

## THE FUNCTIONALITY OF FAMILIES WITH CHILDREN WITH SPECIAL NEEDS FROM THE SYSTEMIC PERSPECTIVE

UDC 316.356.2-056.26/.36

**Marina D. Matejević<sup>1</sup>, Dragana R. Jovanović<sup>2</sup>**

University of Niš, Faculty of Philosophy, Department of Pedagogy, Republic of Serbia

E-mail: <sup>1</sup>marinam@filfak.ni.ac.rs, <sup>2</sup>gagaj@filfak.ni.ac.rs

**Abstract.** *The problem of the functionality of families with children with special needs will be considered from the aspect of a systemic approach to the family, where the family is studied as a system in which there are certain subsystems. It is assumed that in families with children with special needs there are some specificities in relation to patterns of interaction between subsystems. The study was organized with the aim to determine whether any dysfunction is present in family functionality in families with children with special needs. The instrument used in this study is a scale for assessing the functionality of the family system (FACES III, Olson, Portner & Levi, 1985) on the dimensions of adaptability and cohesion. The research results showed that the half-functionality system was present the most (53%), then came functional, balanced family systems (27.3%) and finally the extreme dysfunctional family system (19.7%). Dysfunction is more pronounced in the dimension of cohesion, because of the presence of networked family systems (42.5%) which support the dependence of children on their parents. The research results indicate the problems faced by parents with children with special needs and with the necessity of supporting the wider social community in solving problems faced by these families in achieving their parental roles.*

**Key words:** *systemic approach to family, family functionality, patterns of family functioning, dimensions of cohesion and adaptability.*

### INTRODUCTION

The family as a community with its functionality needs to provide emotional and intellectual coherence between its members, to create conditions for their growth and development. The study of family functionality is associated with an understanding of the functions of the family which can be set on three levels: at the biological level – gratification of sexual needs, and reproductive functions of the family; economic level – production and consumer functions, and on the psycho-social level – the educational function of the family, the function of socialization and the development of emotional ties between

family members. For the family in the past the economic was the most important one, and thus, production functions, while today one of the major functions of the modern family is the educational function. In order to achieve their educational functions, families in their own way of life need to overcome many obstacles, which are numerous in terms of transition, and certainly in cases of traumatic experiences. The basis for the realization of the educational functions of the family makes the functionality of the family which may be clarified from the aspect of the systemic approach to the family.

### 1. FAMILY FUNCTIONALITY FROM THE SYSTEMIC PERSPECTIVE

According to a systemic approach to the family, family functioning cannot be understood as the sum of individual functioning of family members. Within this approach the family is a system composed of subsystem components: the partner subsystem, parent subsystem, subsystems which are made up of the children, and at the same time the whole family is a part of the environmental suprasystems with which it exchanges energy and information. In order to understand the ways in which families function it is very important to understand the relationships that exist between these subsystems and the relationships between the family and the environment in which families operate, or their functioning. Applying general systemic theory to the family and its functioning, it can be said that the parts of the families, in other words, the subsystems are in constant interaction, and the behavior of individual members, or, subsystems cannot be understood in isolation from other parts of the subsystems. The systemic approach to the family introduces a circular understanding of phenomena in the family system, which means that the family is viewed as a system whose components are the subsystems that are in constant interaction. With the feedback mechanism we will explain the relationship between parts of the system. In the light of the systemic overview of the family, the presence of a child with special needs significantly alters the way of functioning of the whole family and its subsystems. An individual who lives in the family is a member of the family system and needs to adapt. It is very important, as Minuchin believes, to understand that an individual responds to stresses that are present in the other parts of the family system, to which he is adapting, but he can also significantly contribute to the stresses of other members of the system (Minuchin & Fishman, 1981). As ascertained by Henderson and Hendershot (according to: Jackson, C.V., A. Turnbull, 2004), a deaf child is a component of the family system and therefore deafness does not belong only to the child but to the whole family. Every family with a child with special needs, over time, develops certain patterns of interaction that complement the family structure which manage the functioning of family members. In its life-cycle the family is faced with expected life events, such as the birth of children, but also with the unexpected life events such as the birth of a child with special needs, which is a traumatic experience for the family, which destabilizes the family, brings a sense of suffering, uncertainty and fear. This kind of stressful event can affect the partner relationship of the parents, may compromise the quality of parenting, can make a family dysfunctional, and unable to respond adequately to the increased needs of a sick child. The birth of a child with special needs destabilizes the family system and significantly modifies the relationships within the family, which is reflected in the functionality of the family system. The family as a system plays a central role in socialization, education, psy-

chological and biological maintenance of family members, and that includes three kinds of tasks that families need to be fulfill (Vukov, M. G., 1989.):

1) Basic tasks related to the provision of nutrition and care of family members. Basic needs on the emotional plan relating to the provision of support, love and understanding for all the members.

2) Developmental tasks related to the stimulating of growth and maturation of family members, and providing support through the all stages of individual and family life-cycle.

3) The next very important task of the family is related to the adaptation and response of a family to situations when there are unexpected events: illness, death and divorce. The family should amortize distortions in economic and social development, and continue to provide support for the possible painless growth and development of its members.

These tasks should be realized by families in the life-cycle that involve various tasks within certain stages of growth and development of the family. The family life-cycle is a natural evolutionary process that initiates the family on the way of development, growth, maturation and change. It is very important that the family in every developmental stage identifies specific tasks and resolves them. The birth of a healthy child is the value, purpose and expectation of every couple. But, a birth of a child with special needs is like a undermined expectations and therefore is seen as a big tragedy, which affects the functionality of the family system and the realization of the tasks that are relevant to a certain stage of the family life-cycle. According to the research of Lloyd, Ch. and E. Rosmaiu (Lloyd, Ch., M. E. Rosmaiu, 2005) parents with children with special needs have problems in the area of emotional functioning, mothers are prone to depression, which makes it very difficult for them to fulfill their parental roles.

One of the models for following the pattern of family functioning is the Circumplex model of marital and family functioning. The author of this model is David Olson. In reference to the Circumplex model the significant dimensions of family functioning include family cohesion and family adaptability, or flexibility.

## 2. THE DIMENSION OF FAMILY FUNCTIONALITY

Functional family patterns are those which enable the achievement of family goals which the families set themselves. Dysfunctional family patterns are those that do not accomplish the task, but lead to the appearance of symptoms or dissatisfaction. The functionality of the family can be studied in relation to the organizational processes which support the integration of the family as a whole. Elements of these organizational processes are cohesiveness, flexibility and communication. The functionality of the family system we can define through the following dimensions: family flexibility, which represents the balance between stability and change, and cohesion, which represents the balance between closeness and individuation and family communication.

**Family cohesion** – According to Olson (Olson, 2000), family cohesion is defined as the emotional articulation of what family members feel for each other. He believes that there are four levels of family cohesion: from disengaged (low level), through the separated (low to moderate) and connected (moderate to high), to the enmeshed (a very high level). In the balanced part of the Circumplex model (separation and connection), individuals are able to experience and balance these two extremes and to be simultaneously

separated and connected to their families. When the level of cohesion is very high (enmeshed systems), then there is too much consensus within the family and too little independence. In the other extreme (disengaged systems), the family members "do their own thing", and the level of connection or commitment to their families is very low. Balanced family systems, of the separated and connected type, are more functional than others, considers Olson. Separated family systems have a certain emotional detachment (emotional separation), but it is not as extreme as in the disengaged system. For the family members, in these family systems, it is essential that they spend most of their time separated, but there is also the time which they spending together, when they make joint decisions, and when they solve family problems. Activities and interests are substantially different, but there are some they have in common. In the connected family systems we find emotional closeness and loyalty to the spouse. The time spent together is more important than the time spent alone. The emphasis here is on communion. There are friends with whom these persons socialize independently, but there are mutual friends with whom they socialize as a group. Common interests are similar to certain interests of separate family systems.

In contrast to this, states Olson, the unbalanced levels of cohesion are the extremes (very low or very high). Disengaged family systems have extreme emotional detachment. In these families, there are very few established relationships with other family members, while separateness and independence are heavily insisted upon at the expense of closeness and togetherness. There is a possibility that these patterns of family functioning appear in families with children with special needs, where the parents are unable to divide the pain among themselves, but eventually become alienated from each other and each of them search for their own way out of difficult situations, whereby, it is possible that one parent could turn to alcoholism and the other fall into a depression. Members of such families are not able to address other family members for advice in solving problems, but each of them, in their own way, cope with feelings of guilt. In contrast to these, enmeshed family systems are characterized by feelings of emotional closeness to an extreme extent, and insistence on loyalty. Individuals are highly dependent on each other and they are constantly in contact. There is a lack of personal isolation, wherein, the private space is minimized. The energy of these individuals is mainly focused within the family and there are a very small number of "external" friends and interests. There is a possibility that this pattern is present in families with children with special needs just because this family, due to feelings of guilt lives in isolation from the external environment. Fearing a negative reaction of the environment, the parents of children with special needs avoid contact with other people. Because of feelings of shame and distrust towards the external environment, children with special needs are often left in complete isolation, confined to their homes.

On the basis of the Circumplex model, very high levels of cohesion (enmeshing) and very low levels of cohesion (disengaging) can be a problem for both: individual development and the development of mutual relations between members of these families, considers Olson. On the other hand, he points out, family systems whose mutual relations have moderate levels of cohesion (the separation and connection) are able to balance time spent alone and time spent together in a much more functional way. While there is no absolute best level of cohesion when we talk about any relationships, family systems may have different problems if they function too long on any of the extremes in this model (any disengaged or enmeshed form). Dysfunctional family systems in the dimension of cohesion characterize families in which are enmeshed, which is characterized by diffuse

boundaries, unclear differentiation, and a lot of pressure to unite, and indicating a lack of autonomy, while on the opposite polarity we find disengaged family systems in which we find distance and rigid boundaries.

**Family flexibility** – The next dimension that is very important to family functioning is family adaptability, or flexibility. According to Olson (Olson, 2000), family flexibility refers to the amount of change in family leadership, division of roles and rules of mutual relations. Specific concepts that are involved here, according to him are: leadership (control, discipline) styles of negotiation, and the distribution of roles and rules of mutual behavior.

According to Olson, there are four levels of adaptability that range from rigid (very low level), through the structured (low to moderate), flexible (moderate to high), to the chaotic (very high). Like cohesiveness, there is an assumption that the middle levels of adaptability (structurality and flexibility) is much more convenient for marital and family functioning, while the extremes (rigid and chaotic) are very problematic for family functioning when they are present for a long time in the family life-cycle. Basically, adaptability focuses on changes in family leadership, roles and rules. The earliest application of systemic theory to the family's functionality pointed out its rigidity and tendency to maintain the *status quo*. Until the scientific works of contemporary theorists, the importance of family potentials for change was minimized. Married couples and families need stability and change, and that ability for change, when it takes place at the right time, separates functional couples and families from others.

According to Olson, balanced family systems (of the structural and flexible type) over time become more functional. A family system which is characterized by a structural relationship tends to possess a relative democracy, in which there is a degree of negotiation, which includes children. Roles are stable with occasional changes of roles. The rules are strictly enforced and there are small changes in them. Family systems which are characterized by a flexible relationship have a divided leadership with a democratic approach to decision making. Contracts are open and actively involve children. The roles are shared, and when it is necessary, changes come easily. Rules can be changed, and they are adaptable to different age groups.

According to Olson, unbalanced family systems in the dimensions of adaptability and flexibility tend to be either of the rigid or chaotic type. A rigid relationship is a relationship where one person is principal and has a high degree of control. Agreements in this case are limited since most of the decisions are imposed by the leader. Rules are strictly defined and never change. There is a possibility that this pattern is present in families with children with special needs as a defensive response to the change which is a result of the birth of a child with special needs. Changes which are brought about by the birth of a child with special needs in some families may encourage a rigid organization in order to preserve the functionality of the family and bring order in the family structure, in order to preserve the illusion of "normal" functioning. Unlike rigid family systems, a chaotic relationship is a relationship in which the leadership is inconstant or limited, decisions are made impulsively, and they are never sufficiently considered, roles are unclear and are often transferred from one member to another. There is a possibility that this pattern of family functioning will be present in families with children with special needs, because the change that occurs in a family system with the birth of a child with special needs could induce chaotic functioning due to parental reluctance to accept change and organize family functioning in an adequate way. On the basis of the Circumplex model, it can be con-

cluded that a high degree of adaptability (the chaotic type) and the very low level of adaptability (the rigid type) can be a problem for both: for individual development and the development of mutual family relations if these patterns are present for a long time in family functioning. On the other hand, mutual relations with moderate levels of adaptability (of the structural and flexible type) are able to balance on the one hand stability, and on the other change in a much more functional way. While there is no absolute best level of flexibility in terms of relationships, many marriage and family relations may have problems, in the long term, if they function too long in any of the extremes in this model (the rigid or chaotic).

Functional flexibility implies stability, which refers to the presence of predictable and consistent rules, roles and patterns of interaction. Functional flexibility implies the existence of a stable structure and certain rituals, where there is a possibility of change - adaptability, which requires an adjustment to changing circumstances and developmental imperatives within a family life-cycle, especially when a crisis occurs. A functional family system provides stability, but also opens opportunities for the adjustment of certain life circumstances and needs of family members. A dysfunctional family system in the dimension of flexibility is a rigid family system and there we find the dominance of one member with no negotiations, the roles are not defined, and the rules are rigid. The chaotic family system is characterized by disorganization, where the roles are vague and vary, there are no clear rules and consistency.

### 3. THE METHODOLOGICAL APPROACH TO THE PROBLEM

The main subject matter of this research was: the patterns of family functionality in families with children with special needs. The aim of our research was to determine whether there is any dysfunctionality in the patterns of family functioning in families with children with special needs. In the research we used descriptive research-science methods and scaling techniques as a research tool. A scale for assessing family cohesion and adaptability (FACES III, Olson, Portner & Levi, 1985) was used. The subjects of the research were the members of 66 families with children with special needs. The structure of the sample is shown in tables 1, 2 and 3.

**Table 1** The structure of family systems

The structure of family systems	N
Complete family systems	60
Incomplete family systems	6

**Table 2** The structure of the sample according to the age of the parents

The age of the parents	N
25-35 years	17
36-45 years	36
46-55 years	13

**Table 3** The structure of the sample according to the educational level of the parents

The level of the parents' education	N
Primary school	10
High school	53
College degree	1
University degree	2

As we can see, most of the samples consist of complete family systems, which is very important for the realization of the educational function of the family and parental roles. Regarding the educational level of the parents, there is some specificity, because there are a few parents who are college and university graduates, which is very important for the organization of cooperation with these families and the provision of an adequate program of support.

#### 4. THE RESULTS OF THE RESEARCH AND INTERPRETATION

On the basis of the statistical analysis of the results, we came to the conclusion that our sample primarily consisted of half-functional family systems (53%), then came functional, balanced family systems (27,3%), and finally extreme dysfunctional family systems (19,7%). Dysfunction is more pronounced in the dimension of cohesion, because there we found enmeshed family systems (42.5%). The results are shown in table 4.

**Table 4** The distribution of functionality of the family systems according to FACES

The functionality of the family systems according to FACES	f	f%
Functional system	18	27.3
Half-functional system	35	53.0
Disbalanced system	13	19.7
Total	66	100.0

The findings of numerous research projects suggest that these families, because of the birth of a child with special needs, are more exposed to crisis, dysfunctionality and disintegration of family systems. Our research also shows there is only a little over a quarter of functional family systems. In comparison to some of our previous research projects and in relation to the sample of families with children without developmental difficulties, the proportion of functional families was more than a third (Matejevic, 2009.). The results that we obtained confirm that the birth of a child with special needs further destabilizes the family system and creates certain patterns of the dysfunctional operating of family.

Based on the presence of certain patterns of family functioning, the following distribution was obtained. The results are shown in table 5.

**Table 5** The distribution of patterns of family functioning according to FACES

FACES III	f	f%
Flexibly-disengaged	4	6.1
Flexibly-separated	2	3.0
Flexibly-connected	12	18.2
Flexibly-enmeshed	11	16.7
Chaotically-separated	5	7.6
Chaotically-connected	6	9.1
Chaotically-enmeshed	11	16.7
Rigidly-connected	5	7.6
Rigidly-enmeshed	2	3.0
Structurally-disengaged	1	1.5
Structurally-connected	3	4.5
Structurally-enmeshed	4	6.1
Total	66	100.0

As we noted above, dysfunctionality is more pronounced in the dimension of cohesion, because 42.5% of the family systems are enmeshed, which indicates the intensification of dependence. Enmeshed families have very high levels of cohesion which means that within the family there is too much consensus and too little independence. The presence of enmeshing in family functioning may be conditioned by patterns of functioning which are characteristic to our culture. Here we mean the support of a slow maturation process of children and the tendency of keeping them as much as possible in a position of dependency. These results can possibly be viewed in the context of a crisis in which the society is, because when a society is in crisis and the family is in a crisis, this can be manifest through an expressed need for togetherness. For as much as these families have their own internal crises, it is quite logical that the response of the family is the insistence on communion. Families with children with special needs are more exposed to financial problems, due to the fact that mothers, who are, because of their obligations toward the child, often forced to leave their jobs. On the other hand, there are increasing financial requirements due to high costs for the treatment or purchasing supplies. So, Polovina (Polovina, 2007) cited that the results of B. Gacic and associates which suggest that increased cohesion in fact points to an increasing pseudocohesion as a temporary form of functioning within the strategies of survival in situations of instability, uncertainty and unpredictability. If cohesiveness does not mean communion and dedication to the family, but can be found as a kind of pooling in crisis situations, such a compression lines, then the question of the presence of authentic intimacy is very important for the normal functioning of families with special needs. It seems that in addition to patterns that exist in our culture, referring to the support of dependence, a crisis in which our society finds itself further strengthens the dysfunctionality of a family with children with special needs and hinders the realization of the educational function of family. In another way these results indicate the problem with which a family is faced in different strategies of surviving. It also should be mentioned that one of the most common educational mistakes of parents with children with developmental difficulties, which are essentially based on increased cohesiveness, is that children are not encouraged to do what they could do, and instead



"learned helplessness" is nurtured, as Hrnjica stated (Hrnjica, 2007). On the other hand, it should be noted that the low level of cohesion in the family has a very negative impact on the functioning of families with children with special needs. According to the research by McGlone, (McGlone, et al. 2002), the families who adopted children with special needs face the problem of the lack of cohesion, which in a specific way destabilizes the family system, because a lack of emotional connection between the family members negatively impacts parental functioning. We can conclude that in our sample we found a disengaged family system in only 6%, which is very important in the context of achieving the educational function of families. Results of the research which are cited by Jackson (Jackson, Turnbull, 2004), indicate that one of the four important factors of school achievement of children with special needs is family involvement, or the existence of adequate family interaction.

When we talk about the dimension of adaptability, than we can conclude that the chaotic family systems made up 33.4%, which was a third of the sample and indicated a specific problem in the functioning of these families. A chaotic family is characterized by a lack of leadership, non-constant discipline, inconstantly, dramatic distribution of roles and the presence of too many changes. The chaotic connected and separated families have the problem of the lack of parental authority, a problem of the lack of adequate rules, and no boundaries. In these families there is a problem of the consistency of parents in establishing certain requirements and the fulfillment of certain obligations. The existence of certain requirements of parents, as well as the consistency in the positive reinforcement of appropriate behavior and negative reinforcement of inappropriate behavior is very important in educational practices of parents with children with special needs. Families with chaotic patterns of family functioning have a problem of consistency, which has a very negative impact on the possibilities of the family in achieving their educational function.

## 5. CONCLUSION

On the basis of the obtained research results we can conclude that the majority of families with children with special needs meet certain problems in family functioning. Society should support these families through the designing a various programs for parents with children with special needs so they can feel more competent in achieving their educational function. It seems that parents do not have adequate information in terms of the possibilities of setting certain requirements to their children, so because of their own insecurities quit claim of consistency in educational practices. The lack of consistency can negatively affect the development of children with special needs in terms of the insufficiency of the potentials which they have. Many families because of a feeling of shame and guilt are isolated and suffer in this isolation without adequate support and understanding of the wider community. Research which dealt with applying the program for families with children with special needs (Stuart, "Keep it Together", 2006) show that within the program, parents have become more confident, believing in their own abilities, which created in them a sense of greater competence in parenthood. The feeling of competence of the parents contributed to their children feeling more secure, thus opening the prospects for meeting the developmentally higher needs of their children. Our findings have practical implications because they indicate the problems with which families with children with special needs are faced and point to the need of establishing support programs for these families.

## REFERENCES

1. Goldner-Vukov, M. (1988): *Porodica u krizi*. Beograd: Medicinska knjiga.
2. Hrnjica, S. (2007): Psihološke pretpostavke saradnje škole i porodice u pružanju pomoći detetu sa posebnim potrebama, *Saradnja porodice i škole*, Institut za pedagoška istraživanja, Beograd, 254-264.
3. Jackson, C.W., A. Turnbull (2004): Impact of Deafness on Family Life: A Review of the Literature, *Topics in Early Childhood Special Education*, Vol. 24:1. pp. 15-29.
4. Lloyd, CH.M., E., Rosmaiu (2005): Exploring Mental Health Outcomes for Low-income Mothers of Children With Special Needs: Implications for Policy and Practice, *Infliulx & Yttiing Children*. Vol. 18. Pp. 186-199.
5. Matejević, M. (2009): Funkcionalnost porodica studenata i sklonost ka alkoholizmu i narkomaniji, *Studenti, seks i droga, Zbornik radova*, Centar za naučna istraživanja SANU i Univerzitet u Nišu, 149-160.
6. Matejević, M. (2010): Obrasci porodičnog funkcionisanja i komunikacija na relaciji roditelj – adolescent, *Teme*, br. 4. Niš, 1421-1442.
7. Minuchin, S. & H. C.Fishman (1981): *Family therapy Technique*, Harvard University Press.
8. McGlone, K., L. Santos, L. Kazaina, R. Fong, Ch. Mueller (2002): Psychological Stress in Adoptive Parents of Special-Needs Children, *Child Welfare* vol. 2.
9. Olson, D. H. (2000): Circumplex Model of Marital and Family Systems, *Journal of Family Therapy*, 22, 144-167.
10. Polovina, N. (2007.): Sistemska analiza saradnje porodice i škole, *Saradnja porodice i škole*, Institut za pedagoška istraživanja, Beograd, 91-114.
11. Ružić, G. (2003): Porodica dece ometene u razvoju, *Istraživanja u defektologiji*, 61-67. Beograd.
12. Stanimirović, D. (2005): Socijalna mreža porodica sa slepim detetom, *Istraživanja u defektologiji*, 41-53. Beograd.
13. Stewart, D. M. Law, J. Burke-Gaffney, C. Missiuna, P. Rosenbaum, G. King, T. Moning, S. King, (2006): Keeping It Together: an information KIT for parents of children and youth with special needs, *Child: Care, Health & Development*, 32, 4, 493-500.
14. Vujačić, M. (2006): Problemi i perspektive dece sa posebnim potrebama, *Zbornik Instituta za pedagoška istraživanja*, god.31. br.1. 190-204.

## FUNKCIONALNOST PORODICA SA DECOM SA POSEBNIM POTREBAMA IZ SISTEMSKE PERSPEKTIVE

**Marina Matejević, Dragana Jovanović**

*Proučavanju ovog problema pristupa se sa aspekta sistemskog pristupa porodici, pri čemu se porodica proučava kao sistem u okviru koga postoje određeni subsistemi. Pretpostavlja se da u porodicama sa decom sa posebnim potrebama postoje određene specifičnosti u odnosu na obrasce interakcije između subsistema. Istraživanje je organizovano sa ciljem da se utvrdi da li je prisutna disfunkcionalnost u porodičnom funkcionisanju porodica sa decom sa posebnim potrebama. Instrument primenjen u ovom istraživanju je skala za procenjivanje funkcionalnosti porodičnog sistema (FACES III, Olson, Portner & Levi, 1985.) na dimenzijama kohezivnosti i adaptabilnosti. Rezultati istraživanja pokazali su da ima najviše polufunkcionalnih porodičnih sistema (53%), zatim slede funkcionalni, uravnoteženi porodični sistemi (27.3%) i najmanje je ekstremnih, disfunkcionalnih (19.7%). Disfunkcionalnost je izraženija na dimenziji kohezivnosti, jer su veoma prisutni umreženi porodični sistemi (42.5%) koji podržavaju zavisnost dece od roditelja. Rezultati istraživanja ukazuju na probleme sa kojima se susreću roditelji sa decom sa posebnim potrebama i na neophodnost podrške šire zajednice u rešavanju problema sa kojima se susreću ove porodice u ostvarivanju svojih roditeljskih uloga.*

*Ključne reči: sistemski pristup porodici, funkcionalnost porodice, obrasci porodičnog funkcionisanja, dimenzije kohezivnosti i adaptabilnosti.*