

PSYCHIATRIC ASSESSMENT AND DIAGNOSTICS IN CHILDREN WITH SEVERE MENTAL RETARDATION

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Despite of recent favourable developments in the field of psychiatric diagnostic among the persons with mental retardation, the diagnostic in children with severe mental retardation remains a precarious issue. Descriptive phenomenological method like DSM IV, does not satisfy and the investigators in this field are looking for new approaches. The developmental psychiatric approach is focusing on the specific developmental aspects in these children, in addition to their biopsychological characteristics. In the assessment the symptoms of the disorder are placed within a broad context of the total child's existence and its developmental process. The diagnostician attempts to discover the onset mechanisms of the disorders as well as the basic psycho-social needs of the child.

INTRODUCTION

The developmental approach to the phenomenon of mental retardation came into being in the late 1960's (Zigler 1967, 1969). The theorists were of the opinion that although retarded children have a slower rate and a lower final level of development, they follow similar universal sequences of development and perform on cognitive tasks identically with non-retarded children of the same mental age.

Later, investigators found, however, that different aspects of development, like motoric functioning, cognition, social development etc., may be divergent for those suffering from certain types of mental retardation like Down's syndrome and Fragile X (McCall 1981, Miller 1986, Dykens et al. 1989). The social aspects of mentally retarded children appear to be influenced by the environment to a greater extent than the cognitive aspects (Bregman and Hodapp 1991). These findings suggest that mentally retarded children may show discrepancies across different aspects of their psychosocial development.

Spurred on by the "Normalization" movement in the 1970's professionals caring

for the mentally retarded paid more and more attention to the behavioral disorders that occurred frequently among these individuals. Psychiatric disorders were often found within a background of behavioral difficulties (Menolascino 1970, 1977, Szymanski 1977). However, the diagnosis and classification of these disorders by means of the existing psychiatric diagnostic and classification systems was difficult (Szymanski and Tanguay 1980, Sovner 1986). It became obvious that the phenomenological descriptive approach used in ICD and DSM systems could not be applied at all levels of mental retardation (Bouras and Drummond 1992, Ballinger et al. 1991).

These systems could be used for the mildly and partially for the moderately mentally retarded, but at the lower levels, they were dissatisfactory (Szymanski 1988, Hucker et al. 1979, Sovner and Hurley 1986).

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Developmental psychiatric approach

Menolascino (1970, 1977) was one of the pioneers in this field, searching for other ways of viewing the psychic problems of these individuals. He utilized Piaget's developmental framework as point of departure for explaining some similarities between psychotic children and severely mentally retarded ones. He concluded that the appearance of the clinical subgroups present among the psychotic children was a function of the age and stage of development of the child at the onset of psychosis, of the underlying constitutional endowment and of the nature of the interpersonal environment. In addition to the importance of cognitive development he pointed out the problems of the socio-emotional development of mentally retarded children. In his opinion, these problems could lead to a wide range of psychiatric disorders in childhood as well as during adulthood.

During the decades to follow, the developmental approach and its different modifications in the psychiatric diagnostics of the mentally retarded have been applied by different authors in different countries.

In the Netherlands, the so-called developmental-dynamic approach (Došen 1983, 1989, 1990) has been applied in the diagnosis and treatment of behavioral and psychiatric disorders among the mentally retarded. The suffix "dynamic" is used here to accentuate the dynamics of biological, psychoemotional and environmental factors in interaction with developmental forces. Biopsychosocial elements are placed within the developmental framework of a mentally retarded individual and within this realm the practitioner attempts to recognize the basic psychosocial needs, abilities and disabilities of the person. Interactions with the surroundings and the person's real life problems are the focus of this approach. According to these characteristics, this approach is actually a developmental psychiatric approach (see also Rutter 1980), somewhat adapted to the mentally retarded population.

On the base of theories of Piaget (1953), Luria (1973), Erikson (1959), Bowlby (1971) and Mahler (1975) we developed for diagnostical purpose a scheme of a normal socio-emotional development during the first three years of life (table 1). Striking behavioral traits of children with mental retardation were systematically compared with the schematized socio-emotional aspects of normal development and it was discovered that various traits of children on particular developmental levels correspond with the traits of children with normal development on the corresponding chronological age. Gradually on particular aspects of behavior were discovered as being rather stable across different developmental stages (table 2). Taking these aspects within different developmental phases into account, an attempt was made to develop a checklist for appraisal of emotional development in children with mental retardation.

From the clinical examination and also using the checklist for emotional development, we found that in approximately 1/3 of referred children, the emotional development was on a lower level than the cognitive level. We spoke in these cases of an arrest in emotional development.

In children with an arrest in emotional development we distinguished three groups of children: those with an arrest in the first, with arrest in the second and in the third phase.

In the cases in which there was an arrest in emotional development in the first phase (0 - 6 months), the most striking problems were those of an inadequate integration of sensoric stimuli, difficulties in adapting to changes in the environment and problems with appropriate interactions with the caretaker. We called this disturbance contact disorder (Došen 1983, 1990). These children were mostly preoccupied with creating and receiving isolated stimuli by means of putting their fingers in their ears, by smelling objects, by making stereotypic movements, etc.. Sometimes this activity could be so extreme that the child would injure itself.

These children would react to more complex or more intensive stimuli with irritation, frustration and aggressive or autoaggressive behavior. Given the same circumstances, other children with contact disorder would react with passivity or apathy. A changed environment or changes within the environment could make these children anxious or cause an outburst of rage. In addition, a resistance to or indifference towards bodily contact was striking among these children. They could not make eye contact and were not interested in communicating with the caretakers. This behavioral pattern was found among children at a profound level of retardation as well as among children at higher cognitive levels showing autistic features. A similar behavior was found in children who apparently were inadequately stimulated in their social development. These features were also noticeable among some children with psychotic conditions. The striking traits exhibited by these children are summarized in Table 3. In DSM-terms one may speak of SIB or Pervasive Developmental Disorder among these children.

Children whose arrest in emotional development occurred during the second phase (6- 18 months), display a number of features which prompted us to apply the term atypical psychosis. In certain children, a behavioral pattern similar to the one described by Mahler (1968) as being a symbiotic psychosis was noticed. These children sought bodily contact with the caretaker and protested at separation. Even during bodily contact they could be aggressive toward the caretaker. Usually they were restless, chaotic and disruptive. In other children, an apathetic state with intermittent rage outbursts was predominant (see Table 4).

This behavior occurred among profoundly mentally retarded children, children with pervasive developmental disorders and children whose environmental circumstances did not correspond to their needs. In DSM terms, with some adaptation, the categories of Reactive Attachment Disorder

or Separation Anxiety Disorder may be used in these children.

Children with an arrest in the third phase (18 - 36 months) were in constantly seeking of interaction with the caretaker. They did not however, desire bodily contact but rather communication at a distance. They preferred to communicate via materials or by means of their hyperactive motorics. The behavioral patterns of these children were directed to constantly attracting the attention of the caretakers. The challenging negativistic and destructive features of this behavior were striking. We called this condition negative and destructive behavior and were of the opinion that it was a consequence of an uncompleted separation - individuation stage (Dosen 1983, 1990). The child fights for its own autonomy but, at the same time, in all its actions, needs the caretaker. In psychodynamic terms one may speak here of a non-internalized emotional security basis. The security experienced by these children is dependent upon their caretakers and as such, remains external. The symptoms of behavioral disturbances found among these children are summarized in Table 5. This behavior was often found among children at moderate and severe levels of retardation and also among those inadequately stimulated by the surroundings. Diagnostically we spoke of Negative-Destructive Behavior while in DSM-terms one may use the category of Oppositional Defiant Disorder.

Psychiatric diagnoses we could establish for children with an arrested emotional development are summarized in Table 6. From this table it is clear that with an increase in the level of emotional development, the diagnoses became more differentiated.

EMOTIONAL DEVELOPMENT AND PSYCHIATRIC DIAGNOSTIC

The use of developmental phases in our approach elicits explanation. Recent investigators in developmental psychology make invariant sequences of development questionable (Bronfenbrenner et al. 1986). Instead, development is seen as being a continuum in which higher levels incorporate all aspects of development at lower levels (Achenbach 1990). Despite significant theoretical differences, all scientists agree that during its development an infant goes through massive developmental changes at particular moments in time and at particular developmental levels. The purpose of the model of socioemotional development we used was served not so much to delineate the stages at a particular age, but rather to accentuate the significant qualitative changes occurring in the course of development as well as to stress the differences in growth in various developmental dimensions. In practice, however, the diagnostician should have a certain elasticity, giving priority not to the assessment scales but to the clinical picture of the child. The result on the scale may serve to give direction to diagnostic thinking and as a support of clinical findings. In this context, the appraisal of emotional development may be seen as just one component of a broader developmental-dynamic and developmental psychiatric approach.

It is striking how relatively little attention has been paid by investigators, to this developmental dimension so far. It is also remarkable that diagnosticians do not hesitate to establish a diagnosis of emotional disorder in a retarded person, while they usually do not think about what the normal emotional state of a person with a similar type of mental retardation is.

The lack of knowledge of the emotional development of mentally retarded persons is a problem encountered not only among psychiatrists. Currently developmental psychologists functioning within the context of a traditional Piagetian developmental theoretical approach, are also faced within the question of how to understand the

qualitative and quantitative differences found when studying the development of various psychosocial aspects of particular types of mental retardation. There are reports in which it is postulated that various patterns of social development may be as directly related to the etiology of the handicap as to the on environmental circumstances (Chichetti and Ganiban 1990, Dykens et al. 1992). Also, discrepancies in performances have been found across different developmental dimensions (e.g. cognitive, social, adaptive, etc.) suggesting that the Piagetian concept of the homogeneity of developmental dimensions across different stages is questionable (Bregman and Hodapp 1991).

However, so far there have been very few investigations which have been directed towards the consequences of different rates of particular developmental aspects for the totality of psychosocial development and particularly for emotional development. In clinical practice it has often been remarked that when a particular function does not occur on time, this may cause a range of disturbances in a child's functioning later on. For example, when there is a lag in speech development at a certain time, various problems in psychosocial life may occur, but not at the moment expected, i.e. at the onset of speech, but later on in development. These problems may remain persistent even in cases in which speech development becomes normal at a later age. In our practice we have also often seen problems of social interactions among some children who began to walk before they reached the level of socioemotional development necessary - e.g. a secure attachment (Došen 1990).

It is our experience that this irregularity in the course of development may often have an impact on the child's emotional development. Since the emotional development was often at a level lower than the cognitive, we consider emotional development to be more vulnerable to different internal and external factors than cognitive development is.

In addition to questions concerning quantitative differences, a question may be posed with regard to qualitative differences in the emotional development of individuals with different types of mental retardation as well as the comparative differences between retarded and non-retarded persons. For example, those suffering from the Fragile X syndrome often exhibit an autistic-like social impairment. Some investigators have discovered however that this social impairment is not actually a social indifference (like with autistic children) but rather a social anxiety (Dykens and Leckman 1990).

For an appropriate clinical diagnosis, a diagnostician, in our opinion, must be oriented towards the emotional development expected of a child at a particular cognitive level while keeping in mind not only quantitative but also qualitative characteristics. Disturbances in emotional development should be investigated before searching for symptoms of psychopathology. In day-to-day practice however, the opposite situation is the reality. Practitioners are engaged in searching for specific symptoms in order to be able to establish the diagnosis usually applied to the non-retarded population.

From the above, it may be clear that we consider the examination of emotional development to be one of the basic assessment components of the psychiatric diagnostics of mentally retarded individuals. By establishing the emotional developmental level in addition to other developmental dimensions, the diagnostician has the opportunity to distinguish between what may be expected to be " a normal " behavioral pattern at that level and reaction features which may be a response to changed and stressful events.

Integrative diagnosis

In practice the question of how to integrate the assessment results of different disciplines into a psychiatric diagnosis is a very important one. By the implementation of the dimension of emotional development into diagnostic thinking, one may be placed in a position in which he may better be able to understand not only the person's problems but also the person's needs. Discovering the person's needs may be of great importance to the treatment (Došen 1993).

In order to implement various aspects into a diagnoses, as well as in order to better understand the problems and the needs of a child we developed an integrative diagnosis.

The integrative diagnosis consists of the following parts:

1. Descriptive diagnosis of actual psychopathology. The diagnosis may be expressed in the existing DSM or ICD terminology. In cases in which this terminology is not adequate, the diagnostician may use a developmental psychiatry diagnoses.
2. Pathological mechanisms and dynamics. Pathological mechanisms should be described so that the dynamics of actual behavior and the factors maintaining the behavior are identified. The treatment approach may be strongly influenced by discovery what the onset mechanisms and the dynamics of the problems are.
3. Biological, psychological and social aspects. Different aspects that play a role in the total disturbance should be highlighted in order to delineate the appropriate treatment, prognosis and plan of prevention.
4. Therapy goals and starting point. Treatment should be based on solid diagnostic ground. A diagnosis by means of which treatment possibilities do not come to light has no clinical relevance. The multiplicity of the diagnostic facets of an integrative diagnosis create possibilities combined treatment approaches.

Table 1. A model of socioemotional development

1. 0-6 months: Adaptation phase
 - integration of sensory stimuli
 - integration of structures of place, time and people.
2. 6-18 months: Socialization phase
 - bonding
 - creation of a secure base.
3. 18-36 months: Individuation phase
 - separation
 - individuation
 - unique personality development.

Table 2. Items of emotional development

1. How the child deals with its own body
2. Interaction with the caregivers
3. Interaction with peers
4. Handling with material objects
5. Affect differentiation
6. Verbal communication
7. Anxiety
8. Object permanency
9. Experience of self
10. Aggression regulation

Table 4. Symptoms found in persons with an arrest in development at the level 6--18 months

Symptoms

1. Active or passive resistance to bodily contact
2. Withdrawal
3. Passivity
4. Stereotypy
5. Lack of interest in material objects
6. Tantrums by change in surroundings
7. Hyperirritability for sensory stimuli
8. Self-injurious behavior
9. Aggressive outbursts
10. Selfstimulation
11. Preference to small room (space)

Table 5. Symptoms found in persons with an arrest in development at the level 18--36 months

1. Self-injurious behaviour
2. Aggressive outbursts
3. Selfstimulation
4. Preference to small room (space)
5. Destruction of material object
6. Anxiety from strange people
7. Compulsive handling of material
8. Rituals
9. Fast switching mood

Table 5. Symptoms found in persons with arrest in emotional development at level 18-36 months.

1. Rituals
2. Fast switching mood
3. Constant attempts to attract attention
4. Restlessness and hyperactivity
5. Obstinance and negativism
6. Delay in language development
7. Lack of bowel and bladder control
8. Lack of social interest in peers
9. Irritable, tending to destructibility and aggressivity.

Table 6. Diagnoses established at different levels of emotional development

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| 1. Diagnoses at the level 0-6 months | - psycho-organic states |
| - self injurious behavior | - conduct disorder |
| - atypical psychotic states | - overanxious disorder |
| - organic mood disorders | 4. Diagnoses at the emotional levels beyond 36 months. |
| - pervasive developmental disorder | - anxiety disorders |
| - autistic disorder | - psychotic disorders |
| 2. Diagnoses at the level 6-18 months. | - mood disorders |
| - avoidant disorder | - conduct disorders |
| - separation anxiety disorder | - antisocial behaviour |
| - conduct disorder - aggressive type | - personality disorders |
| - atypical psychotic states | - functional disorders |
| - pervasive developmental disorder | - dissociative disorders |
| - organic mood disorders | - other |
| 3. Diagnoses at the level 18-36 months | |
| - oppositional defiant disorder | |
| - antisocial behavior | |
| - psychotic disorders | |
| - atypical mood disorders | |

REFERENCES

- Achenbach T.M., (1990): Conceptualization of developmental psychopathology, in: Lewis M., Miller S. (eds.): Handbook of developmental psychopathology, Plenum Press, New York.
- Ballinger B.R.; Ballinger C.B., Reid A., Mc. Queen E. (1991): The psychiatric symptoms, diagnoses and care needs of 100 mentally handicapped patients; Brit. J. Psychiat. 158, 251 - 254.
- Bouras N, Drummond C. (1992): Behaviour and psychiatric disorders of people with mental handicap living in the community; J. of intellect. disability Research, 36, 349 - 357.
- Bowlby J. (1971): Attachment and loss, Vol. I: Attachment, Hogarth Press, London.
- Bregman J.D., Hodapp R.M. (1991): Current developments in the understanding of mental retardation Part I; J. Am. Ac. Child Adolesc. Psychiatry 30, 5, 707 - 719.
- Bronfenbrenner U. (1979). The ecology of human development. Cambridge, MA: Harvard University Press.
- Cicchetti D., Ganiban J. (1990): The organization and coherence of developmental processes in infants and children with Down syndrome, in: Hodapp R., Burack J., Zigler E. (ed). Issues in the developmental approach to mental retardation, Cambridge Univ. Press, New York.
- Corbett J. (1985): Mental retardation, psychiatric aspects, in: M. Rutter, L. Hersov (red). Child and adolescent psychiatry, Modern approaches. Basil Blackwell, London.
- Došen A. (1989): Diagnostic and Treatment of mental illness in mentally retarded children; a developmental model; Child Psychiat. and Human Develop. 20, 1, 73-84.
- Došen A. (1983). Psychische stoornissen bij zwakzinnige kinderen; Swets en Zeitlinger, Lisse.
- Došen A. (1990): Psychische en gedragsstoornissen bij zwakzinnigen: Een ontwikkelingsdynamische benadering. Boom, Meppel, Amsterdam.
- Došen A. (1984): Experiences with individual relationship therapy within a therapeutic milieu for retarded children with severe emotional disorders. In J.M. Berg (Ed.), Perspective and progress in mental retardation, Volume II. Baltimore; Union Park Press.
- Došen A. (1993): A developmental psychiatric approach for the diagnosis of psychiatric disorders of persons with mental retardation; Dr. Frank Menolascino Memorial Lecture, Boston, International Congress.
- Dykens E., Hodapp R., Walsh K., Nash L. (1992): Adaptive and maladaptive behaviour in Prader-Willi syndrome, J. Am. Child Adolesc. Psychiatry 31, 6, 1131 - 1136.
- Dykens E.M, Leckman J.F. (1990): Developmental issues in fragile X syndrome; in R.M., Hodapp, J.A. Burack, E. Zigler (eds). Issues in the developmental approach to mental retardation, Cambridge Univ. Press, New York.
- Dykens E.M., Ort S., Finucane B., Shapiro L. & Leckman J.F. (1989). The trajectory of cognitive development in males with fragile X syndrome. J. Am. Acad. Child Adolesc. Psychiatry, 28, 422 - 426.

- Eaton, L.F., Menolascino, F.J. (1982): Psychiatric disorders in the mentally retarded, types problems and challenges. *American J. of Psychiat.*, 1297 - 1303.
- Erikson, E. (1959): Identity and the life cycle. *Internat. Univ. Press*, New York.
- Frankish P. (1992): A Psychodynamic approach to emotional difficulties within a social framework. *J. Intellect. Disab. Research*, 36, 559 - 563.
- Frankish P. (1989): Meeting the emotional needs of handicapped people; a psycho-dynamic approach. *Journal of Mental Deficiency Research* 33, 407-14.
- Gaedt Ch., Görtner D. (1990): Depressive Grundprozesse - Reizenierung der Selbstentwertung. *Neuerkeroder forum* 4. Neuerkerode.
- Greenspan S.J. (1985): Normal child development, in: A. Freedman, H. Kaplan (red.), *Comprehensive Textbook of Psychiatry*. William and Wilkins, Baltimore.
- Hodapp, R.M., Goldfield E.C. (1985): Self and other regulation in the infancy period. *Development Review*, 5, 274 - 288.
- Hodapp, R.M., Mueller, E. (1982): Early social development. In B. Wolman (Ed.). *Handbook of developmental psychology*. Englewood Cliffs, NJ: Prentice-Hall.
- Hodapp R.M., Burack J.A., Zigler E. (1990): *Issues in the developmental approach to mental retardation*, Cambridge Univ. Press, Cambridge, New York.
- Hucker S.J., Day K.A., George S., & Roth, M. (1979) Psychosis in mentally handicapped adults. In: F.E. James & R.P. Snaith (eds.), *Psychiatric illness and mental handicap*. Gaskell Press, London.
- Ineichen, B. (1984): Prevalence of mental illness among mentally handicapped people (discussion paper). *J. of Royal Society of Medicine* 77, 761 - 765.
- Lane, R.D., Schwatz, G.E. (1987): Levels of emotional awareness. A cognitive-developmental theory and its application to psychopathology. *Am. J. Psychiat.* 144, 2, 133 - 143.
- Levitas, A., Gilson, S.F. (1988). Toward the developmental understanding of the impact of mental retardation on the assessment of psychopathology. In: U.S. Department of Health and Human Services, *Assessment of behavior problems in persons with mental retardation living in the community; Report on a Workshop*, September 9.
- Levitas A., and Gilson S. (1990). Towards the developmental understanding of the impact of mental retardation on assessment and psychopathology; in: *National Institute for Mental Health. Publ.: Rockville Maryland.*
- Lewis, M.G., Michalson, L. (1983): *Children's emotions and moods. Developmental theory and measurement*. Plenum, New York.
- Luria A.R. (1973); *The working brain*. Penguin Press, London.
- Mahler, M.S. (1968): *On human symbiosis and the vicissitudes of individuation*. Int. Univ. Press, New York.
- Mahler, M.S., Pine, F., Bergman, A. (1975). *The psychological birth of the human infant*. New York: Basic Books.
- McCall, R.B. (1981): Nature-nurture and the two realms of development: A proposed integration with respect to mental development. *Child Development*, 52, 1 - 12.
- Menolascino F.J. (1990): The nature and types of mental illness in the mentally retarded, in: Lewis M., Miller S. (eds.). *Handbook of developmental psychopathology*, Plenum Press, New York.
- Menolascino, F.J. (1970): *Psychiatric Approach to the mental retardation*. Basic Books, New York.
- Menolascino, F.J. (1977): *Challenges in mental retardation; Progressive ideologies and services*. Human Sciences Press, New York.
- Miller, J. (1986). Early cross-cultural commonalities in social explanation. *Developmental Psychology*, 22, 514 - 520.
- Piaget J. (1953): *The child's construction of reality*. Routledge and Kegan Paul, London.
- Rutter M. (1980): *Developmental psychiatry*, Scientific foundation, W. Heinemann, London.
- Sameroff, A., Chandler, M. (1975). Reproductive risk and the continuum of caretaker casualty. In F.D. Horowitz, M. Hetherington, S., Scarr-Salapatek, & G. Siegel (Eds.). *Review of child development research*, Vol. 4. Chicago: University of Chicago Press.
- Sovner, R. (1986). Limiting factors in the use of DSM-III criteria with mentally ill/mentally retarded persons. *Psychopharm Bull*, 22, 1055 - 1060.
- Sovner, R., Hurley, A. (1986): Four factors affecting the diagnosis of psychiatric disorders in mentally retarded persons. *Psychiat. Asp. Ment. Retard. Rev.* 5, 9.
- Sparrow, S., Balla, D., & Cichetti, D. (1984). *Vineland Scales of Adaptive Behavior, Survey Form Manual*. Circle Pines, MN: American Guidance Service.
- Sroufe, A.L. (1979): Socioemotional development, in: J.D. Osofsky (red.), *Handbook of infant development*. Wiley, New York.
- Szymanski, L.S. Tanguay, P.E. (1980): *Emotional disorders of mentally retarded persons*. Univ. Park Press, Baltimore.
- Szymanski, L.S. (1980). Individual psychotherapy with retarded persons. In Szymanski L.S. & Tanguay P.E. (Eds.), *Emotional disorders of mentally retarded persons*. Baltimore: University Park Press.
- Szymanski L.S. (1988): Integrative approach to diagnosis of mental disorders in retarded persons; in: Stark J., Menolascino F., Albarelli N., Gray V. (ed.). *Mental Retardation and mental health*; Springer-Verlag, New York.
- Tanguay P.E. (1984): Toward a new classification of serious psychopathology in children, *J. Am. Ac. Child Psychiatr.* 23, 373 - 384.
- Vietze P.M. (1985): Emotional development in retarded children; in: Sigman M. (ed): *Children with emotional disorders and developmental disabilities*; Grune and Stratton New York.
- Werner H. (1957). The concept of development from a comparative and organismic point of view. In D. Harris (Ed.). *The concept of development*. Minneapolis, MN: University of Minnesota Press.

Zigler E., (1967). Familial mental retardation: A continuing dilemma. *Science*, 155, 292 - 298.

Zigler E. (1969). Developmental versus difference theories of mental retardation and the problem of motivation. *American Journal of Mental Deficiency* 73, 536 - 556.

Zigler E. (1971). The retarded child as a whole person. In H.E. Adams & W.K. Boardman (Eds.). *Advances in experimental clinical psychology*. New York: Pergamon.