caused irritation. The parameter "Opposition" showed the semantic relationship between the questions "I get irritated...", "I don't like it...", "I think it is nice...". If there was contrast between the first two questions and the third, then the answer was encoded by 1, if not — by 0. For example, the combination of endings: "*It irritates me that he spends so much time at the computer*" and "*it is pleasant to walk with him*" was encoded by 1, because one situation excluded the other. Combination of endings: "*It irritates me that he is moody*" and "*It is pleasant to walk together*" was encoded by 0. These two actions are not contrasted as one can misbehave even during a walk.

Four clusters were derived from these data.

1. Cluster <0,0,0> (absence of opposition, situatedness, the future) the cluster was marked nine times It was found only in the mothers of the clinical group. The Confidence level of an accidental coincidence was set up as $\rho<1/2^9$. The possibility of accidental coincidence of cluster 1 is equal to $1/2^{3\times 9}=1/2^{27}$ that is extremely small.

2. Clusters <1,1,1> (the presence of opposition, quality, the present time) and <1,1,0> (the presence of opposition, quality, the future time) are presented fourteen times with the mothers of the control group and once in the answers of the mothers of the clinical group. Therefore, the possibility of an accidental coincidence equals to $1/2^{14\times 3}$, which is extremely small.

3. Cluster <0,1,1> (absence of the opposition, quality, the present time) is presented ten times in the texts of the mothers of the clinical group and six times with the mothers of the control group, that is, it is not diagnostic but it is more prevalent with the mothers of the clinical group. Therefore, the probability of an accidental coincidence is equal to $1/2^{3\times 16}$.

4. Cluster <1,0,0> (the presence of opposition, situatedness, the future time) is present five times in the texts of the mothers of the clinical group and eight times in the conclusions of the mothers of the control group, which is not diagnostic but much closer to

the mothers of the control group. Therefore, the probability of an accidental coincidence is equal to $1/2^{3\times13}$.

The results are presented in the Table.

Table

Opposition, situatedness, time perspective in texts

	Opposition	Quality/ Situation	Present/ Future	The possibility of an accidental coincidence	Control/ Clinical	Comments
Cluster <0,0,0>	0	0	0	$1/2^{3\times9}=1/2^{27}$	0/9	Patients only
Cluster <1,1,1>	1	1	1	$1/2^{3\times7}=1/2^{21}$	7/1	Mothers of the control group predominantly
Cluster <1,1,0>	1	1	0	$1/2^{3\times7}=1/2^{21}$	7/0	Mothers of the control group only
Cluster <0,1,1>	0	1	1	$1/2^{3\times16}=1/2^{48}$	6/10	Mothers of both groups (clinical and control)
Cluster <1,0,0>	1	0	0	$1/2^{3\times13}=1/2^{39}$	8/5	
Cluster <1,0,1>	1	0	1	$1/2^{3\times8}=1/2^{24}$	4/4	

Regarding the other two clusters: <0,0,1> (was presented 2 times in the conclusions of the mothers of the clinical group and 1 time in the conclusions of mothers of the control group). Cluster <0,1,0> (was presented 3 times in the conclusions of the mothers of the clinical group and 0 times in the conclusions of the mothers of the control group, were defined as not diagnostic.

Discussion

Parenting of mothers who have schizophrenia is discussed as usual in the literature as the link between mental health problems and negative impact for parenting and parent-child relationship [11; 17; 22; 24; 25]. Mothers with schizophrenia have been observed to have significant difficulties in interactions with children, caregiving, decreased ability to perceive emotions and read children's cues [11]. In addition, they have been described as having lower parenting sensitivity and interactive deficits [17], difficulties in recognition

of emotions, and laxness style of parenting, especially in mothers with blunt effect [23]. At the same time, other authors pointed not only to the harmful effects of the illness and the difficulties that psychotic women encounter during parenthood but individual and environmental protective factors [7; 13; 15; 21].

The study of the texts of mothers who have schizophrenia and healthy mothers, confirmed our idea of the absence of an unambiguous connection between bad parenting and mental disorder. The statistical analysis proved the relevance of such detected parameters as “Agent: Mother”, “Agent: Child”, “Internal predicate related to the mother”, “Internal predicate related to the child”, “Time perspective: Present”, “Time Perspective: Future”, “Emotional coloring of conclusion”, “Negative emotional coloring of conclusion”, “Concrete conclusion”, “Subject of mental disorder in conclusion”. The mothers who have schizophrenia, more often than the healthy mothers note their own experiences and subjectivity than the experiences and subjectivity of the child. Nevertheless, “more often” means that some of them note the experiences and subjectivity of the child. At the same time, among the healthy mothers, there are those who do not see their child as a person having his feelings and being able to act independently.

A refinement of this often/rare statistical point of view was psychosemiotic analysis. As a result, a blurred line between good and bad parenting became visible. The whole set of texts by the mothers from the clinical and control groups were divided into subgroups, of which two turned out to be directly opposed for illness/health and simultaneously for bad/good parenting.

To see the meaningful differences between them, let's look at the values of each of the three parameters. The first parameter is “time”. Its zero value marks an abstract emotionless event, whilea nonzero value is a sign of an actual experience. This parameter has a zero value not only in subset A, but also in subset B. This means that describing events as abstract emotionless in the text is an important, if not a diagnostic factor, of poor parenting. If the next two places in the cluster are 1, we observe insufficiently good parenting. On the contrary, if the events in the text are described as an actual experience, then even zeros in the other two places allow us to speak of fairly good parenting.

“Quality/situationality” (second place in the cluster) specifies the subject which causes irritation among the respondents: meaning “1” marks negative attitude to some qualities which are specific to a child as an individual, meaning “0” is connected with a child's reactions to some situation. Zero second place in the cluster, in our opinion, means a significant negative trait of parenting inherent in both subset A and subset C. However, if we talk about the “strength” of the parameter, then “quality/situationality” is weaker than “time”: a zero value of the “time” parameter, a nonzero parameter “quality/situationality” preserves the position of insufficiently good parenting for the text, and vice versa: with a nonzero “time”, zeros in the second and third places do not prevent the text from being assigned to subset C.

Opposition. The parameter “Opposition” appeared to be the most interesting and surprising. We did not use it for the analysis of the coherent texts before. It was introduced heuristically because we expected to see the paradoxical integrity of the view of the world

of the mothers of the clinical group, which is not common among the mothers of the control group. However, the biclustering results crossed out this concept: in the diagnostically opposed clusters, the parameter “Opposition” had a meaning “0” among the mothers of the clinical group. It may be interpreted as the mothers’ weakness who described the “good” situation as an escape from traumatic situations. On the contrary, those mothers from the control group were strong enough to be disturbed by the irritating behavior of the child, and they could evaluate the situation on the whole as being rather “good” to them. Therefore, it is reasonable to consider a non-zero value of this parameter as a positive characteristic of parenting.

It is easy to see that the four clusters discovered during biclustering do not exhaust all combinatorial possibilities of combinations. However, based on the available material at the moment, it is impossible to say whether this is due to the numerical insufficiency of the sample or to the meaningful properties of the selected parameters that have not yet been found.

Conclusion

The conclusions of the first macrostatistic and the second modified psychosemiotic parts of the research combine well with each other, they complement each other, and there are no contradictions between them.

From a methodological point of view, the combination of macrostatistical and psychosemiotic approaches has proven to be productive. One of them gives a general idea of the picture. The other gives detalization, thanks to which a working hypothesis is being formed allowing to create a new plan for a larger-scale study. It promises an improvement of both statistical and psychosemiotic results. So, as a result of the study, the work is now underway to modify the semi-structured parental essay in the incomplete-sentence form (test “Parental composition”) [10], in order to get a complete picture of constructive and destructive child-parent relationships in both healthy and ill parents. It also hypothetically assumes at least two intermediate classes of relationships: rather destructive and rather constructive parents. Diagnosing the last two is especially important since it involves special correction protocols.

The initial humanistic position regarding the absence of undoubted links between the parental behavior of healthy and ill women has been confirmed. It follows the idea that a mother's psychiatric diagnosis should not be a sufficient argument to restrict her parental rights.

The research has led to a new processing of the original test of unfinished sentences. Its modification is currently being created and is built on reformulating unfinished sentences to receive more linguistically diverse responses from the subjects. This will make it possible to detect, in the process of psychosemiotic analysis, not three-place, but five-six-place clusters, which will significantly increase the reliability of the results, and also make it possible to differentiate “reasonably good” and “not quite good” parenting in mothers from both clinical and control group.

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Appendix

Mann–Whitney U-test for the conclusions to the parental essay in the form of incomplete-sentence test: p-value

Non-complete sentences and the number of it	Agent: Mother	Agent: Child	Agent: Third parties	Non-agent	Internal predicate related to mother	Internal predicate related to child	Present	Future	Emotion	Negative emotion	Concrete	Subject of mental disorder
Open scale												
11. Most likely, he/she									0,007			
21. I’ve always recognized		0,030		0,031					0,006	0,011		
Comparative assessment												
2. As compared to other children		0,042									0,042	
12. When we are with other children											0,021	
Ideal expectations												
4. I’d like my child						0,002					0,027	
14. I’ve always dreamt my child		0,039				0,011			0,001			
24. I would have been glad if		0,042	0,025									
26. My child is talented enough to		0,011					0,005	<0,001				
Fears and anxieties												
5. I trouble, he/she				0,026	0,042	0,001						
15. I am afraid, he/she		>0,001			0,030					0,048		0,006
25. I don’t want he/she will		0,025				0,021						

Non-complete sentences and the number of it	Agent: Mother	Agent: Child	Agent: Third parties	Non-agent	Internal predicate related to mother	Internal predicate related to child	Present	Future	Emotion	Negative emotion	Concrete	Subject of mental disorder
Requirements												
6. I want my child to have greater focus on	0,003				0,006				0,040		>0,001	
Causes of difficulties												
7. I get awfully irritated, when												0,042
17. I don’t like his/her						0,007						
27. I think, his/her difficulties relate to				0,048								
Anamnesis												
8. When he/she’s grown…									0,041			
18. When he/she was a small											0,042	
28. The heaviest experience, my child had to go through	0,003											0,011

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