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ENRICHING THE QUALITY AND QUANTITY OF STIMULATION AND SUPPORT AVAILABLE TO A CHILD IN THE HOME ENVIRONMENT THROUGH THE USE OF STANDARDIZED TOOLS IN EARLY INTERVENTION

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This article describes the use of Home Observation for Measurement of the Environment (HOME) in early intervention in a research project in Republic of Moldova. The goal of the article is to describe the structure of the instrument, show how it has been used successfully in a study on children with development delay or at risk in order to measure the effectiveness of the intervention in early intervention practices. These are followed by studies showing how the HOME has been used to evaluate interventions. Although most interventions are not designed primarily on the basis of the HOME outcomes, the instrument has been used as a measure of the effectiveness of the intervention schedule. HOME has been used extensively in research to reveal relationships between several aspects of the home environment and children's developmental outcomes.

Keywords: *Home, observations, home-visits, parenting assessment.*

ÎMBUNĂȚIREA CALITĂȚII ȘI CANTITĂȚII ÎN SUPORTUL DE STIMULARE, DISPONIBIL COPILULUI ÎN MEDIUL „HOME” PRIN TEHNOLOGIILE TIPIZATE ÎN INTERVENȚII PRECOCE

În articol este descrisă utilizarea Testului (HOME) în intervenție timpurie într-un proiect de cercetare din Republica Moldova. Scopul urmărit în acest demers științific este de a descrie structura instrumentului, de a prezenta modul în care acesta a fost utilizat cu succes într-un studiu privind copiii cu întârziere de dezvoltare sau risc, de a măsura eficiența practicilor de intervenție timpurie. Deși cele mai multe intervenții nu sunt efectuate în principal pe baza rezultatelor HOME, instrumentul a fost folosit cu scopul de a evalua eficiența programului de intervenție. HOME a fost utilizat pe scară largă în cercetare pentru a descoperi relațiile dintre mai multe aspecte ale mediului de origine și rezultatele privind dezvoltarea copiilor.

Cuvinte-cheie: *HOME, observare, vizite la domiciliu, evaluarea abilităților parentale.*

Overview the Home Observation for Measurement of the Environment (HOME)

HOME – Home Observation for Measurement of the Environment) is a tool used extensively since 1975 for observing and assessing stimulant or improve the environment for the development of children aged 0-3 years (Bradley, Cadwell & 1976a, 1976b, Bradley, Cadwell & Elardo 1977). HOME was first developed and used by Bettye Caldwell and her colleagues in a longitudinal study they conducted during the 1960s, which examined the relationship between home environments, day care and children's development (Elardo, Bradley & Cadwell, 1975). At this time, theorists and practitioners had accepted that the home environment makes an independent and significant contribution to children's development. It had become clear that assessment of IQ or of language development (or any kind of cognitive assessment on its own) could not provide sufficient basis for the prediction of children's developmental outcome. Three main factors led to the construction of the HOME: a) the realisation of the importance of the environment's contribution to the cognitive development of children, b) the inadequacy of the environmental measures used until then (mainly socio-economic status), and c) the need for a comprehensive environmental assessment when planning interventions (Bradley & Cadwell, 1984). The HOME inventory is intended for use by researchers and practitioners to measure the quality and extent of stimulation available to a child in the home environment. Both interaction and the physical environment are assessed. Several versions of the HOME are available to include: Infant/Toddler (IT) HOME for children birth to 3, Early Childhood (EC) HOME for children ages 3 to 6, Middle Childhood (MC) HOME for children ages 6 to 10 years of age [1, p.27].

The Infant Toddler-HOME (IT-HOME) is composed of 45 items. Higher total HOME scores indicate a more enriched home environment. Assessors make observations during home visits when the child is awake and engaged in activities typical for that time of the day and conduct an interview with a parent or guardian.

Birth to three years old version contains 45 items total and six subscales:

- (1) Responsivity: the extent of responsiveness of the parent to the child;
- (2) Acceptance: parental acceptance of suboptimal behaviour and avoidance of restriction and punishment;
- (3) Organization: including regularity and predictability of the environment;
- (4) Learning Materials: provision of appropriate play and learning materials;
- (5) Involvement: extent of parental involvement;
- (6) Variety in daily stimulation.

Eighteen items are based on observation, 15 on interview, and 12 on either observation or interview. The initial version of HOME is the Infant-Toddler HOME (0-3). Information is obtained through observation and interview with the primary caregiver (usually the mother) of the child in the family home. Items are scored on the basis of information obtained from the answers to the questions of the semi-structured interview and from direct observation of the home environment by a trained assessor. All items are scored according to a manual that provides explanation of each item and some examples for scoring them. The child is physically present and active along with the caregiver during the interview in order to obtain immediate information about the patterns of interactions between the caregiver and the child. The whole assessment lasts approximately one hour [2, p.31-35].

Table

The Infant-Toddler HOME inventory descriptions with additions to the disability adapted scales – HOME orthopaedic delay and HOME developmental delay, ages 0 to 3 years)

Name of subscale	Description	Example item	Additional items included in the orthopaedic delay and developmental delay Home versions
1. Emotional and verbal responsiveness of the primary caregiver (items 1–11)	The communicative and affective interactions between the caregiver and the child	Mother spontaneously vocalises to the child at least twice during visit; Mother caresses or kisses child at least once during visit	Additional item 11a in the developmentally delayed children Home Scale
2. Avoidance of restriction and punishment (items 12–19)	How the adult disciplines the child	Primary caregiver (PC) does not shout at child during visit; PC does not express overt annoyance with or hostility about the child	Additional item 19a in both the orthopedically and developmentally delayed children Home Scale
3. Organisation of the physical and temporal environment (items 20–25)	How the child's time is organised outside the family house. What the child's personal space looks like	When PC is away, care is provided by one of three regular substitutes The child's play environment appears safe and free of hazards	No additional items included
4. Provision of appropriate play materials (items 26–34)	Presence of several types of toys available to the child and appropriate for his/her age	Child has one or more large muscle activity toys or pieces of equipment Provides equipment appropriate to age e.g. infant seat, infant rocker, playpen	Additional item 33a in the orthopedically delayed children Home Scale
5. Parental involvement with the child (items 35–40)	How the adult interacts physically with the child	PC tends to keep child within visual range and look at him/her often PC talks to child while doing her work	Additional items – 38a, 39 a, b in the orthopedically delayed children Home Scale Additional items – 38a,b,c,d, 39a, 40a in the developmentally delayed children Home Scale
6. Opportunities for variety in daily stimulation (items 40–45)	The way the child's daily routine is designed to incorporate social meetings with people other than the mother	Father provides some care-giving everyday. Family visits or receives visits from relatives approximately once a month	No additional items included

The relevance of using HOME for evaluating interventions is as well as pre – interventions as well as a post – intervention assessment tool and it has been used to measure the changes in the home/family environment and also in the quality of parenting skills that are brought by intervention programmes. The interventions include both home- and centre-based programmes, aiming mainly to enhance the interactional style between parent and infant (Roman and her colleagues, 1995) or to promote the infant's cognitive development (Martin, Ramey and Ramey, 1990) through creating a more stimulating learning environment in the child's home [3, p.130, 133].

Medical problems

HOME can be useful in identifying aspects of the home environment that place medically fragile children (with or without neurological problems) at risk for later cognitive problems, even as early as 6 and 12 months of age, thus HOME can be used in clinical practice to guide interventions for these populations (Holditch-Davis et al., 2000). It was found however that two of the IT-HOME subscales, organization of the environment and avoidance of restriction, performed differently than in the general population; therefore, the researchers suggested that it is more appropriate to use the total HOME scores and not the subscale scores when assessing the environments of medically fragile infants [4, p.29].

Background

During the period since the instrument (HOME) was initially developed, the instrument was extended and have been done research on different age groups (Ramey, Mills, Campbell & O BREIN 1975), respectively children from 0-36 months, 36-50 months; In the application of the test which is a scale observation and interview were developed three types of tests Home tailored to the type of disability specific (developmental impairments, mobility impairments and standard) and the evaluation scale used in the assessment is determined by the presence or absence of a specific type of difficulty, so that the selected items for assessment are specific and relatively adapted to the environment in which the child grows and develops in particular to his or her type of difficulty. In the context of Moldova and use of this instrument in the service of early intervention provided by the Centre for Early Intervention Voinicel, this test has been translated and for goal of this research project adapted with the intention of adapting items this and other features for use to increase the quality of early intervention [5; 6; 7, p.27].

The method

The goal of the research was to determine the applicability and relevance of using HOME in early intervention and development of practical recommendations for the improvement of the tool as an assessment tool for the use of practitioners in the enriching of home environment according to the specific needs of children that are receiving early intervention services. In order to achieve the objective of the project was selected target group distributed in two research groups. The **study group** was composed of 35 children aged between 12 and maximum 48 months receiving early intervention services for at least 1 year. The **control group** consisted of 33 children aged between 0 and 18 months maximum.

The reason of such selections is argued by the intention perform a comparative analysis between beneficiaries are just beginning to access early intervention services and beneficiaries who receive minimum 12 months of EI services in order to detect possible differences in environmental assessment scores collected. The basic principle in the selection of the target group is the beneficiaries who currently accessing early intervention services under the CIP Voinicel. The objectives are:

- a) Identify specific sensitivity of the instrument to evaluate peculiarities compliant;
- b) Determining the practical utility of using the test to increase the quality of early intervention;
- c) Determination of recommendations to improve the scale and implementation methodology relevant for early intervention;

Results/Conclusions

After analysing the results following features are outlined as significant evaluation result summaries like the fact that in most families (both the study group and in the control about 98%), emerges a profile relationship similar to the specific allocation of parental roles for child care (primary caregiver is the mother), the father is under full job, and/or working outside the country sometimes or regularly working abroad. For the study group and the control level of education of both parents is relatively identical, dominating the higher education both fathers and mothers (about 78% of parents have higher education and only 12% have secondary or middle education). Most children were evaluated using the scale Home for developmental disorders (81.1% – developmental disorders and 18, 9% of mobility disorders for the study group and 80% – and 20% developmental

disorders – disorders mobility the control group). However, in most families indicate one or no children in the family. This is relatively identical situation for both groups (child index is 0.5 and 0.8 in the control group in the study group), this means that in most families is the only disabled child or a brother or has maximum sister.

Comparative analysis of the results obtained in the 6 areas (within the HOME) reflects an increase in both overall scores and those specific to each area evaluated. In this difference partly reflects a discrepancy between the results. It was found that there is a difference between the results of the first group, children who receive early intervention within one year and more, and those who have just been included in early intervention services, determine a positive trend compared to the control group. It appears that individual aspects of subjects such as cultural characteristics, diagnosis child, family values, father's participation in activities of daily living, physical condition, psychological state and parenting skills, which are reflected in the results of the questionnaire where analysed and referred to when understanding the presented results. Similarly, we found the situation when fathers working in full working regime falls less in education activities and child care.

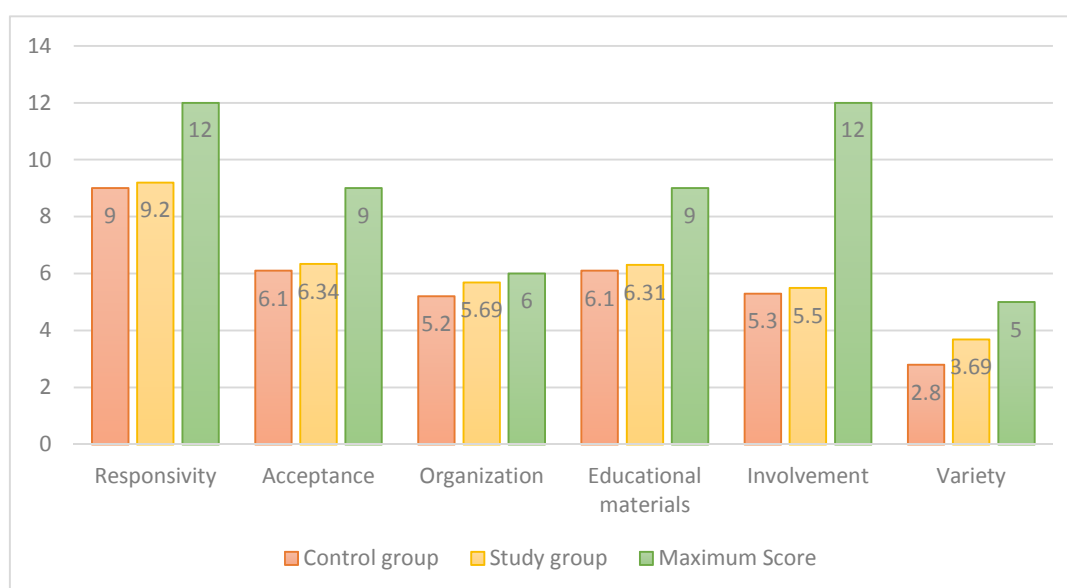


Fig.1. The average HOME scores obtained for both control and study group for all 6 areas assessed.

Significant difference but relevant to the analysis results (see diagram nr.1 and nr.2), following more detailed analysis and correlation of the objectives indicated in the individual service plans for the Family have identified the following features and arguments to explain differences between results of the assessment that with increasing age the correlation between demands to the child's abilities and potential increase it becomes more significant. During the assessment process of the instrument there have been made some changes in the content of some items (item nr.1.19, 21.23). Respectively such questions have adapted relatively content based on the user experience and knowledge considerations reflected from evaluators;

After applying this test by the evaluation team were made following conclusions on its usefulness in the context of increasing the quality of intervention. This tool determines the most important aspects of the environment, in which the child grows, activities, toys and parent-child relationship. It also helps to improve environmental conditions for multilateral and harmonious development of the child. After completing the visit some recommendations offer immediate intervention possible so the direct environment of the developing child. The recommended approach of applying the questionnaire is home visit, allowing the practitioners to observe the child in a natural environment, but also to form cooperative relationships with parents.

The results of the questionnaire suggest for the practitioner to develop practical recommendations tailored to the child and explained to the parent (or primary caregiver). It is possible to design and revise practical purposes removed term perspective and that are tailored to the needs of children and families. The instrument can be used as a means of measuring progress in changing the behaviour of parents to child care and increase quality tool for early intervention services. Children who receive early intervention services within a long time have a development environment better, and the level of Acceptance and Involvement get results higher, allowing us to assume that early intervention forms parenting skills and adapt environment the child's needs.

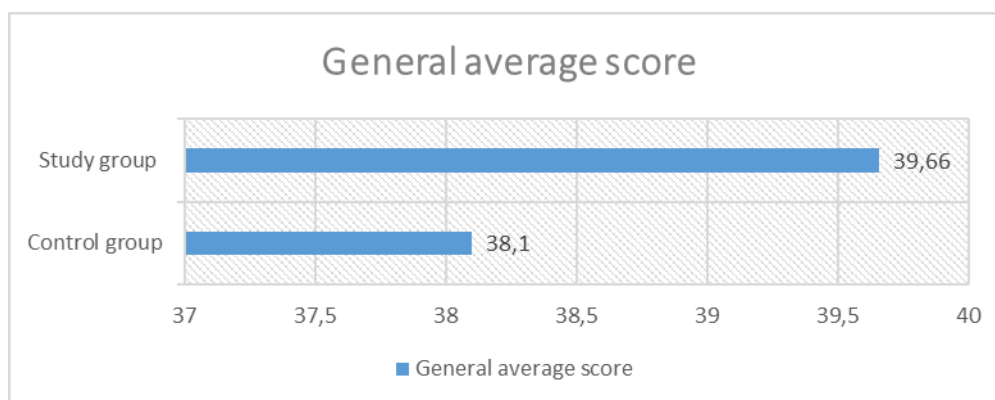


Fig.2. The general average HOME scores obtained for both control and study group.

The combination of interview and direct observation allows for an assessment of the caring environment along with a more detailed assessment of individual children. It has been used in such a way that places the focus directly on examples of the child's experience in the family home. Interviewers provide specific time limits as a framework for the conversation by asking the caregiver to focus on the facts of a very specific day of the week. Thus, the practitioner manages to elicit more valid information on the child's actual experience and not on the interviewer's feelings and mental representations of the situation. The emphasis it places on obtaining factual information does not hinder the interviewee from expressing his/her own feelings at the end (Cox, Hop-kinson & Rutter, 1981; Cox, Rutter & Holbrook, 1981; Rutter et al., 1981).

Recommendations

After applying this test by the evaluation team were made following conclusions on its usefulness in the context of increasing the quality of early intervention. Taking into account the specifics of home visits and that the visit can be made by any specialist working in early intervention services but there is also need for a training specialist for proper application, preparing parents for the visit at home and correct information to subjects. Application of the tool depending on the need and relevance. Given the circumstances and findings made during visits in the case of children (ex. Children with profound and multiple disabilities) application of this instrument could not be possible to entirely based on the severity of health conditions and that some items could not be applied or other circumstances that can influence the use of the tool. Another finding and specific recommendation is that the instrument is applied in the presence of both parents (if other persons involved in child care) even if only one of them is the main caretaker. This allows extensive knowledge and broader psycho-emotional manifestations of people participating in care and the opportunity to foster mutual understanding between adults in the family. Family environment for child development depends on several factors such as the level of cooperation of parents with therapists, cultural, financial possibilities and flexibility for parent's new changes.

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