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Superficial and systemic diagnosis of family

The distinction between two types of diagnosis of family was inspired by the concept of surface and source features of personality by R.B. Cattell. By means of existing psychological questionnaires we can only know the surface of consciously available mental phenomena. The same is true in the diagnosis of family. The McMaster model of family, systemic in its assumptions, developed research tools giving access only to the surface of the phenomena. Although they are divided into certain thematic categories they do not reveal what is really important in the family system. In this article, the author, after a detailed discussion of one of the tests based on the McMaster theoretical model, is attempting to identify the source features (here: unavailable for conscious cognition) of the family, hereinafter called systemic traits. In this research the exploration factor analysis was used. Three perspectives of the opinion of the family were maintained (like in the Family Assessment Measure). Factor analysis allowed identification of three factors for each perspective of the family assessment. Confirmative analysis proved a satisfactory match (using RMSEA, GFI and AGFI statistics). The accuracy of the identified systemic model was then tested by a confirmation study (confirmative factor analysis using Amos from SPSS). The authors also prepared a provisional questionnaire for measuring these systemic traits of the family. The tool proved to be promising and the work worth continuing. Incidentally, it turned out that the characteristics of the family system are relatively independent of personality traits of family members.

Keywords: assessment of family system, systemic traits, factor analysis in family research

Introduction

In family therapy, to plan effective work with the disfunctional family, we often ask questions about the family adaptive potentials and basic behavioral and emotional tendencies in it. The systemic approach seems to be the most accurate and proved to be in such cases. The McMaster Model of Family Functioning is such a theory which was established to explain thoroughly family processes (Epstein et. al. 1981, 1982, 1983; Simon & Stierlin, 1998). The main idea of this model is to deliver the notional apparatus to the diagnosis of the functionality of family through the profile of behaviors of the members of families in several distinguished areas: problem solving, communication, roles, affective responsiveness, affective involvement and behavior control. Many diagnostic methods were established on the basis of McMaster theory, with clinical methods predominating and leaning mainly on the qualitative analysis, e.g. Family Assessment Device or McMaster Clinical Rating Scale (Epstein et.al., 1994). Using the idea of the McMaster's model, Canadian researchers H. Skinner, P. Steinhauer and J. Santa-Barbara worked out the

Process Model of Family Functioning, which emphasizes dynamics and the interactive character of family processes more strongly than MMFF. According to the model, the dimensions of family system are: task accomplishment, roles performance, communication, affective expression, involvement, control, values and norms, social desirability and defensiveness. This model, and the Family Assessment Measure based on it, allows multilevel assessment of family functioning, overall family functioning, as well as dyadic relationships with another family members and one's own functioning within the family. FAM gives a quantitative profile of the family, which makes it possible to estimate the level of functionality and malfunctioning of the family system and may be very useful in systemic research over families being in very varied critical situations.

Does the model PMFF really allow authentically systemic diagnosis of the family by questionnaire research method? An attempt to answer these questions is the subject of the present article.

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Characteristics of the Family Questionnaire scales

The detailed descriptions of all dimensions are presented below (Cierpka & Frevert, 1994; Beauvale, 2002).

A. Task accomplishment

This scale refers to the family effectiveness in solving problems which can make up the difficulty for the family. In such circumstances family has to be ready to undertake new tasks that appear, which may be a source of the emotional tension in the system, but the solution of which guarantees the existential and emotional safety of the family. Proper accomplishment of these tasks is the condition of psychosocial development of family members according to the phases of the life cycle. The family ability to react effectively in new situations is the measure of its functionality in the range of this dimension.

The strong points of the family are the indicator of elasticity and the ability of adjusting to requirements connected with appearing new tasks. They also show:

- the functional strategies of accomplishing tasks in stressful situations,
- solving the problems in agreement with the other members of the family, and
- the attempts of searching for alternative ways of solution.

The weak points of the family are lack or lowered ability for a suitable reaction to the requirements of the life cycle, the difficulty in accomplishing various tasks, and working out the alternative possibilities of solutions or realizing necessary changes. The symptom of extreme malfunctioning is the inability to identify a problem and undertake a solution. This happens in unstable families which only seemingly act well but under stressful events experience disorganization. Unsolved instrumental problems usually cause affective difficulties as a consequence, and finally - low satisfaction with family life in many or even in all members of the family. Existing affective difficulties are not only the problem themselves, but also they may disturb in realization current instrumental tasks because of negative emotions, low motivation, lack of will and cause interpersonal tension making even a conversation about the problem impossible.

B. Role performance

Role is the repeating pattern of behavior, which helps to realize ones' family functions (Bishop and Epstein, op. cit.). The authors mention three kinds of roles: instrumental, necessary in satisfying basic family needs of the family, affective, appearing in looking after and supporting members of the family and satisfying sexual needs (relates to the adult members of the family) and complex roles – supporting children development adequately to the level

of their maturity, health protection and keeping general control in the family.

The ability to accomplish roles effectively is the essential criterion of family functionality in MMFF and PMFF models. Division of roles is effective when important roles are efficiently assigned (for example, a situation, in which every person is able to undertake suitable challenge in difficult and uncommon circumstances) and when accomplishing roles correspond with task performance. The roles of certain members of the family should be thoroughly defined and should complement each other. This is the main condition of safety assurance of each individual, because they have clear demands from themselves and are aware of others' expectations from them. Thus the level of confidence grows and the probability of conflicts within the family diminishes.

The items in the role performance scale refer to the person's responsibility in the family. They examine the feeling of justice and clear assignment of duties, and also trust for to others' responsibility and determination in their performance.

The results indicating family strengths in that area mean that:

- roles are well-known to everybody and family members are aware of others' expectations,
- individuals realize their duties in accordance,
- individuals accommodate to new duties resulting from family developmental stage (for example, take parental duties and the like).

The scale also allows the catching of situations, when parts are vaguely divided and 'attributed' and to disclose inability of a certain family member to adapt him or herself to new roles, required by the life cycle.

C. Communication

This dimension relates to the exchange of information within the family. Information may be affective (concerning emotions), instrumental (connected with executing everyday tasks) or indifferent. The unambiguous and direct communication is the most effective ('direct' messages), the least effective - indirect messages with hidden intentions (e.g. allusions, misunderstandings). Special problems arise when there is much conflicting information, resulting from the incompatibility between verbal and non-verbal channel (*double bind* type). In such cases the recipient is responsible for his / her interpretation. Communication is connected with fulfilling roles.

Results indicating the family strengths testify that communication is clear, direct and comprehensible, strengthened with sufficient information exchange and that misunderstandings are being explained up to date, just after they have been perceived.

Opposite results show that the circulation of information between members of the family is insufficient, that

agreement is incomplete or completely does not exist or – that the family is incapable of explaining conflicts and contradictions.

D. Emotionality (Affective expression)

This is one of two affective dimensions of the questionnaire. The authors use the term ‘affective expression’ and define it as the ability of the members of family to react to various stimuli in an adequate way to the modality and strength of affect (Epstein and Bishop, op.cit.). Emotional reactions should include a wide spectrum of expressive behaviors, adequate to experienced emotions and stimulating situations.

The scale items refer to the way of coping with emotions: openness in communicating emotions, coping with resentment and the right to have individual feelings.

When strong points predominate in the family, the interaction is characterized by manifestation of feelings of suitable intensity and by adequate to the situation emotional expression.

Problems may lay in shallow and inadequate emotional expression or in extreme expression; feelings are muffled or expressed very violently.

E. Affective involvement

According to the McMaster theory this dimension refers to the way of manifestation of the interest of the other person in the family system; items focus on the way and degree to which members mutually get involved in their matters. Respondents’ answers reflect the strength of emotional ties within family, level of mutual confidence and openness to others’ problems and the respect of others’ feelings.

The strengths of the family are then empathy and mutual care as well as positive emotional relationships, which play a protective and strengthening role through satisfying various needs (e.g. need for safety). Weak points are complete lack of involvement or a symbiotic relationship.

F. Control

The aim of control behaviors is to fulfill roles properly in the face of such problems as: the physical threat, difficulties in satisfying biological and safety needs, difficulties in social relations, both inside the family system and beyond it as well. Control behaviors regulate adaptive processes in difficult situations. The effectiveness of the control depends, among others, on the strength of mutual influence, ability to restrain impulses and a feeling of personal responsibility.

Advantageous results tell about family flexibility, i.e. when the rules are accepted by the majority, but they are not obeyed too rigidly (there is some spontaneity, but somewhat confined). Problems arise when stereotypical and schematic behaviors predominate, making it difficult to fulfill everyday tasks (e.g. stiff rules, inexplicable rules). Also, when control behaviors exclude the spontaneity or

just on the contrary – when they are chaotic and inconsistent and when open or hidden conflicts accompany control behaviors.

G. Values and Norms

This dimension refers to moral standards and the ways of fulfilling them in the family. Norm means the minimum requirement in this area regarding every family member. The test based on PMFF does not explore the system of the values existing in a certain family. Respondents’ notes are indicator of the feeling of uniformity in the sphere of accepted basic values (what is right and what is not) and acceptance of these members who present the different system of the values or even lower possibilities (e.g. intellectual).

Strong points signify agreement and cohesion of the family system according to the basic values and level of liberty within the family. Problems may result from the lack of agreement and cohesion in the family system and insufficient freedom.

H. Social Desirability

This scale exists only in the sheet of general assessment of the family. One can say that this is a scale of “family self-esteem” in comparison with other families. It allows estimating the feeling of satisfaction with one’s own family. It also may be treated as control scale.

In each case both low and high results may indicate problems. High results indicate agreement and the cohesion of the family system as well as high appraisal of the family. They may also suggest possible conflicts with the system surrounding (social surroundings) due to the feeling of superiority (‘we are better than others’). Low scores result in the lack of agreement and cohesion in the family system or the feeling of limited freedom and testify the lack of the acceptance of one’s own family, which can result in the tendency to close the borders and isolate or in the feeling of hostility against surroundings.

I. Defensiveness

This scale also exists in the general assessment sheet. Items refer to typical abrasive situations and misunderstandings which happen in every family. And so it may be treated as the typical control scale, whose result indicates the sincerity of answers and the respondent’s attitude to the test situation. Denying obvious and common facts is meant for defending the family image and protecting from the possible feeling of guilt of misunderstandings.

The conception of the model is illustrated in the schematic drawing below.

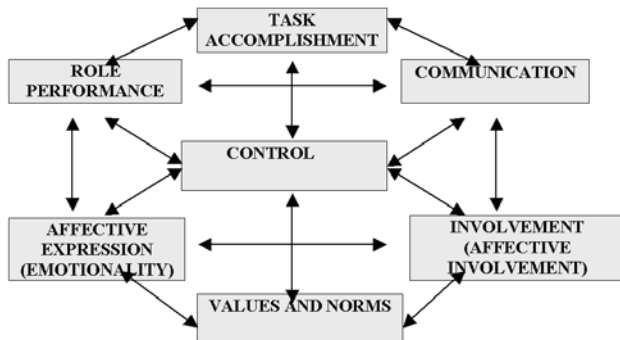


Figure 1. Systemic model of family (Cierpka and Frevort, 1994).

Construction, psychometric properties and use of Family Assessment Questionnaire

The Family Assessment Measure had numerous metamorphoses, among others depending on the cultures to which it was adapted. The Family Questionnaire (Familienbogen) by M. Cierpka and G. Frevort from Gottingen, Germany is one of such versions. This Family Questionnaire contains the same dimensions as the original FAM; however it differs only in the number of items used. There are 40 items in general scale (50 in FAM), 28 in dyadic relationships scale (42 in FAM) and 28 in self rating scale (42 in FAM).

The questionnaire may be used in different than clinical diagnoses of the family. It is possible because FQ does not deliver the results in psychiatric terms, but it uses the terms of natural language. Thus it allows describing the families in objective categories, not reducing them to the object of potential therapy and clinical treatment.

The Polish adaptation of this method, Family Assessment Questionnaire, accomplished by teams from Warsaw Medical University and Jagiellonian University (Namysłowska *et al.*, 2002; Beauvale *et al.*, 2002), gave data for analyses being presented in the further part of the article. The Polish version is homogeneous with the questionnaire of Cierpka & Frevort. Linguistic specificity was considered creating the adaptation. The questionnaire consists of 96 items. Each of them is a self-report type scale, with four possible attitudes to each statement: definitely true, rather true, rather not true, definitely not true. Test items are the statements which refer to the various areas of the family life. I use the term 'area of the family life' to emphasize that items describe the range of specific family problems and the term 'dimension' as referring to test variable having various values according to the answers given by respondents in the research.

All members of the family older than 12 take part in the Family Questionnaire research (Cierpka & Frevort, 1994). For assessment of mutual relations there are 8 sheets with similar statements but differing only with the person 'addressee' (that is this member of the family about which a

person examined expresses his or her opinion). Every sheet is designed for a different dyad. So: the sheet 2a is designed for the opinions of the mother and the father about their son, 2b -the mother and the father about their daughter, 2c - the wife about the husband, 2d - the husband about the wife, 2e - the child (daughter or son) about his or her mother, 2f - the child (daughter or son) about the father, 2g - the brother or the sister about the sister and the sheet 2h - opinion of the brother or the sister about his or her brother.

The validity of any psychological test is based on the theory of its origin. In the case of FAQ it is McMaster Model of Family Functioning with modifications of P. Steinhauer and M. Cierpka and co-workers. Thus we may say of theoretical validity of FAQ.

Psychometric properties of FAQ are defined on the basis of results of 557 families (1511 people), out of which 248 are the so called normal and 309 are the so called clinical. The *alpha* Cronbach coefficient was used to specify reliability. The coefficients were not very high, but also they did not disqualify the method (.746 to .809). In all three questionnaires the highest reliability, allowing the use of the technique in diagnostic aims, showed in the general assessment scales - $\alpha > .80$ (Beauvale, *op. cit.*).

The authors of the adapted version give sufficiently high results of the discriminatory power of items to use them in empirical research. The skewness of results is rather high and they are lower to the theoretical schedule, but this should not be surprising, because in the population there were many functional families i.e.: not showing the features of any disorders in the family structure or functions. We may suppose that functionality in majority of areas of family life is typical. However, we should remember that the items relate to private and subtle problems, and the social approval variable may be of special significance. It probably makes the respondents answer in the way they believe it should be answered, and not necessarily according to the real situation.

The Family Assessment Questionnaire makes it possible to characterize the family in all the above listed areas of its functioning and on the basis of the results we may assess the functionality or malfunctioning of the family in a given dimension.

Each of seven basic dimensions of the test is a continuum, with one pole reflecting problem areas (high results) and the other pole (low results) informing about the strengths of the system. It is comparatively easy to characterize the functionality of the certain dimension of the family, at least in very general terms. The high result on Defensiveness scale shows strong defensive tendencies in the family. A high result on Social Desirability scale reflects satisfaction and pride with one's own family, whereas low result suggests discontent and a low opinion of one's own family.

FAQ contains items relating to the respondents' opinions on certain areas of the family life. In the questionnaire he or she chooses the answer which corresponds to his or her subjective feelings. Knowledge of specialist language is not required. The respondent's internal conviction is the basis of each answer, based on how he or she experiences family processes (e.g. making decision, interpersonal relations and the like). So we may say that answers reflect functioning of the family in various aspects. However, some explorers believe that in the respondents' answers the emotional component often outweighs the cognitive one. Therefore, they suggest interpreting the results of FAQ in terms of satisfaction and discontent with family functioning in a certain area (Beauvale, 2002). In fact the items are formulated in a way that the answer always indicates the positive or negative opinion of the respondent. For example, the answer "definitely agree" to the statement: 'My family and I agree entirely what is good and what is bad' expresses the approval for the extent of the agreement in the family. And the same answer to the statement 'Sometimes we are unfair to ourselves', may be an expression of dissatisfaction with the level of agreement in the family. One can now admit that these authors are reasoning right, which gives us the possibility of interpretation in terms of satisfaction or discontent. But not only. Doubtlessly, the respondent bases his or her answers on some premises (his or her interpretations of what happens in the family). So they are his or her reflections of his knowledge and beliefs and make up the element of the subjective representation, sometimes called a 'family map' (de Barbaro, 1999).

So we should say that both FAQ, FQ and their prototype, the Family Assessment Measure, give us knowledge about how individual members of the family take others' behavior in certain kinds of situations. Certainly it is neither the thorough picture of the family, nor the systemic diagnosis. Results in test dimensions give us some information about how the family acts in certain areas and about satisfaction with this functioning. Thus the respondent's opinion may be treated as information on perceptible family features, enabling its superficial diagnosis. They are comparatively easily accessible for consciousnesses and the members of families may easily choose these answers which describe, according to their opinion, what is going on in their family. This resembles R. Cattell's 'superficial traits' of personality. In this case, "superficial traits" of the family may be also recognized thorough observation or structuralized family interview (e.g. the McMaster Family Assessment Device) (Epstein et.al., 1983). Systemic diagnosis based on such knowledge is risky and depends on the researcher's bias towards the family. Such diagnosis would be intuitive and subjective.

Factor analysis of Family Assessment Questionnaire

We may suppose each family may be described not only by the features perceived on the surface of the family life. The systemic theory requires structural as well as dynamic analysis of the family. One may say that it requires the analysis of feedbacks giving information on hidden, even for an involved observer (e.g. the member of the family), interactions and their mechanisms (e.g. motivational tendencies, the rules of the communication and the like). It means that some family traits do exist on the deeper level. We may call them root traits. The name root does not mean the same as in Cattell personality theory because Cattell's source trait is only a not confirmed empirically speculation (Oleś, 2003). What is more, source personality traits are the reasons for certain behaviors. They are responsible for functioning of the personality. However, in the systemic approach the circular causality is the main principle of explanation. Thus recognizing certain factors as responsible for one's behavior or for the family processes would be a principal error.

I tried to identify those root family traits by means of factor analysis. Simultaneously, it was an attempt to confirm the validity of dimensions distinguished in the FAM, FQ and FAQ questionnaires by means of factor analysis. I assume root traits come out in various behaviors as well as in test answers treated as observational variables.

The material for factor analysis was research on 422 families without recognized psychopathological problems. Subjects live in two large municipal agglomerations in Poland (Lodz and Warsaw) and smaller cities of the Lodz and Mazovian provinces. The method of main components was applied, with Oblimin rotation due to intercorrelations among variables (Beauvale, 2002). The structure of three separate factors for each perspective of the family assessment was obtained:

Three factors obtained for the general assessment (rotation reached the convergence in 13 iterations) were:

GA1) inclusion according to the Family FIRO Model theory (Doherty et.al., 1984). Inclusion is claimed to be a measure of the cohesion of the family. It is the basic feature of the family system according to the above-mentioned Family FIRO Model and it means the feeling of common identity and the similarity of values and opinions within the family system.

GA2) co-operation - this is the ability to recognize and define problems accurately and to undertake common acts in order to solve them. The level of co-operation is determined by confidence that all family members fulfill their duties in trouble situations and in the face of new challenges and difficulties; this is mainly the behavioral factor.

GA3) agreeableness - this is tendency for peaceful living together and avoiding conflicts with the others in

Table 1
Coefficients of fit in the general family assessment.

	GFI	AGFI	CFI	RMSEA
Cohesion	.951	.935	.958	.057
Co-operation	.969	.951	.955	.061
Aggreableness	.979	.927	.951	.082

Table 2
The coefficients of fit in the bilateral relations assessment.

	GFI	AGFI	CFI	RMSEA
Communicational mutuality	.974	.961	.975	.053
Acceptance of one's autonomy	.949	.920	.926	.078
Feeling of support	.983	.966	.980	.062

Table 3
The coefficients of fit for the self – evaluation.

	GFI	AGFI	CFI	RMSEA
Partnership	.944	.916	.943	.078
Self-confidence	.973	.951	.945	.067
Care	.979	.957	.948	.067

the family; this factor appears in attitudes of the family members. Its level expresses the feeling of community and satisfaction resulting from being a family.

The following factors were identified in the assessment of bilateral relations (rotation reached the convergence in 7 iterations.):

BR1) communicational mutuality, that is the ability for mutual conversation with another person and for acceptance of his or her needs and rights,

BR2) the acceptance of one's autonomy,

BR3) feeling of support (from the family).

Another three factors were revealed in the self assessment scale (the rotation also reached the convergence in 7 iterations):

SA1) partnership; that is one's belief of being valued by the family,

SA2) sense of security in fulfilling his or her family role,

SA3) care; the feeling of responsibility for others.

The statistical criterion of accuracy of the factor model is the fit coefficient settled by confirmative factor analysis. The following coefficients were applied: GFI (goodness of fit index), AGFI (adjusted of fit index), the comparative coefficient of adjustment (CFI) and square root of average approximation error RMSEA by Steiger-Linda (Garson, 2009; Zakrzewska, 2005). Their values are demonstrated in Table 2 and Table 4 (Garson, op.cit.).

I assume distinguished factors reflect the root family traits which are hardly noticeable by 'superficial' characteristics of the family.

Systemic profile of the family

Variables revealed in the research with FAM and their derivatives give us the image of the potential of the family. They inform about the readiness for performing certain behaviors towards others and about the emotional atmosphere in the family.

The most general features are:

1. Functionality in MMFF dimensions of family: tasks accomplishment, role performance, communication, emotional reactivity, affective involvements, control and values and norms in three perspectives – general assessment, assessment of bilateral relations and family self-evaluation.

2. Satisfaction or dissatisfaction with family functioning in certain areas of family life.

From the point of the view of family therapy, the key question is to diagnose the family system in terms that enable translating the clinical knowledge of the family into family model coherent with systemic theory. The Family Assessment Questionnaire allows us to set such diagnosis in terms of variables identified by factor analysis: cohesion, co-operation and agreeableness in general assessment, communicational openness, feeling of autonomy and support in the bilateral opinion and partnership, feeling of safety and care in the family self - evaluation. It is not the profile of the individual elements of the system what is essential in FAQ, but rather the assessment of the whole system functioning, only made by the individual members of the family. Objective facts and events from family life are not crucial for the answers in the test. It is their perception of respondents what is decisive. It is also possible, that

there are differences among family members' opinions – some of them may view the family system as coherent and peaceable, while the others, as abrasive and antagonized.

We assume that factors disclose new variables describing the family as a system. Thus we may say about systemic variables as follows:

1. Cohesion (inclusion); it detains close and strong large feeling of the community. It may also show considerable frankness and similarity of attitudes and standards in the area of values.

2. Co-operation, which expresses ability to recognize and define problems accurately and to undertake collaboration in order to solve them. In cooperative families one may observe high level of trust for others' good will and abilities to fulfill their tasks; the co-operation appears mostly in new or trouble situations.

3. Agreeableness, expressing tendency to a live peaceful life in harmony with other members of the family. High agreeableness may show limitations in open expression of opinions, whereas low indicates large tension and real conflicts in the family.

The variables listed above characterize the family in terms of its homogeneity and closeness of relations among all her members. Those dimensions, when put together may indicate the durability of the family and its ability to survive in critical situations. We may also suppose that these traits show family identity and the clarity of the external boundaries of the family system.

Variables concerning bilateral relations are:

4. Communicational openness; high level of openness expresses the skill of the bilateral communication and is the indicator of the tolerance for opinions and convictions of the other family members, low level - can be recognized as manifestation of intolerance and communicational problems.

5. Feeling of autonomy; it shows the level of perceived individual autonomy and the lack of behavioral limitations towards the person from the family whose behavior is the object of the opinion; low autonomy is characteristic for families, where members clearly and decidedly express behaviors and opinions,

6. Feeling of support; this feature reflects members' conviction on how they can count on others' help and support in difficult situations.

The assessments of bilateral relations refer to a certain person from the family (receiver). New variables may give suggestions of mutual respect among the family and about respecting individual borders.

New variables in the area of family self evaluation are: 7. Partnership - like attitude towards others, 8. the feeling of one's self-confidence and - 9. Care.

Attitude of partnership reflects the level of objectivism and partnership of opinion about other members of the family. Self confidence reflects the feeling of being an

Table 4
The values of alpha Cronbach coefficient for new scales.

The systemic feature	
Cohesion	.875
Co-operation	.630
Agreeableness	.821
Communication	.904
Autonomy	.868
Support	.872
Partnership	.901
Self-confidence	.734
Care	.830

important member of the family. It may also inform about the level of trust in others, and, on the other hand, show nervous tension and anxiety resulting from lack of understanding and acceptance for others' behavior. Care expresses the feeling of responsibility for others and the interest in their matters.

The factors obtained reveal new features useful in systemic diagnosis of the family system. The factor itself is not a variable and we cannot measure it, but we are allowed to say that 'a person represents certain level of a factor similarly as we say he or she got certain result ... in the test' (Ferguson and Takane, op.cit, p. 554). Consequently one may use the test for the measurement of the family hidden variables. However, it is well known that factor loads of measured variables (in this case – test answers) are differentiated. Their weights vary considerable and it means that single items explain factors to the varying degree. So I decided to choose only the items with factor loadings more than .5, because the higher the factor loading, the larger the degree to which the item is replete with the trait corresponding with the factor. Thus new questionnaires were created for measuring root traits of the family. On the basis of confirmative analysis, nine new scales were created according to identified factors.

These scales are: 1. Cohesion scale (15 items), 2. Co-operation scale (11 items), 3. Agreeableness scale (8 items), 4. Communicational mutuality scale (11 items), 5. Acceptance of one's autonomy scale (9 items), 6. Feeling of support scale (7 items), 7. Partnership scale (11 items), 8. Self – confidence scale (8 items), 9. Care scale (7 items).

The reliability of created scales was examined by estimation of the internal agreement (alpha Cronbach coefficients). Results are presented in Table 4.

The coefficients' values are comparatively high and acceptable for all scales (Beauvale, 2002). The authors of the Polish adaptation of Family Questionnaire found the discriminatory power of items as acceptable. Therefore, when we take into account the results of confirmatory analysis and coefficients of model fit, we may

Table 5
Personality traits and systemic proprieties.

Systemic variables		Personality traits according to Big Five Model					*** R ²
		Neuroticism	Extraversion	Openness	Agreeableness	Conscientiousness	
General Family Profile	Cohesion	x	1*	3	x*	2	.237
	Cooperation	1	2	X	3	4	.099
	Agreeableness	1	x	2	3	x	.04
Bilateral Relations	Communication	x	1	x	x	2	.11
	Acceptance of other's autonomy	x	1	x	x	2	.095
	Support	x	1	x	x	2	.102
Family self-evaluation	Partnership	x	1	x	3	2	.215
	Self-confidence	1	2	x	x	3	.088
	Care	x	2	x	x	1	.249

*Model was marked with arabic numerals (1- first introduced trait, 2 - first and second trait, 3 - first, second, third trait ...etc.)

** traits excluded were marked with x

*** R² score for all introduced features (final model)

assume that newly created scales are sufficient tools for measuring root family traits.

Are the systemic variables the product of the system?

According to the fundamental foundations of the systemic theory this approach makes up the alternative for traditional psychological investigations, concentrated on analyzing the relationships among certain number of factors: personality, emotions, temperament, motives and the like. Researchers are more or less orthodox in this matter. Some of them treat systemic perspective as the supplement of individual explanations, the others – particularly practitioners in systemic psychotherapy - firmly and consistently throw aside views different than the systemic point of view (Walsh, 1982; McKenry, 2005; Tryjarska, 2005; Świątochowski, 2000 and others). However, it does not provide clear and empirical premises, which would allow the unambiguous determination of that dispute. Also, I shall not undertake it in this article, and do not attempt it in the present article. Nevertheless, there remains the question if individual psychological variables may determine the functioning of an individual in the family system.

Some premises for answering such a question may be delivered by regression analyses. I checked the strength of determination of systemic variables identified in the factor analysis by personality traits according to Big Five Model (Costa, McCrae), which are assumed to be independent variables. They were measured by NEO-FFI (Zawadzki et.al., 1998). The following table presents results obtained in the specific areas of the family life. It contains personality variables introduced to the model, variables excluded the and determination coefficients (R²).

Personality traits in a low degree explain the variance of systemic traits, though three traits: extraversion, conscientiousness and openness may determine cohesion to the certain degree.

As to the mutual relations all R² score are about .1 (from .095 to .11), so we may say, that the area of family life is determined by personality traits to a very small degree. We observe more significant results in the range of family self-evaluation. Two systemic traits, Partnership and Care are determined in about 20% by the personality. Nevertheless, such a result should not surprise, especially if we realize that family self-evaluation mainly results from the subject's opinion about himself or herself. So it is the element of self-image, usually considered to be the element of personality.

It is however symptomatic that in the model, there are two variables introduced in all dimensions of self-esteem: extraversion and conscientiousness. Probably it is due to a high sense of social desirability of self-evaluation scales. The principal matter is: primacy of systemic mechanisms over individual, or inversely obviously cannot be determined by just described analyses. Yet, they give, as we believe, strong premises for the acceptance of the systemic point of view and of legitimacy of the presented research strategy.

Conclusion

Factor analysis allows us to identify important systemic variables, which give valuable information on mechanisms operating in the certain family system and supply the superficial profile, based on the results of basic scales of FAQ test. We hope that complex model provides a useful model of organizing information helpful in the diagnosis of family strengths and needs, which are necessary for efficient family therapy. Preliminary results of the research -- which is being carried out at the moment -- on using this model in families with the schizophrenic patient show

that it may be useful in clinical treatment. However, further research in the area of family centered practice is needed.

Study of the new tool for measuring detected systemic variables is particularly necessary. This would give us the possibility to make an exact family diagnosis and to detect the mechanisms which make up the potentials or weaknesses of the family. This could bring significant advantages in the process of the family therapy. This could bring significant advantages into the process of family therapy. First of all, it would make it easier to define accurately the purpose of the therapy in its early stage, and in some particular cases, it would evoke the decision to subject some family members to individual therapy.

References

- Andersen, J.Z. & White, G.D. (1986). An empirical investigation of interaction and relationship patterns in functional and dysfunctional nuclear families and stepfamilies. *Family Process*, 25, 38-51.
- Barbaro de, M. (1994). Struktura rodziny (The structure of the family). In: B. de Barbaro (ed.), Wprowadzenie do systemowego rozumienia rodziny (*Introduction to the systemic understanding of the family*), p. 45-55. Kraków: Collegium Medicum UJ.
- Baucom, D.H., Epstein, N., Rankin, L.A. & Burnett Ch.K. (1996). Assessing Relationship Standards: The Inventory of Specific Relationship Standards. *Journal of Family Psychology*, 2, 72-86.
- Beauvale, A., Barbaro de, B., Furgał, M. & Namysłowska, I. (2002). Niektóre psychometryczne własności Kwestionariuszy do badania rodziny (Some psychometric properties of family questionnaires). *Psychiatria Polska*, vol. XXXVI, 1, p. 29-40.
- Cierpka, M. (1996). *Handbuch der Familiendiagnostik (Handbook for family diagnosis)*. Berlin:Springer Verlag.
- Cierpka, M. & Frevert, G. (1994). *Die Familienbögen*. Göttingen:Hogrefe-Verlag GmbH & Co.
- Doherty, W. J. & Colangelo N. (1984). The Family FIRO Model: A modest proposal for organizing family treatment. *Journal of Marital and Family Therapy*, 10, 19-29.
- Epstein, N.B. & Bishop, D.S. (1981). Problem centered systems therapy of the family. In: A.S. Gurman & D. P. Kniskern (red.), *Handbook of family therapy* (444-452). New York: Brunner/Mazel.
- Epstein, N. B., Baldwin, L. M. & Bishop, D. S. (1983). The McMaster Family Assessment Device. *Journal of Marital and Family Therapy*, vol. 9, nr 2, 171-180.
- Epstein, N. B., Bishop, D. S. & Baldwin, L. M. (1982). McMaster Model of Family Functioning: A View of The Normal Family. In: F. Walsh (ed.), *Normal Family Processes*. New York: The Guilford Press.
- Ferguson, G. & Takane, Y. (1997). *Analiza statystyczna w psychologii i pedagogice (The statistical analysis in psychology and pedagogy)*. Warszawa: Wydawnictwo Naukowe PWN.
- Garson, D. (8.06.2009). Structural Equation Modeling. <http://faculty.chass.ncsu.edu/garson/PA765/structur.htm> 15.07.2009.
- Jabłoński, M., Dudek, D., Furgał, M., Datka, W. & Zięba, A. (2007). Wykorzystanie kwestionariusza Manfreda Cierpki w analizie wsparcia rodzinnego u pacjentów z ostrą białaczką (Use of Manfred Cierpka questionnaire in the analysis of the family support in patients with acute leukaemia). *Psychiatria Polska*, vol. XLI, 6, p. 799-812.
- McDaniel, S. H., Hepworth, J. & Doherty, W. J. (1992). *Medical Family Therapy*. New York:Basic Books.
- McDonald, L., Kysela, G., Drummond, J. & Cathy Wiles, M. & W. (2009). Assessment of the Clinical Utility of a Family Adaptation Model. <http://www.quasar.ualberta.ca/cfrfp/famadap.html>, 15-04-2009.
- Namysłowska, I., Barbaro de, B., Paszkiewicz, E., Siewierska, A., Furgał, M., Drożdżowicz, L., Józefik, B. & Beauvale, A. (2002). Kwestionariusze Manfreda Cierpki do Oceny Rodziny (Manfred Cierpka questionnaires for family assessment). *Psychiatria Polska*, vol. XXXVI, 1, p. 17-28.
- Pervin, L. A. (1993). *Personality: theory and research*. New York:John Wiley & Sons, Inc. Ridenour, T.A., Daley, J.G. & Reich, W. (1999). Factor analyses of the Family Assessment Device. *Family Process*, 38, 497-510.
- Schiller, M., Dickstein, S., Seifer, R., Miller, I., Keitner, G., Sameroff, A. J. & Rasmussen, S. (1998). Levels of Family Assessment: I. Family, Marital, and Parent-Child Interaction. *Journal of Family Psychology*, vol. 12, 1, 7-22
- Spanier, G.B. (1976). Measuring Dyadic Adjustment: New Scales for Assessing the Quality of Marriage and Similar Dyads. *Journal of Marriage and the Family*, 38, 1, 15-28.
- Steinhauer, P., Santa Barbara, J. & Skinner, H. (1984). The process the model of family functioning. *Canadian Journal of Psychiatry*, 29, 89-97.
- Świętochowski, W. (2002). Kliniczna i empiryczna użyteczność wybranych systemowych modeli rodziny (Clinical and empirical application of the selected models of the family system). *Psychologia Rozwojowa*, 7, 5, 59 - 74.
- Walsh, F. (1982). Conceptualizations of Normal Family Functioning. In: F. Walsh (Ed.), *Normal Family Processes*. New York:Guilford Press.
- Zakrzewska, M. (1994). *Analiza czynnikowa w budowaniu i sprawdzaniu modeli psychologicznych (Factor analysis in developing and verifying psychological models)*. Poznań: Wydawnictwo Naukowe UAM.