



# Journal of Early Childhood Development

**Volume II**



*Tribhuvan University*  
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**ECD Resource Centre**  
Balkhu, Kathmandu, Nepal  
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# **Journal of Early Childhood Development**

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Tribhuvan University  
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The journal invites articles and book reviews from academicians, researchers and practitioners from both Nepal and abroad. Manuscripts should be sent to one of the joint editors:

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## Preface

Early Childhood Development (ECD) Resource Center was established by Research Center for Educational Innovation and Development (CERID) in 1997 with the support from UNICEF Nepal. Since its inception the resource centre has been generating ECD related resource materials, creating organizational linkages, developing a shared vision, organizing training programs and disseminating information on ECD through organization of dialogue sessions and conferences, publication of newsletters and publication of the journal. The publication of the Journal of Early Childhood Development is Nepal's first and only journal devoted to ECD in Nepal. This is a multi-dimensional journal concerned with child development and early child care and education.

This volume of the journal consists of eight articles written by academics, professionals and experts working in the field of ECD in Nepal and abroad. The articles included cover a wide range of areas. Some of the articles give a brief description of research and research based findings. These include Children's readiness for learning to read in Turkey; Music for child's holistic development in Israel; Situation of young children affected or infected by HIV/AIDS in Namibia. Other articles open discourse on the experiential learning, relationship between food and the neurodevelopment of young children; Understanding and responding to violence in Children's lives; Policies and plans on ECD in Nepal and Myths and realities of early child care in Nepal. We hope that this journal will bring about better understanding and consequently better practices of ECD in Nepal.

The publication of the Journal of Early childhood Development is the direct outcome of the World Forum Networking project between Dr. Kishor Shrestha of this centre and Dr. Wayne Eastman of College of the North Atlantic, Canada. Dr. Eastman paid a visit to CERID under the World Forum Networking Fund in 2002. His visit was highly beneficial for continuation of the publication of the journal and development of ECD resource centre at CERID.

On behalf of CERID, I would like to express my sincere thanks to Mr. P. O. Bloomquist and Mr. Purushottam Acharya of UNICEF Nepal for the assistance received in publishing this journal as well as for the development of the ECD resource centre as a whole. I would like to acknowledge the contributions made by all the writers whose articles appear in this volume. My special appreciation goes to Mr. Gaja Sundar Pradhan for his support in editing the language aspect. Appreciative thanks are also due to Mr. Gautam Manandhar for the layout and cover design, Mr. Chandra Mani Bhandari and Mr. Bishnu Bikram Giri for computer typing and Mr. Bhakta Bahadur Shrestha for printing.

November, 2004

Professor Hridaya Ratna Bajracharya  
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## **An Investigation On How Preschool Teachers Perceive Turkish Children's Readiness For Learning To Read**

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Young children are born with the ability to produce and perceive phonetic elements (Eimas, Siqueland, Jusczyk & Vigorito, 1971). Very young children can easily distinguish between words on the basis of a single phoneme. However, this phonological ability is not accompanied by an innate ability which allows them to manipulate phonological elements intentionally. In recent years, several research studies conducted on preschool children with the aim of enabling them to divide up words into their syllables; syllables into their phonemes; to determine the similarities between several phonemes; to match the names of letters with the corresponding phonemes play quite an important part in their success in reading in the future (Ball and Blachman, 1991; Bradley and Bryant, 1991; Brady, Fowler, Stone and Winbury, 1994; Lundberg, Frost and Petersen, 1988). Here the term "training studies" means all the activities we provide for children in order to help them gain the basic skills to learn how to read. For example, studies by Bradley and Bryant (1983; 1983) demonstrated that explicit training improved phonological awareness before any reading instruction had taken place. In addition, in the light of the findings obtained from this research, the researchers state that the most effective method which helps the child to gain the skill of reading is a training study which draws the attention to the phonemes and to the relation between the written symbols representing these units (Bradley and Bryant, 1991).

The children whose environment has been full of stimuli for the written language since they were born begin to form concepts about print, by joining some activities which lead them to develop reading skills by paying attention to the characteristics of printed material and by observing the adults using the written language. Hence, the findings of the research studies carried out by Baker and Raban (1991), Clay (1991), Feitelson and Goldstein (1986), Ferreiro and Teberosky (1982), Hiebert (1981, 1988), Sulzby and Teale (1991) and Tuncel (1992) and several other linguists show that the child's developing concepts about print and having success in reading are closely related to each other. For example, Morrow, Connor and Smith (1990) investigated the effects of an educational programme designed to see how preschool children form concepts about print and how they develop their reading skills; they found out that the children's developing the ability to read

during the preschool period positively affects their success in reading during the coming years.

Some training studies carried out to improve the child's vocabulary use in alphabetic writing systems proved to be very effective. This has been supported by the findings of some recent research studies (Eller, Pappas and Brown, 1988; Elley, 1989; Feitelson, Kita and Goldstein, 1986; Jenkins and Dixon, 1983; Leung and Pikulski, 1990 and Senechal, 1993). Robbins ve Ehri (1994) conducted a research in order to investigate how listening to stories affected the children's vocabulary knowledge. They found that reading stories aloud to children increases their vocabulary knowledge. It has a positive influence on their language development and reading success.

During the preschool period, while children are developing their reading skills, their gaining skills in visual discrimination is crucially important. A child having this skill is interested in books, signs and titles. He perceives the similarities and the differences between objects and simple symbolic forms; they know the primary colours (i.e. red, yellow and blue) and some secondary colours; he can tell the location and direction of somebody or something (e.g. up-down, right-left and top-bottom). He knows the visual direction (e.g. from left to right, from front to back) that he needs while reading. He can discriminate symbolic forms. This ability enables him to learn the letters of the alphabet and to perceive them in groups as words (Ryan, 1999). Similarly, a child having the auditorial and visual discrimination skills understands how letters and words are pronounced; he distinguishes the phonemic differences in initial and final positions. He enjoys language games played on various pronunciations of words. He likes poems and stories read to them (Ryan, 1999). The findings of the training studies aiming at developing auditorial and visual discrimination skills of children seem to support the view of the researcher that the skills developed during the preschool period have a strong effect on children's reading development in alphabetical writing systems and their success in reading in the coming years.

Languages differ in the complexity of their phonological structures. The diversity of the syllable types, the occurrence of morphophonemic alternations, occurrence of vowel or consonant harmony are only some of the differences that exist among different languages. Just as spoken languages differ in the complexity of their phonological structure, written languages differ in how they represent the spoken language. It is possible to classify all alphabetic orthographies according to the transparency of their letter-phoneme correspondences. This factor referred to as orthographic depth (Liberman, Shankweiler and Liberman, 1989) has been shown to influence the acquisition and development of reading.



Given all possible variations in phonetic and orthographic structures of word languages, it is reasonable to ask how an explicit understanding of a spoken word's internal structure may be influenced by the variation in the phonetic complexity of a language. After the child is introduced to an alphabetic writing system, how does the nature of the orthographic system influence the development of phonological awareness further.

Studies on beginning readers in orthographies with transparent letter-sound correspondences like Finnish and Turkish have shown that the acquisition of decoding skills takes place rapidly and children become accurate in decoding even complex pseudowords by the end of first grade (Venezky, 1973; Öney and Goldman, 1984, Caravolas and Bruck, 1993). The diversity in writing systems seems to lead to processing differences in word recognition also. While word recognition in phonologically transparent orthographies (sometimes referred to as "shallow orthographies") seems to involve the language's phonology, the same process may encourage the reader to rely more on the word's visual-orthographic structure in orthographies where the letter-sound relation is subsequentially equivocal (Katz and Frost, 1992, Seidenberg, 1992).

Öney and Goldman (1984) conducted a research study in order to investigate how children gain reading skills in various languages -each having a phoneme-letter relationship. They carried out the research on two different groups of first and third grade Turkish and American students. They found out that the decoding skill was acquired more quickly in Turkish than in English as Turkish has a very high phoneme-letter correlation whereas English has an irregular and complicated relationship between its phonemes and letters.

Öney, Peter and Katz (in press) compared the Turkish language with the English and Hebrew languages. At the end of the research they determined that the Turkish subjects utilized the phonological process more heavily than their American and Jewish peers.

In her research, Topbaş (1996) studied phonological development of a group of Turkish and English children at different ages and found that they both demonstrated parallelism in developing phonological awareness.

In other study, Aktan (1996) investigated how the characteristics of different languages belonging to different alphabetic writing systems affect children's phonological awareness and their skill at learning to read. In this study, she also aimed at developing the most appropriate teaching methods to facilitate literacy of Turkish children in their native language. Due to the characteristics of its alphabetic writing system, phonological process is heavily used in Turkish in contrast to some other languages, such as English with a different alphabetic writing system.

Turkish has fewer syllable types. Ninety eight percent of all Turkish syllables belong to one of the four simple syllable forms (V, VC, CV, CVC) with CV being the most frequent syllable form, by far, as over 50% of all Turkish syllables have that form. Thus, Turkish words are very easy to break into syllables and therefore Turkish may lend itself to awareness of syllables. Since the common syllable types do not include consonant clusters, phonemes within the syllable are also easy to identify.

Another important characteristic of Turkish phonology is vowel harmony. Turkish has an eight-vowel system (a, e, ı, i, o, ö, u, ü) where all possible combinations of the distinctive features front/back, high/low, and rounded/unrounded are observed. Vowel harmony is a left-to-right process operating sequentially along syllables. Any of the eight vowels may appear in the first syllable of a word, but each following vowel is conditioned by the vowel immediately preceding it (Underhill, 1976). Thus the following vowel assimilates to the preceding vowel in frontness and rounding. Although there are many exceptions to the vowel harmony rule, most of these exceptions occur in borrowed words.

Vowel harmony becomes a very important feature in word formation when Turkish morphology is considered. Turkish is an agglutinating language where grammatical elements are joined to the word as suffixes. Suffixes mark voice, aspect, modality, mood, person and number in the noun paradigm while they mark derivation, negation, tense, person etc. in the verb paradigm. As a result of vowel harmony, Turkish suffixes have an extremely variable nature. For example, the nominal and participle suffix *DİK* (indicating past tense, first person plural) has 16 different surface forms (Underhill, 1976). Variation in suffixes is very common, and may result in vowel dropping in the suffix. For example, the suffix meaning “my” has the form –*im* in *Elim* (meaning “my hand”), but –*m* in *ANNEm* (meaning “my mother”). Vowel harmony may also lead to variation in the stems (e.g.: *KİTAP-KİTABIM*, meaning “book” or “my book”).

Being a speaker of Turkish requires constant monitoring and manipulation of subword linguistic units where the speaker has to pay constant attention to the phonological characteristics of suffixes, choosing between alternate surface forms of the suffix based on phonological criteria. We believe that these phonological characteristics of spoken Turkish will facilitate the development of phonological awareness earlier.

As it is stated above, during the process of teaching to read in Turkish, the utilized method should give importance to syllable segmentation, phoneme segmentation and to analyzing the relations between the syllables and the corresponding phonemes. Due to the characteristics of this language, a method based on perceiving each word as a whole is not recommended.

In this study, we aimed to support the limited research studies done on this subject in our country. We also thought there was an opportunity to create new areas; therefore we consulted preschool teachers in order to obtain their opinions on children's developing reading skills, in other words, preschool children's readiness to read. In the meantime, we carried out some situational detection on what the teachers have been doing to support this development.

Later, based on the results of this detection, we designed a *New Programme About Children's Readiness For Learning to Read*, which was aimed to enrich the current curriculum. We also measured the effectiveness of the programme.

## **Method**

### *Subjects*

In Istanbul in the 1998-1999 school year, the general survey section of this research consisted of an accessible population of teachers working in public and private kindergartens run under the authority of the Ministry of Education. Teachers working in the Institutes of public and private preschool education run under the authority of the Institute of Social Services and Child Care. Teachers working in some practice schools operate in coordination with several universities. One hundred eighty two preschool teachers selected from this accessible population formed the sample. The second phase of the study was carried out as experimental research in which we chose 26 children out of 77 kindergarten pupils in the 5 to 6 age group attending the Independent Yıldız Erten Kindergarten in Beşiktaş, a provincial town of Istanbul. We formed two groups out of these 26 pupils. In the Experimental Group, there were 13 pupils; 8 girls and 5 boys. The Control Group also consisted of 13 pupils; 8 girls and 5 boys.

### *Materials and Procedure*

In the survey section, a questionnaire was administered by the researchers of this study to 182 teachers working in preschool institutes in order to determine their points of view on the research topic. The content of the questionnaire included 54 questions aiming to get the opinions of the teachers about preschool children's readiness for learning to read during the preschool period.

In comparing and contrasting the Experimental Group with the Control Group and testing the significance of the findings of *The Programme About Children's Readiness For Learning to Read*, the following tests were used during the implementation of the pretest and the posttest: Phonological

Awareness Tests, Concepts about Print Test, Peabody Picture -Vocabulary Test, Test Reversal (Test on Children's Readiness For Reading) and Stambak's Rhythms Test. Validity and Reliability Studies for Phonological Awareness Tests, Concepts about Print Test and the Peabody Picture - Vocabulary Test had been scientifically adapted for use in Turkey. On the other hand, the Test Reversal and Stambak's Rhythms Test were only adapted to Turkish but no reliability studies were done over them. For this reason, in order to utilize these tests in this research, we have carried out the necessary reliability work on them.

In the 1999-2000 school year, in order to ascertain reliability of the Test Reversal we administered the test to 300 pupils aged between 5 and 6 attending educational institutions at the preschool level. The internal validity of the test is a maximum of 0.97 according to the Cronbach Alpha Technique. The Guttman Technique was used to measure the minimum internal validity of the test and it was found to be 0.96. These results demonstrate that the test is highly reliable. In the research, Stambak's Rhythms Test was administered to 77 pupils in order to determine the Experimental and Control Groups. Having considered the results of the test over these groups, we determined the coefficient of internal validity according to Cronbach Alpha Technique. The result found to be 0.84 demonstrates that the test is 84% reliable.

During the Autumn term of 1999-2000 school year, *The Programme About Children's Readiness For Learning to Read* was put into practice together with the 13 subjects in the Experimental Group.

According to the Turkish Preschool Curriculum (M.E.B. Anasınıfı Program, 1994), a half hour is allotted to the tasks of preparing children for literacy. These tasks should be thought provoking on children's readiness for learning to read and they could be flexible so that each child would get the most advantage out of them.

In our research we established the database for developing some basic skills needed by 61-72 month old preschool children such as phonological awareness, concepts about print, vocabulary usage, auditorial and visual discrimination. We tried to build a bridge between the preschool and elementary school education, bearing in mind that child education is a continuous, crucial process preparing him/her for life.

This programme which consisted of 93 miscellaneous activities (Activities of Readiness for Reading, Activities of Linguistic Competence, Activities in the Acquisition of Conceptual Notions, Activities in the form of Games, Spare-time Activities, Science and Nature Activities, Drama Activities and Music Activities) aimed at to realize our objectives and targets. It was carried out four days a week as 60 to 90-minute activities a day and lasted for six weeks.

During the application of the programme aiming at the children's readiness for learning to read, during the preparations and pre-tests, 5 experts in preschool education helped the researcher one after another. The programme was finalized with the post-test activities conducted with the experimental and control groups.

## Results

Before starting the research, the experimental and control groups were matched with each other as it is necessitated by the scientific nature of the work model. This process is achieved by utilizing Phonological Awareness Tests, Concepts About Print Test, Peabody Picture -Vocabulary Test, Test Reversal (Test on Children's Readiness For Reading) and Stambak's Rhythms Test. As both experimental and control groups consisted of 13 pupils, non-parametric technique was considered to be appropriate for matching the two groups. To achieve this, Mann-Whitney Test was used. Both of the experimental and control groups took a number of pre-tests, such as Phonological Awareness Tests, Concepts About Print Test, Peabody Picture -Vocabulary Test, Test Reversal (Test on Children's Readiness For Reading) and Stambak's Rhythms Test.

TABLE I. The results of Mann-Whitney Test for the pre-test of the experimental and control groups

Tests	Group	N	Mean Rank	Sum of Ranks	Mann-Whitney	Z	P
Phonological Awareness Test PRE-TEST	Experimental	13	15.42	200.50	59.50	-1.285	p>0.05
	Control	13	11.58	150.50			
	Total	26					
Concepts About Print Test PRE-TEST	Experimental	13	14.85	193.00	67.00	-.906	p>0.05
	Control	13	12.15	158.00			
	Total	26					
Peabody Picture-Vocabulary Test PRE-TEST	Experimental	13	12.23	159.00	68.00	-0.847	p>0.05
	Control	13	14.77	192.00			
	Total	26					
Test Reversal PRE-TEST	Experimental	13	11.19	145.50	54.50	-1.547	p>0.05
	Control	13	15.81	205.50			
	Total	26					
Stambak's Rhythms Test PRE-TEST	Experimental	13	14.73	191.50	68.50	-0.824	p>0.05
	Control	13	12.27	159.50			
	Total	26					

As summarised in Table I, both groups were closely matched with each other on the base of the applied tests.

During the second phase of the study, the programme about children's readiness for learning to read was applied to the experimental group. The

programme was completed within 6 weeks. At the end of the allotted time, all the tests utilized in the pre-test session were applied once more. Non-parametric Wilcoxon Signed Ranks Test was given to the experimental group to see how effective the programme was.

*TABLE II. The results of Wilcoxon Signed Ranks Test for the pre-test and post-test of the experimental group*

Tests	Ranks	N	Mean Rank	Sum of Ranks	Z	P
Phonological Awareness Test PRE-TEST/ POST-TEST	Negative Ranks	0 <sup>a</sup>	.00 7.00	.00 91.00	-3.181	p<0.01
	Positive Ranks	13 <sup>b</sup>				
	Ties	0 <sup>c</sup>				
	Total	13				
Concepts About Print Test PRE-TEST/ POST-TEST	Negative Ranks	0 <sup>d</sup>	.00 7.00	.00 91.00	-3.192	p<0.01
	Positive Ranks	13 <sup>e</sup>				
	Ties	0 <sup>f</sup>				
	Total	13				
Peabody Picture-Vocabulary Test PRE-TEST/ POST-TEST	Negative Ranks	0 <sup>g</sup>	.00 7.00	.00 91.00	-3.181	p<0.01
	Positive Ranks	13 <sup>h</sup>				
	Ties	0 <sup>i</sup>				
	Total	13				
Test Reversal PRE-TEST/ POST-TEST	Negative Ranks	0 <sup>j</sup>	.00 7.00	.00 91.00	-3.181	p<0.01
	Positive Ranks	13 <sup>k</sup>				
	Ties	0 <sup>l</sup>				
	Total	13				
Stambak's Rhythms Test PRE-TEST/ POST-TEST	Negative Ranks	0 <sup>m</sup>	.00 7.00	.00 91.00	-3.186	p<0.01
	Positive Ranks	13 <sup>n</sup>				
	Ties	0 <sup>o</sup>				
	Total	13				

As summarized in Table II, the programme we applied about children's readiness for learning to read developed the children's skills in the areas of phonological awareness, concepts about print, vocabulary usage, visual and auditorial discrimination.

In the third phase of the experimental study, Wilcoxon Signed Ranks Test was utilized in the pre-test and post-test of the control group. (This data is presented in Table III).

**TABLE III. The results of Wilcoxon Signed Ranks Test for the pre-test and post-test of the control group**

Tests	Ranks	N	Mean Rank	Sum of Ranks	Z	P
Phonological Awareness Test PRE-TEST/ POST-TEST	Negative Ranks	2 <sup>a</sup>	4.50	9.00	-2.550	p<0.05
	Positive Ranks	11 <sup>b</sup>				
	Ties	0 <sup>c</sup>				
	Total	13				
Concepts About Print Test PRE-TEST/ POST-TEST	Negative Ranks	8 <sup>d</sup>	4.63	37.00	-1.721	p>0.05
	Positive Ranks	1 <sup>e</sup>				
	Ties	4 <sup>f</sup>	8.00	8.00		
	Total	13				
Peabody Picture-Vocabulary Test PRE-TEST/ POST-TEST	Negative Ranks	6 <sup>g</sup>	6.50	39.00	0.00	p>0.05
	Positive Ranks	6 <sup>h</sup>				
	Ties	1 <sup>i</sup>	6.50	39.00		
	Total	13				
Test Reversal PRE-TEST/ POST-TEST	Negative Ranks	11 <sup>j</sup>	7.95	87.50	-2.940	p<0.01
	Positive Ranks	2 <sup>k</sup>				
	Ties	0 <sup>l</sup>	1.75	3.50		
	Total	13				
Stambak's Rhythms Test PRE-TEST/ POST-TEST	Negative Ranks	8 <sup>m</sup>	6.75	54.00	-1.184	p>0.05
	Positive Ranks	4 <sup>n</sup>				
	Ties	1 <sup>o</sup>	6.00	24.00		
	Total	13				

Wilcoxon Signed Ranks Test was used for the pre-test and post-test of the control group. In the Phonological Awareness Test, there was a significance level of at least 0.05 in favour of the post-test. The same level of significance was found to be in favour of the pre-test in Test Reversal (Test on Children's Readiness For Reading). Although the programme about readiness for learning to read wasn't applied to the pupils of the control group, their phonological awareness skill developed; whereas their scores in the Test Reversal (Test on Children's Readiness For Reading) decreased significantly. We couldn't find any significant difference between the pre-test and post-test results of Concepts About Print Test, Peabody Picture - Vocabulary Test and Stambak's Rhythms Test. These findings show that apart from phonological awareness and visual discrimination of the pupils,

their concepts about print, vocabulary usage and auditorial discrimination skills didn't differ in pre-test and post-test applications.

At the end of the last phase of the experimental study, Mann-Whitney Test was utilized to compare the post-tests of the experimental and control groups. (The findings are presented in Table IV).

*TABLE IV. The results of Mann-Whitney Test for the post-test of the experimental and control groups*

Tests	Group	N	Mean Rank	Sum of Ranks	Mann-Whitney	Z	P
Phonological Awareness Test POST-TEST	Experimental	13	20.00	260.00	0.00	-4.339	p<0.01
	Control	13	7.00	91.00			
	Total	26					
Concepts About Print Test POST-TEST	Experimental	13	20.00	260.00	0.00	-4.378	p<0.01
	Control	13	7.00	91.00			
	Total	26					
Peabody Picture-Vocabulary Test POST-TEST	Experimental	13	19.27	250.00	9.50	-3.867	p<0.01
	Control	13	7.73	100.50			
	Total	26					
Test Reversal POST-TEST	Experimental	13	20.00	260.00	0.00	-4.350	p<0.01
	Control	13	7.00	91.00			
	Total	26					
Stambak's Rhythms Test POST-TEST	Experimental	13	20.00	260.00	0.00	-4.369	p<0.01
	Control	13	7.00	91.00			
	Total	26					

As summarized in Table II, the experimental group did better than the control group in the post-tests. A significant level of 0.01 in favour of the experimental group was found. The group of pupils who joined the programme of readiness for learning to read developed their skills of phonological awareness, concepts about print, vocabulary usage, visual and auditorial discrimination to a higher level than compared to the group which didn't join this programme.



## General Discussion

The results of our research clearly indicate that *The Programme About Children's Readiness For Learning to Read* applied to a group of children aged between 5 and 6 supports their developing reading skills. After the educational programme was applied to the Experimental Group, we administered 5 different tests to the subjects. When we compared their scores with those of the Control Group, we found out that the scores of the Experimental Group were significantly higher than the scores of the Control Group. *The Programme About Children's Readiness For Learning to Read* helped the children of this age to develop their skills such as phonological awareness, concepts about print, vocabulary usage, auditorial and visual discrimination skills. The results of this research is consistent with the findings of many research studies (Ball and Blachman, 1988, 1991; Bradley and Bryant, 1983, 1985, 1991; Cunningham, 1988; Lundberg, Wall and Olofsson, 1981; Lundberg, Frost and Petersen, 1988; Olofsson and Lundberg, 1983; Torgesen, Morgan and Davis, 1992; Treiman and Baron, 1983; Williams, 1980, 1984) similarly carried out in literature.

In summary, at the end of this research study, we found that the programme we applied was effective on the reading development of children in the 5-6 age group. However, to see how long-lasting this effect is, some follow-up studies should be carried out at certain intervals. Besides, the programme can be more useful if it is applied over a longer period, preferably for a year. For this reason, we think that this programme may be used as part of preschool curriculum. It may also be used with the children in the first year of primary education who haven't benefited from preschool education before. In our time, there are great advancements in every area of life. Tomorrow's adults, today's children in Turkey should be provided with good education so that they could be prepared properly for their future lives. Children attending preschool institutions in our country are 11.9% of all at that age. It seems quite impossible to provide preschool education for all the children because of the financial difficulties the country is in. However, it should be born in mind that the future of this country depends on the proper education given to its children. Therefore, every effort should be made to improve preschool education in our country and to allow all the children to benefit from it.

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## Music that Counts

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### Background

We first met in summer 2001, the Managing Director of the musical enrichment centre in Acco and the Educational Supervisor of early childhood programs in math, science and technology. We were being sent together by Golda Meir mount Carmel International training centre Haifa (MCTC<sup>1</sup>) to Katmandu, Nepal, to give a workshop on integrated programming of math, science and music in early childhood development. The need for the workshop for trainers was expressed by Seto Gurans, a well-known NGO on the field of ECD<sup>2</sup> in Nepal.

While planning and preparing for the workshop, we tried to examine the inherent relation and the possibilities for integration between mathematics and music, that when highlighted might contribute to improvement of the early childhood learning process in both areas.

Implementing the workshop together helped us to sort out these ideas. Upon our return to Israel, we continued to discuss and to analyze them. We wondered whether we could develop a study unit that would include design, writing, reading and production of rhythmical patterns as musical accompaniment. These musical accompaniments would include a wide use of musical and mathematical symbols while transferring from one language to another.

With the approval of all the involved parties in the Israeli Ministry of Education, Division of ECE<sup>2</sup> – embarked on an experimental voyage in the city of Acco.

During the school year 2003 we documented the processes and by the end of the year we examined the outcomes. We found that many of the preschool children, ages 5-6, who took part in the programme reached impressive observable mathematical performance in number conservation, combining and separating numbers, reading and producing musical notes of a quantitative value and then transferring them into mathematical symbols.

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<sup>1</sup> MCTC works within the framework of Mashav , the center for international corporation , Ministry of foreign affairs Israel

Early Childhood Education <sup>2</sup>

In this article we briefly present the process of our study, which has not yet been finalized. It is our intention to continue our investigation during the school year 2003-2004.

### **The Musical Enrichment Center - Acco**

The musical centre in Acco serves about 800 children of the city. The population is quite diverse and comprises Israeli born children, new immigrants, Arab children and children with special needs.

The centre was established nine years ago by the Department of Education of the Acco Municipality, and is activated by Mrs. Efrat Srebro. The centre is integrated into the Acco musical educational curriculum, which begins at the early childhood level and continues until High School graduation.

The main objectives of the Early Childhood Musical Education enrichment centre are to teach the children to love and understand the world of music and to enhance their holistic development.

The learning process is a multi-sensory musical adventure that is placed mainly on:

Acknowledgement of selected musical pieces from around the world.

Understanding basic musical terms.

Introduction of rhythm as a base for music and math.

Recognition of musical notation as part of extended literacy.

Developing musical skills.

Nine times a year, the children come to the centre for the duration of one and a half hours. Each programme is built in an integrative manner around one musical composition.

In addition, a follow-up programme for the EC<sup>3</sup> teacher has been developed, and is being implemented under the guidance of the musical centre manager. The follow-up activities and the ongoing practice allow for the enhancement and development of the children's basic musical and mathematical skills.

In the centre and in the EC centre music is the basis of different activities like movement, drawing, exploring and playing by rhythmic score.

The multi- sensory activities with music help the children develop an inner and mental image of the melody. They remember parts of the music and their

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Early Childhood <sup>3</sup>

location in the sequence of the musical piece. They sing the music and are aware of its meter and the rhythmic accompaniment that they learned from the score. Recognizing the structure and the meter of the music enable the children to write their own rhythmic scores to musical compositions.

## The musical curriculum

The annual programme of 2002 exposed the children to ethnic music from all around the world. The children learned about the historical and geographical background of the music and about the local typical musical instruments.

The musical literature is contemporary and multi culture:

- "Messenger" by Guem
- "The Dueling Banjos" by Eric Weissberg
- "Song of Ocarina" by Diego Modena and Senneville
- "Music box Dancer" by Frank Mills
- "Frielech"- folk Chasidic Jewish music
- The considerations in choosing the musical works were:



- Different musical styles from around the world.
- Performances that emphasize one group of instruments.
- A Musical composition that emphasizes a musical topic.
- Music with steady rhythmic structure which allows for a percussion world accompaniment by young children.

We preferred music with 4/4 meter in which each quarter is equal to one beat. This simple meter is easier for young children to manage.

The following example demonstrates all of the above-mentioned educational criteria:

"Messenger "by Guem is an African musical style with emphasis on the percussions instruments. The musical topic, which is emphasized, is the rhythm and the meter is 4/4.

The general structure of the musical activity in the enrichment centre and the ECC include the following components:

**The drum circle-** Playing rhythmic patterns with no relation to specific music. Throughout the school year the children practice rhythmic patterns playing at different levels of complexity.

**Active listening** – Acquaintance with selected musical literature and learning the musical topics through movement and games.

**Acting on rhythmic scores** - Group percussion playing according to written rhythm notes together with listening to specific music.

**Inventing rhythmic patterns**- Arranging and organizing rhythmic symbol cards by meter and playing these patterns in small groups.

**Inventing and acting on individual rhythmic scores**- The activity starts by combining and separating rhythmic notes keeping the quantity of the meter and playing individually.

After developing a mental image of the music and understanding its meter, the children are capable of writing rhythmic accompaniments to the music and arranging it in a score.

### **Math and Music in the annual curriculum**





The musical area on which we focused is the rhythm. Rhythm is the main element of our most basic activities e.g. breathing, heart beats and walking and it is an essential component in any musical work. In the Oxford dictionary of music, rhythm is defined as covering everything pertaining to the time aspect of music as distinct from the aspect of pitch. It includes the effects of beats, accent measures, grouping of notes into beats, grouping of beats into measures, grouping of measures into phrases, etc.



We chose musical pieces with steady rhythmical patterns with the meter of 4/4 because in these works **each quarter note is equal to one beat**. This promotes children accurate rhythmic playing. It is important to emphasize that at the beginning we used the "beat" term in order to "by-pass" the difficulty of using fraction terms (quarter note, eighth note, half etc.) which are both note names and mathematical values that we did not want to address.

Using the "beat" term, which is a unit of measurement of the rhythmic pulse of music, as indicated in time signature, helped the children to sense and later understand the rhythmic pulse by playing while counting: "one two three four..."

In addition, we used a rhythmic language which was developed in England in the 19th century – the "ta" language (syllables that represent rhythmic units).



Ta =   
 Taa =   
 Taaa =   
 Taaaa = 

We exposed the children to the rhythmical note  and presented it as two equal taps in one ta. We also taught the "quiet quarter"  –that is called "hush" in the rhythmic assistance language.


This Musical programme was a basis for developing mathematical terms and abilities.

**One to One Correspondence** - As we know from research, one to one adaptation in quantities up to four is inherent in humans as well as various mammals, and we can see this with babies before they can express it in words (Dehaene, 97).

During rhythmic activity, the correspondence was obvious when the children were accompanying the composition by clapping or playing percussions instruments. At a later stage the children composed a "rhythmic score" and played accordingly. Doing that, they created a series of correspondence: between the sound (rhythm, beat) and its written representation (score), between the read (the written score) and the action (percussion), which resulted in re-listening (re- correspondence). This series, which began with simple correspondence and developed into more complicated, multi sensory ones, also represent **correspondence between languages**.

**Count** – in order to find out and assemble rhythmic patterns the children use counting. They name numbers in the conventional order and in accordance with the beat or with the written score, which means in accordance with the musical meter of the music.

**Reading the mathematical representation** – While being trained in the assisting musical language and the way of writing the symbols of the

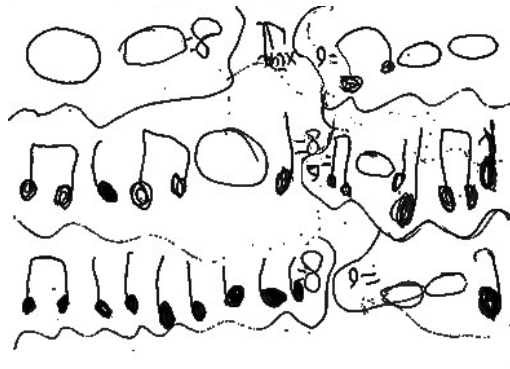
rhythmic units: , the children learn the mathematical values of the musical symbols and they manage to read them using the mathematical language: - one, one two, one two three etc.

**Correspondence between a group and a number** – After the children identify the meter of music through active listening accompanied by playing percussion instruments or clapping, they write a score. By doing this, they correlate between a rhythmic unit and a number.

**Number Conservation** – When the children are capable of creating combinations of musical representations while keeping the rhythmic pattern, they are experiencing the conservation of a number, even though the representation they use is not mathematical. This can be observed in the photo below:

Rhythmic score that was written by Amit, a 5 year old

Each sentence has two bars.  
One is eight  $4/4$ (ta) and the other  $9\ 4/4$ (ta)



### **Implementing the programme – from theory to practice**

The programme was organized to be carried out in five chapters. Each presents one musical piece and covers two visits to the Musical Enrichment Center.

During the time between the visits, many activities take place in the EC centre and these contribute to a comprehensive understanding of the experience at the enrichment centre.

## **Chapter 1: “The Messenger” by Guem.**

### *Musical Background*



A piece for percussion instruments which was composed by Guem and performed by his band.

Guem, an African percussionist traveled to France at the age of 16 with the intention of becoming a professional football player. He turned out to be the greatest percussionist in the whole world. Born in 1947, his first album, which consisted of African music, was published in 1973.

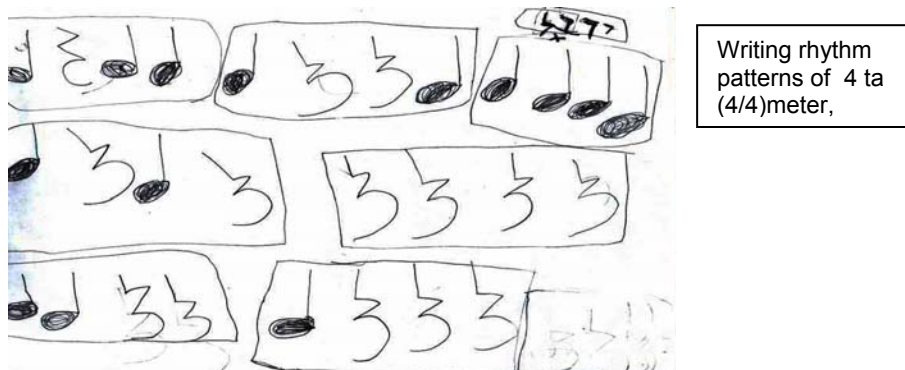
### *Musical and mathematical topics*

The first two meetings were devoted to percussion instruments, beat and meter.

The children were exposed to music with a meter of four quarters and responded with free and intended motion, and with group games which were designed to enhance their sense of musical meter and beat. During these

meetings the children learned the “ta”  (1/4) and the silent “ta” . The rhythmic activity related to both reading and acting on a written score (percussion) of rhythmic patterns which are composed of these two symbols. Special emphasis was given to the development of simultaneous group playing.

From the mathematical aspect, the children related to patterns of four quarters (4 ta) and created compositions using cards of “ta” and “hush”. The photo below shows a relatively simple situation of training in number conservation in a musical context. In each bar, four rhythmic symbols represent the number four.




## Chapter 2: “The Dueling Banjos” by Eric Weissberg

### *Musical Background*

This music was written by Eric Weissberg, an American composer and player of our time who wrote over 8000 pieces of music, including radio jingles and film music. His famous work, "The Dueling Banjos" was written in 1972 as a musical track for the film "Men in a Trap" and won the Grammy prize.

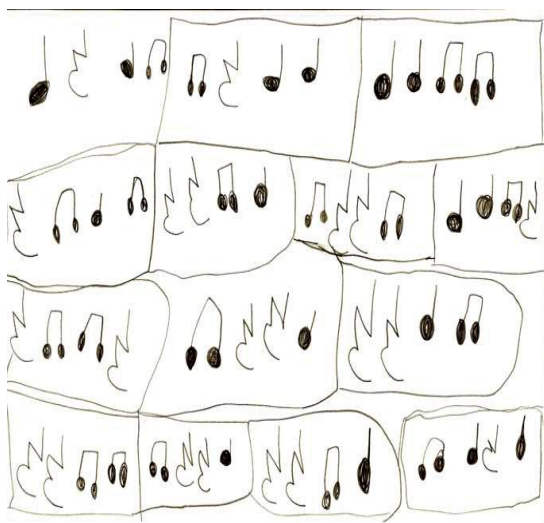
### *Musical and mathematical topics*

The third and the fourth meetings focused on string instruments, movement and pause of sound. The children listened to music with 4/4 meter which was performed by a guitar and a banjo and they were exposed to the rhythmic note: titi  (2/8) which is equal to two halves of 1/4 or, as we named it with the children, two equal taps in one ta.

Mathematically, the children exercised reading musical symbols with mathematical values and playing three rhythmical notes (ta titi and hush) in 4/4 meter rhythmic patterns with percussion instruments. They began writing

different rhythmic variations to the 4/4 meter using those three rhythmic notes.

At this stage we devoted time to strengthening and reinforcement of simultaneous group playing, using score reading. This move to writing rhythm patterns allowed for individual work and creativity.



Writing rhythm patterns of 4 ta(4/4) meter, using three rhythm notes: ta titi and hush

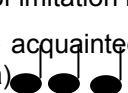
### Chapter 3: "Song of Ocarina" by Diego Modena and Senneville

#### *Musical Background*

P. Senneville who wrote "Ballade for Adeline" met in 1991 with the Argentinean flute player Diego Modena. After three working days in a recording studio, they composed the "Song of Ocarina". The performing musical instruments in this musical piece are a pan flute, an ocarina flute and a cello. The ocarina flute is an ancient small clay wind instrument. The "Song of Ocarina" became known in many parts of the world and is very popular in South American countries.

#### *Musical and mathematical topics*

The fifth and sixth meetings focused on the group of wind instruments and on the musical topic of imitation in tunes.

The children were acquainted with the following rhythmic notes:  which is equal to 2/4 (two ta)

The rhythmic score which helped the children accompany the music consisted of the following rhythm notes:

Mathematically, the children created a large variety of rhythmic patterns. Motivated by intrinsic curiosity, they tried to create maximum unique possibilities of the 4 meter patterns. They acted on the rhythmic patterns using triangles and whistles.

When the children understood the 4/4 meter and the structure of the specific musical piece, they started to compose a rhythmic score for the music on their own.

At the music corner of the EC centre, all the "composers" gathered with the "conductors" and the other "members of the band" who were happy to play and to re-create their own compositions.

At this point we felt that the interest and curiosity that motivated the children, contribute to the process development in a way that we had not foreseen. Mainly, we could not assume in advance that young children would work so intensively and in such consistency, practicing reading, writing and playing rhythmic notes with percussion instruments.



Variety of rhythm patterns of the 4 ta(4/4) meter by using 4 rhythm notes: ta hush, titi and taa


## Chapter 4: "The Music Box Dancer" by Frank Mills


### *Musical Background*

This is a musical piece for piano, which was written by a Canadian composer of our time – Frank Mills. It became very popular all over the world at the beginning of the seventies. During his musical career, Frank Miles published about ten musical albums.

### *Musical and mathematical topics*

The seventh and the eighth meeting were devoted to the play box and to solo or many players.

In these meetings the children were exposed to the following rhythmic units: Ta- a -a- which is equivalent to three quarters = .

(3 Ta) and Ta-a-a-a - which is equivalent to four quarters= 

The inventory of six representations for five rhythmic units encouraged the children to break through the four ta (4/4) meter

We understand that this proves that the children were capable of making mathematical use of the basic rhythmic, quantitative and symbolic units in order to produce new rhythmic patterns.

Many children produced different rhythmic patterns which include up to ten quarters, and moved easily from one meter to another, using the guiding rule of - equality of the mathematical value of different patterns.



## **Chapter 5: “Frylichs” –A Hasidic folk tune**

### *Musical Background*

Jewish, hasidic joyful folk music played by a trio of harmonicas. Music is most important in the Hasidic movement which was established by Rabbi Baal Shem Tov. The Hasidic movement regards it as a means to uplift the soul to high levels which enables recognition of and belief in God. The meaning of the word “Frylichs” in Yiddish is a “happy dance”

### *Mathematical and musical learning subjects*

The ninth meeting presented the harmonica and the cycle of the Chasidish music. The children kept composing rhythmic patterns of various forms based on different meters, and reached patterns of more than ten quarters. The writing and playing process became more accurate and quick. The enthusiasm created bilateral assistance which resulted in overcoming problems, mutual checking and feedback

The EC teachers said that children who once had difficulties in understanding Math operations such as counting, numbering and adding up to 10, succeeded doing it in a Music context. They willingly received help from their friends in order to join the "class orchestra".

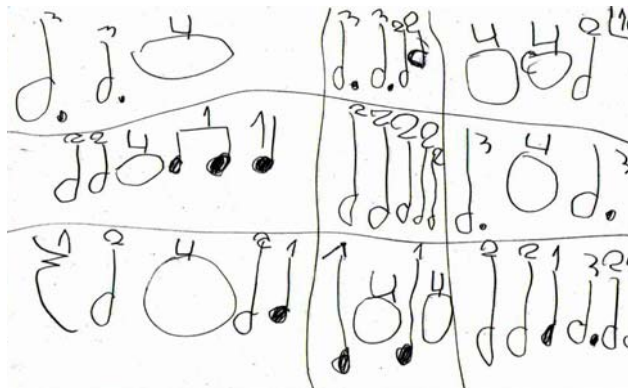


"I know how to play music better than my sister, I am inventing songs"  
Colleague study at the class music corner.

We were amazed at the children's expressed creativity in assembling and disassembling rhythmic scores using different abilities such as writing, reading and playing percussion instruments.

Mathematically, the children were experiencing assembling different numerical patterns and conservation until 10, understanding of the numerical inclusion within the musical notation, counting, comparing and graphic representation.

During score reading and practice in harmony with the music the children developed mental image of the score and were able to sing and accompany the music by heart. The reversibility from a continuous tune to singular musical symbols and vice versa is analogous to the transfer between the whole to the parts and vice versa. Both cases involve a process of disassembly and re-assembling. After understanding the rhythm notes the children used them as "building blocks" to create new scores.



Ten ta(10/4) rhythm patterns using Mathematical and Musical notations

**“Translation” from music notation to math notation**

Towards the end of year the musical writing and playing skills were at a very high level. They demonstrated capability in planning and performing, reading, writing and playing accordingly. They seemed to be enjoying their success in writing and playing individual accompaniments to music, and continued with enthusiasm to write their own music at their ECC and at home. From parents’ reports we found that the children shared and express their knowledge in both music and math. Some children presented partial understanding of the concept of “one half”, and others began composing rhythms beyond 10.



The "Drum circle" at the center

Since all our mathematical activity was situated within the musical context, we wondered whether the children and the EC teachers were in any way aware of this fact. We asked our selves what evidence we could find to show that this situated practice has impact on reflection and can be transferable.

We asked a number of children who presented a score, which they had written; if they knew what arithmetic exercises looked like. If a child said “yes”

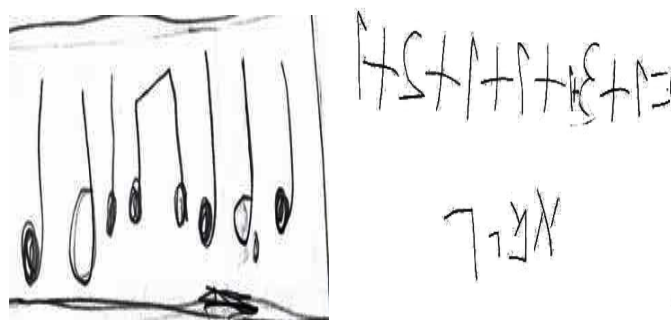


(most of the children answered thus) we asked “can you write it (one of the musical patterns he / she composed) as an arithmetic exercise?”

Many children started to translate the rhythmic patterns that they wrote into numbers sentences (addition). Many of them seemed capable of doing it without hesitation. It seemed that the transition between these two languages created no difficulty for them.

We suggested to the children that they translate a musical pattern, one out of a number of patterns, which they wrote down very densely, on the whole sheet and not to reveal which of them they chose. We had to guess and point out the right one. This suggestion excited the children and resulted in a lasting activity including writing of musical patterns, playing them, writing of arithmetical addition exercises and giving them out to each other to guess which of the musical patterns they fit.

Six years old Amir translates musical rhythmic pattern to numbers



## Discussion

Our observations suggest that integrating music and mathematics may enhance the learning experience of both fields. In music, the children learned about rhythm, they composed accompaniments to melodies and played their compositions as a group with percussion instruments. In mathematics, they learned how to disassemble and assemble numerical patterns up to ten and beyond, and how to represent them symbolically.

Geary (1995), suggested a distinction between primary and secondary mathematical capabilities in humans. Among the primary, naturally acquired capabilities are correspondence and comparing groups of up to 4 items each. Among the secondary, school-learned capabilities are the four operations with large numbers, understanding of base ten and fractions. It was his claim that the basic assumptions of constructivism and situated practice are fit mostly for the development of primary capabilities and much less for secondary mathematical capabilities. In his opinion, context and situated

practice are insufficient for the construction of complicated mathematical knowledge.

It is our impression that the context within which children practiced mathematics, allowed for proceeding beyond primary capabilities in areas of counting, comparing, addition and writing mathematical sentences, while going back and forth between the language of music and the language of math.

It is possible that the musical context arouses meaningful and powerful intrinsic motivation, similar to the one we find in playing games or engaging in functional activities. Both were identified by Lave (1990) as well as by Teubal (1996) and others as sources do be taken in consideration when developing learning activities.

The musical context served as a catalyst for the implicit and informal challenges to the children's mathematical thinking. Some, who lacked in language skills (new immigrants), used this context as scaffolding by which they could express both musical and mathematical dispositions. In spite of the situated practice, it seemed that the children became able to present a level of reflection and translation of the musical symbols into mathematical ones.

Lemke (1990), indicated the significance of allowing learners opportunities for translation between scientific language and every day language, and vice versa. According to his findings, educators should seek all the semantic associations between concepts, and all the conceptual associations of a topic, both in daily speech and in the language of science, in order to nurture "multi-linguistic" skills of learners. The activities, which were described in this article, attempt to nurture these skills: to promote the "shift" between the musical notation representation to the mathematical and the opposite. The integration of identifying rhythm, playing accordingly and using notation is analogous to counting, numerating and matching a group to a number. Moreover, the activities described add another layer of dealing with numerical values – we think of a rhythm, write it down, act upon it and thereby hear it again.

Finally, all this could not have been achieved without an ongoing process between the EC centre and the music centre. We feel that this issue is worthy of further investigation, especially in light of the need to develop multi-literacy for growing populations while taking in consideration diversity and culture.

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## **When the World Is a Dangerous Place: Understanding and Responding to Violence in Children's Lives<sup>4</sup>**

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When I do presentations for parents and teachers in the United States on issues related to violence in children's lives, I begin by asking participants about the issues that they want to make sure we address. With each session, the list of topics grows longer, and the examples become more extreme. Some recent issues raised include:

- "Should we talk to children about events in the news like September 11<sup>th</sup>? They build towers in the block area and then crash them down. I'm not sure how I should respond"
- "A child announced at our class meeting yesterday that her brother had been shot. I didn't know anything about it but have since found out he was killed two years ago."
- "My four-year-olds were on a field trip and started kicking and karate chopping cars and making real dents. They excitedly said they were Power Rangers."
- "I have children who turn anything they can find into a toy weapon. When I tell them "no weapons in school, a few sneak around doing it anyway."

### **Growing up in Violent Times**

As many of us are becoming all too aware, children growing up today in the United States and in many countries around the world encounter a great deal of violence. There is increasing violence children around the world see on the screen—in TV programs, movies, video and computer games. There are all the highly-realistic toys that are marketed with violent TV programs and other media that encourage children to imitate in their play the violence that they have seen on the screen (Levin, 1998).

Then there is real world violence. Children see it on the news—weapons exploding, adults hurting adults, adults hurting children, even children hurting children. And, most tragic of all is the violence that growing numbers of children are experiencing directly in their own homes and wider communities from either an isolated event or on a regular basis.

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<sup>4</sup>Adapted with permission for an article which first appeared in *Child Care Information Exchange, Beginnings Workshop on Violence*, March/April, 1995—#102. To appear in *ECD Journal* (Nepal), vol. #2.

The degree to which children are exposed to and affected by violence varies, but few children growing up today are untouched by it. And it has an impact on them. As shown in Figure 1 (The Continuum of Violence in Children's Lives), the violence can be seen as fitting along a continuum of severity. At the bottom is entertainment violence that is most prevalent in society and touches most children's lives. At the top are the most extreme forms of violence— chronic and direct exposure in the immediate environment, which fewer children experience but which builds onto the exposure more of the prevalent forms of violence below it on the pyramid. The degree to which children are affected is likely to increase as they move up the continuum.

Fortunately, while we have not yet had to help children deal with the full range of incidents listed above, children at all ages are being affected. It is becoming increasingly urgent for us to begin to confront the special challenges that these violent times are creating for children and families. We need to figure out how to effectively counteract the negative effects and break the cycle of violence in children's lives and in society, even when we have received little training for knowing how to do so. (Levin, 2003a).

### **Creating a Lens for Understanding and Responding Effectively**

Exposure to violence creates special needs and problems for many children that the adults who care for them need to understand in order to help. It can affect development in far reaching ways as children struggle to make meaning of the violence they see and incorporate it into their ideas and behavior (Garbarino et al., 1991 & 1998).

The meaning children make of the violence in their lives is different from that of adults (Levin, 1998). Children's understandings are influenced by such things as:

- their current level of development;
- the meanings they have made from prior experiences with violence which they use to help them make sense of new experiences with it;
- individual characteristics;
- family, community and societal approaches to violence.

As we work with children around issues of violence, the more we are able to understand the unique meanings each child is making, the more we are likely to be able to help.

There is a growing body of child development theory and research and literature about the effects of violence on children. Together they can provide

us with a very powerful framework for understanding why children's development and wellbeing can be so negatively affected by violence. Such a lens can also guide our efforts to find effective responses. Table 1 (A Developmental Framework for Understanding How to Counteract the Negative Effects of Violence) summarizes this framework.

### **Violence Undermines the Sense of Trust and Safety**

Many children growing up today see over and over, from both entertainment violence and the violence that they experience directly, that the world is a dangerous place. Dangers lurk in many places. Often, adults are unable to keep them safe. Fighting and weapons are necessary to keep oneself safe. Such messages undermine children's very sense of safety and trust.

*Not feeling safe deeply affects social and emotional development.* It can contribute to increased aggression, hyperactivity, impulsiveness, withdrawal, and distractibility. Intellectual development is also undermined as children's energy goes into understanding the violence that surrounds them and figuring out how to keep themselves safe rather than into mastering other vital cognitive issues. This situation can place many later aspects of development at risk (Erikson, 1950).

**What you can do.** Children who see the world as a dangerous place need to learn how to feel safe. They need help learning what they can do to keep themselves and others safe. They need to be able to let their guard down and trust the adults who are caring for them. To accomplish this goal, children need predictable, secure, respectful classroom environments. Furthermore, they need consistent, caring and responsive adults who see helping children feel safe as a legitimate and important focus of the curriculum (Koplow, 2002; Levin, 2003a & 2003b).

### **Violence Undermines Feelings of Competence and Autonomy**

A central developmental task of children in the early years is to establish a sense of themselves as separate people who can effectively deal with and make a difference in what happens in the world that surrounds them. As children experience this, they feel powerful and strong; they are developing the confidence and skills they need to get their needs met and solve the problems they encounter without violence.

Exposure to violence can make children feel that being strong, separate and competent is dangerous and requires fighting and weapons. And for some children, few other models are provided about how to be separate and safe.

**What you can do.** Children exposed to violence need help learning how to function as autonomous and effective people—sharing responsibility for what happens in their immediate environment, feeling important and powerful through really making a difference, getting their needs met and voices heard—without fighting and violence. To do this we need to work to make classrooms places where children regularly contribute to what happens in meaningful and developmentally appropriate ways and where their individual voices are heard and respected.

### **Violence Undermines Relationships and Sense of Connection with Others**

Another task in the early years is to learn how to participate in relationships with others and to rely on and support others in mutually respectful ways—to be a part of a caring community. As they succeed, children develop a sense of belonging which can help them feel secure enough to try new things, experiment, explore, learn and grow as autonomous individuals.

Violence undermines children's ability to develop positive interpersonal skills or a sense of connection with others. The rugged individual who can protect him or herself is the model held up to be emulated. Needing others is associated with vulnerability and helplessness. And, violence is often seen as the method of choice for solving problems and conflicts among people.

**What you can do.** You can provide children with opportunities to belong to a community of caring and responsible individuals. In such a classroom, children contribute in meaningful ways to what happens. They have many chances to learn about how their actions affect others and what they can do to get their own needs met. They also learn skills for solving their problems and conflicts with others in mutually agreeable ways and without violence (Levin, 2003a; Wheeler, 2004).

### **Children Need to Build an Understanding of Violent Experiences to Which They are Exposed**

Children need to tell their stories and work through their experience in order to master it and actively construct meaning from it in their own unique ways. They often do this through their play, art, storytelling or writing (as they get older), or by talking to a caring adult. It is through this work that a sense of equilibrium is achieved and learning and development are fostered.

When children have experienced some sort of trauma or disturbing and violent event, it is especially important to their healthy development that they have ample opportunities and assistance to talk about and work it through

(Garbarino et al., 1998; Groves, 2002). So, the more violence children are exposed to, the greater will be their efforts to try to work it out.

**What you can do.** Trying to "ban" violent content from the classroom, which often seems like the easiest and safest approach, usually does not serve children's needs well. They need wide-ranging opportunities to talk about and work through the violence in their lives with caring adults and to develop rich and meaningful art, stories, and play. As children do this, you can gain an understanding of their needs and how they are interpreting the violence. This information can guide your efforts to provide children with the information and support they need and to counteract many of the negative lessons they may be learning.

Creating opportunities for children to work through an understanding of their experiences with violence can be quite stressful for adults. You never know what disturbing information children will bring up; you might even hear things about children's experience that you wish you did not know and cannot possibly make better. In some cases, it will be important to know outside resources to which you can turn for help (Levin, 2003b).

### **Violence Undermines Ability to Construct Meaning from Experience**

Children's ability to engage in the kinds of activities that could help them work through their violent experiences (for instance, play, art, and writing) can be seriously undermined by the violence in their lives (Terr, 1990). Their energy and resources are diverted into trying to cope with the violence and the lack of safety that it can bring. The increasing amounts of time they spend with media gives them less time to engage in activities that would help them work it out. Then when they do play, it can be taken over by the violence, while at the same time, controlled by the highly realistic media-linked toys they use. When this happens they tend to imitate the violence over and over, rather than use creative play to meet their needs and be ready to move on. Thus, as children's needs to work through violence increase, their ability to work it through is often seriously impaired (Levin & Carlsson-Paige, in preparation).

**What you can do.** Once children feel safe expressing themselves openly, adults can help them develop the skills and processes they need—for instance, creativity, imagination, problem solving, and communication—to work through violence in play, art, storytelling, drama and guided discussions. The materials you provide, how time is structured, the degree to which you value and respect what children do, as well as the ways you actively enter in and facilitate children's efforts all contribute to their ability to work things through effectively.



## **Violent Content Becomes a Central Organizer of Experience**

What children see, hear, and do in their environment becomes the content they use for building ideas about the world. The ideas they build are then used for interpreting new experience and building new ideas. When society provides children with extensive violent content, it is hard for them not to come to see violence as central to how the world works and how they will fit into it. In this way, violence can become a powerful part of the foundation onto which later ideas are built.

**What you can do.** As children work through the violence in their lives, you can also help them to get deeply involved in developmentally appropriate content that offers exciting and meaningful alternatives to violence. You can consciously build a curriculum with activities that offer such alternatives and grow out of children's deep interests and needs (See Edwards et al., 1993 and Jones & Nimmo, 1994). I have found that it is often those children most involved with violence who are the most excited about finding new and empowering ways to become involved with their world.

## **A Call to Action**

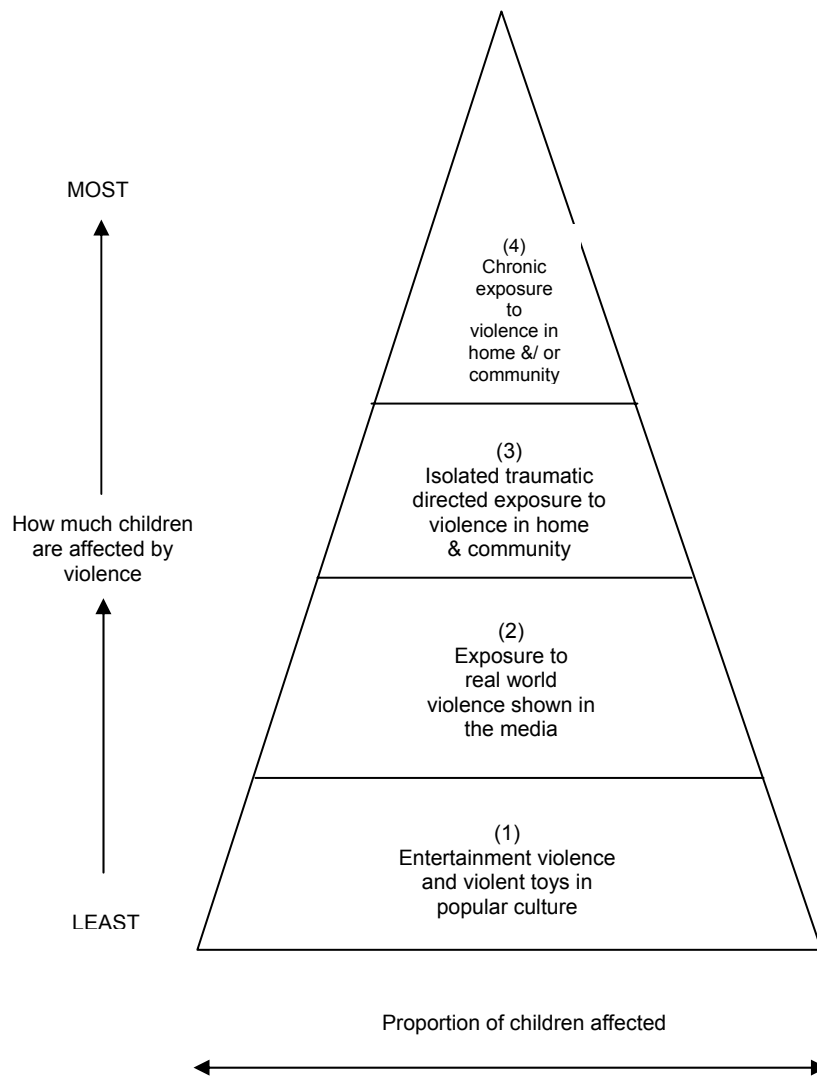
It is an enormous challenge we face. Early childhood educators alone cannot solve the problems created for children by the violence in their lives. Yet, there is a lot you can do. Working to understand how children are affected and what helps to counteract the negative effects is one meaningful way to begin. It will never be easy, but it can be empowering and rewarding for everyone involved. And our efforts can truly make a difference in the daily lives of children and in whom they become.

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Figure 1.  
THE CONTINUUM OF VIOLENCE  
IN CHILDREN'S LIVES<sup>5</sup>



<sup>5</sup> Reprinted with permission from: *Teaching Young Children in Violent Times: Building A Peaceable Classroom (2<sup>nd</sup> Ed.)* by Diane E. Levin (Cambridge, MA: Educators for Social Responsibility & Washington, DC: National Association for the Education of Young Children, 2003).

**Table 1.**  
**A Developmental Framework for Understanding**  
**How To Counteract The Negative Effects Of Violence\***

<b>How Children Are Affected by Violence</b>	<b>How To Counteract the Negative Effects</b>
<ul style="list-style-type: none"> <li>• Sense of <i>trust &amp; safety</i> is undermined as children see the world is dangerous &amp; adults can't keep them safe.</li> </ul>	<ul style="list-style-type: none"> <li>• Create a <i>secure, predictable environment</i> which teaches children how to keep themselves &amp; others <i>safe</i>.</li> </ul>
<ul style="list-style-type: none"> <li>• Sense of <i>self as a separate person</i> who can have a positive, meaningful <i>effect</i> on the world without violence is undermined.</li> </ul>	<ul style="list-style-type: none"> <li>• Help children take responsibility, feel powerful, positively affect their world, &amp; meet individual needs without fighting.</li> </ul>
<ul style="list-style-type: none"> <li>• Sense of <i>relationship and connectedness with others</i> is undermined—relying on others is a sign of vulnerability, violence is modeled as central in human interactions.</li> </ul>	<ul style="list-style-type: none"> <li>• Many opportunities to <i>participate in a caring community</i> where people help and rely on each other and work out their problems in mutually agreeable ways.</li> </ul>
<ul style="list-style-type: none"> <li>• Increased <i>need to construct an understanding of violent experiences</i> in discussions, creative play, art &amp; storytelling.</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Wide-ranging opportunities to develop meanings of violence</i> through art, stories, &amp; play (with adult help as needed).</li> </ul>
<ul style="list-style-type: none"> <li>• <i>Endangered ability to work through violence</i> as mechanisms for doing so are undermined.</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Actively facilitate play, art, language</i> so children can safely and competently work through violent experiences.</li> </ul>
<ul style="list-style-type: none"> <li>• Overemphasis on <i>violent content as the organizer</i> of thoughts, feelings and behavior</li> </ul>	<ul style="list-style-type: none"> <li>• Provide deeply <i>meaningful content which offers appealing alternatives</i> to violence as organizers of experience</li> </ul>

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<sup>2</sup>Adapted and reprinted with permission from: Teaching Young Children in Violent Times: Building A Peaceable Classroom (2<sup>nd</sup> Ed.) by Diane E. Levin (Cambridge, MA: Educators for Social Responsibility and Washington, DC: National Association for the Education of Young Children, 2003).

## **Nourishing The Brain: The Relationship Between Food and The Neurodevelopment of Young Children**

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Neuroscience has shown that the first three years of a child's life is when the most rapid development of the brain occurs (Bertrand, 2001). The brain directs all aspects of life through structured biological pathways. Outlined below are a number of facts pertaining to brain development and its relationship to a child's learning curve.

- Brain development begins three weeks after conception.
- At birth, a child has 100 billion brain cells (neurons) and trillions of connections (synapses).
- Early childhood experiences exert a dramatic impact and physically determine how the brain is wired.
- Growth continues and a single neuron can connect with as many as 15,000 other neurons.
- A three year old child has twice as many connections as an adult.
- The number of connections could easily go up or down by 25 percent or more, depending upon whether a child grows up in an enriched environment.
- Those synapses that aren't used wither away in a process called pruning.
- At about 10, the brain begins to dramatically prune extra connections and make order of the tangled circuitry of the brain.
- New synapses grow throughout life and adults continue to learn but they do not master new skills so quickly or rebound from setbacks so easily (Eastman, 2002).

Children's eating habits are learned in childhood and are influenced by family and food practices. Families and caregivers are responsible for the selection of foods young children consume. When considering food attitudes and preferences, it should be noted that a child's age also impacts upon his/her feeding likes and dislikes. For instance, food for infants often represents security and love, but for the toddler, food may reflect experimentation or a means to express frustration (Eastman, 2002).

This article is intended to give an overview of the relationship between nutrition and the neurodevelopment of young children. As well the author will outline implications for parents and early childhood educators as they endeavor to understand how nutrition influences brain functions. Optimal nutritional health is needed for the functions of the central nervous system, more specifically the brain (Doman, et al, 1997). As Doman (1997) states "The brain is energy-dependent. Although comprising only 2% of body weight, approximately, it consumes around 25% of resting metabolic energy and receives 15% of cardiac output. Neurons in the cerebral cortex are, by reason of their complexity and multiple inter-connections, even more energy dependent".

## **Nourishment and Neurodevelopment**

Early research pertaining to the relationship between nutritional deficits and brain function was guided by a 'main affect theory'. The Center on Hunger and Poverty (1998) describes the theory as follows: "---early exposure to biological risk factors such as undernutrition during critical periods of brain growth could result in actual neurological trauma and permanent developmental abnormalities". However, today many researchers emphasize that other factors along with malnutrition damages the brain; for example, "A cumulative effect of persistent exposure to undernutrition and poverty has been shown clearly" (Center on Hunger and Poverty, 1998). Outlined below are some of the current scientific links between nutrition and cognitive development.

- Undernutrition along with environmental factors associated with poverty can permanently retard physical growth, brain development, and cognitive functioning.
- The longer a child's nutritional, emotional and educational needs go unmet, the greater the likelihood of cognitive impairments.
- Poor children who attend school hungry perform significantly below non-hungry low income peers on standardized test scores.
- Improved nutrition and environmental conditions can modify the effects of early undernutrition.
- Once undernutrition occurs, its long-term effects may be reduced or eliminated by a combination of adequate food intake and environmental support (Center on Hunger and Poverty, 1998).

The first three years of a child's life is an incredibly important phase for his/her brain and IQ development. Why are these years so important? During the first three years of life, the most rapid brain development takes

place. “The brain growth spurt is the fastest and most critical stage of brain development” (MD Anti-aging Institute, 2004). The brain growth spurt commences near the middle of pregnancy and concludes between a child’s second and third year of life. Therefore, by the time a child enters his/her second birthday, the brain development has reached 80% of its full adult potential. Consequently, during this brain growth spurt, children should be fed nutrients that enhance neurodevelopment (MD Anti-aging Institute, 2004). Because of the rapid brain growth of the fetus from the tenth to the eighteenth week of pregnancy, it becomes critical that mothers eat nutritiously during this time. A subsequent brain growth just before and for about two years after conception further reinforces the importance of proper nutrition during the early years.

Brain cells require a great deal of energy to protect themselves from death and damage. Furthermore, brain cells have specific nutritional needs because they are composed primarily of fat. Consequently, the quality of fat in a child’s diet is a primary nutritional issue germane to neurodevelopment. When considering brain functions, it is important to realize that essential fatty acids are critical in brain growth. “The most frequently deficient fatty acid involved in brain and nerve function appears to be DHA (docosohexaenic acid). This is a fat high in salmon oil. A lack may contribute to lowered IQ” (Image Awareness, 2001).

Nutrients must follow a precarious pathway to one’s brain and subsequently overcome the following challenges:

- They must gain entry to your body; if you don’t eat them, they will not be available to your brain.
- Once in your stomach, they must survive an attack by acid that breaks some foods down.
- Further along the digestive tract, they must be absorbed through the cells lining the intestine and transported through blood vessel walls into the bloodstream.
- Traveling in the blood through the liver, nutrients need to avoid being metabolized (destroyed).
- Once in the bloodstream, nutrients must cross small blood vessels into brain tissue. This transport from the blood to neurons is restricted by the blood brain barrier (Chudler, 2004).

Upon entering the brain, nutrients influence brain function in a number of ways. For example, iron can affect a child’s mental development in such areas as memory and learning ability. Milk, meat, whole grains and green vegetables are examples of foods rich in iron. Glucose found in simple

carbohydrates such as sugar and flour fuels the brain into a short lived sugar high but it is subsequently followed by a fatigue-defined crash (Health Discovery, 2004). These sugar high foods should be replaced with foods such as fruit, vegetables, and whole grains which have an abundance of complex carbohydrates which consequently “---supply the brain with a steady glucose dose for a calming effect and brain power for problem-solving and memory” (Health Discovery 2004).

### **How does Nutrition Affect a Child’s Developing Brain?**

A child’s brain size depends on the quality of the mother’s nutritional intake during pregnancy. Hence, it is recommended that pregnant women eat an extra 300 calories a

day, with an extra 10-12 grams of protein being ingested. The significance of proper nutrition during pregnancy and its relationship to brain development can be ascertained from Silberg’s (2000) statements that “Upon birth, the brain has already begun to link billions of cells together-up to 15,000 connections per day. These synapses form the brain’s physical maps that allow learning to take place”.

After birth, the development of a child’s brain depends critically on the quality of a child’s nutrition. For brain growth, it is recommended that mothers breast-feed their children exclusively for the first six months provided that breast-fed infants receive iron supplement (CCCF, 2001; Zero to Three, 2004). “Iron deficiency has been clearly linked to cognitive deficits in young children. Iron is critical for maintaining an adequate number of oxygen-carrying red blood cells, which in turn are necessary to fuel brain growth” (Zero to Three, 2004). The strong correlation between breast milk and the optimal nerve and brain development in babies is primarily due to the abundant supply of fatty acids found in breast milk (CCCF, 2001). Science also says the following about breastfeeding:

- Breast milk is uniquely composed to meet a baby’s nutritional requirements.
- Breast milk cannot be chemically reproduced. Initial colostrums is unique to each mother and her baby.
- Nutrients in breast milk change to meet baby’s needs both with age of the baby and throughout the day.
- Babies who are breast fed have increased protection against acute and chronic illnesses (CCCF, 2000).

Many changes take place between the ages of one and two. Children may eat less because their growth tends to slow down. However, because of the



rapid pace of myelination during the early years, myelin is the fatty sheath on axons; young children need a high level of fat in their diets (Zero to Three, 2004). Until about two years of age, it is recommended that approximately 50 per cent of a child's total caloric intake should be in the form of fat (Zero to Three, 2004). Proper nutrition is essential during these critical brain growth periods because it is at this time long, thin fibers grow within the brain which creates the pathways that carry electrical impulses from cell to cell (Silberg, 2000). Furthermore, "The resulting network, which grows daily in the young brain, forms the neurological foundation upon which a child builds a lifetime of skills (Silberg, 2000).

When children begin feeding themselves, it is necessary that they receive adequate 'brain food'. Studies are finding that certain foods help children to concentrate as well as stay motivated. How can foods affect a child's brain functions? Outlined below are foods that affect the developing brain.

- Some foods contain nutrients that are used to manufacture certain brain chemicals that may enhance mental tasks such as memory and concentration. For example, protein foods enhance the brain's production of dopamine, a natural brain chemical that helps one to feel alert.
- Iron is needed to carry oxygen to the brain cells used to make neurotransmitters which is crucial to thinking. The best sources of iron are lean beef, whole grain cereals, whole grain breads, raisins, and legumes. For young children, it is not easy to obtain the recommended daily amount of iron. Consequently, to improve iron absorption, children should be given a good source of vitamin C at the same time.
- Certain types of foods are used by the brain for energy. Glucose in the bloodstream is the brain's only source of energy. Half of the energy required by a child should be from carbohydrates, with the main portion being complex carbohydrates and no more than ten per cent refined sugars. Examples of complex carbohydrates foods include grains, legumes, root vegetables, nuts, and fruits.
- Certain nutrients are needed for proper growth and development of the brain, for example omega-3 fat. Brain cells are constantly refreshing themselves with these fatty acids and need a constant supply from the diet. Omega-3 fatty acids are known to improve general brain function and memory. An example of foods rich in omega-3 fatty acids includes salmon, sardines, flax oil, and walnuts. Fish and fish oils are important for a healthy brain. Sixty per cent of the brain's solid matter is composed of essential fatty acids. Omega-3 fats found in cold water fish make up a large portion of the communicating membranes of the brain. DHA is a

particular omega-3 fatty acid found in fish that appears to boost brain development.

- Antioxidants are healthy chemicals that clean the brain from free radicals that cause cell deterioration. One example of a food with a high source of antioxidants is blueberries. Blueberries have been shown to reduce the aging related damage of the brain. Blueberries also seem to influence the way brain cells communicate with each other. Raisins, apples, grapes, cherries, prunes, and spinach are also excellent sources of antioxidants which can neutralize free radicals before they harm brain cells.
- The whole body runs on carbohydrates. Too much simple carbohydrates can be harmful to brain functioning by creating a sharp rise in blood sugar. Simple carbohydrates turn instantly to sugar in the body. Some scientists feel that eating white potatoes or white bread is like eating candy. Eating too much sugar can lead to insulin resistance which upsets the glucose level in the blood. However, complex carbohydrates do not cause a sharp rise in blood sugar.
- Some types of fat are not good for the brain, for example, polyunsaturated fats. Foods high in polyunsaturated fats include sunflower and corn oils. These oils are usually included in processed foods such as salad dressings, fried doughnuts and most margarine (Chaudhary, 2002).

Young children need to consume foods that contain precursors, starting material, for some neurotransmitters. If a child's food intake lacks particular precursors, the brain is unable to produce some neurotransmitters (Chudler, 2004). Several examples of neurotransmitters include: aspartic acid, used to make aspartate, found in peanuts, potatoes, eggs and grains; choline, used to make acetylcholine, found in eggs, liver, and soybeans; and tyrosine, used to make norepinephrine, found in milk, fish, and legumes (Chudler, 2004).

Antioxidants and free radicals were briefly discussed previously. This paragraph will further elaborate on the preceding two concepts. Free radicals are often defined as unstable chemicals created by metabolic processes and exposure to such external toxins as air pollution. "Even though they're part of the body's natural chemistry, free radicals can damage cells if they exist at higher levels than normal" (Vital Nutrition, 2001). Furthermore, "Because free radicals are particularly attracted to fat cells, the brain, with its relatively high fat content, is especially vulnerable to free radical damage" (Vital Nutrient, 2001). Studies have indicated that antioxidants assist in the prevention of free radicals prior to them attacking healthy cells. Thus in theory, "---a well-balanced diet should supply adequate amount of antioxidants" (Vital Nutrient, 2001).

The brain undergoes this rapid development in the early years of life; consequently, a child's neurodevelopment is vulnerable to the adverse affects of malnutrition and under-nutrition. "Malnutrition during these periods of rapid brain growth may have devastating effects on the nervous system and can affect not only neurons, but also 'glial cell' development and growth" (Chudler, 2004). The impact of malnutrition on the developing brain is evident in a report released by UNICEF and the Micronutrient Initiative (2004). The report summarized the findings of nutrition damage assessment studies in 80 countries. The UNICEF (2004) found that lack of basic vitamins and minerals in the diet is damaging the health of one-third of the world's people. Furthermore, the report reveals that the lack of key vitamins and minerals is responsible for impairing of hundreds of millions of growing minds as well as the lowering of national IQ's.

Outlined below are some of the more significant findings of the UNICEF study (2004).

- Iron deficiency impairs mental development in young children and lowering national IQ's. Iron deficiency in early life is related to neurodevelopment. Beard (2003) states "Studies in human infants suggest that it is an irreversible effect that may be related to changes in chemistry of neurotransmitters, organization and morphology of neuronal networks and neurobiology of myelination".
- Iodine deficiency in pregnancy is causing as many as 20 million babies a year to be born mentally impaired.
- Folate deficiency is causing approximately 200,000 severe birth defects every year.

Vitamins are vital to a child's normal brain function. Listed below are a number of vitamins, the advantage of that vitamin, and their nutritional sources.

- Vitamin B1 (Thiamine) - it is essential for a healthy brain and nerve cells. It is found in whole grain and enriched grain products like bread, rice, pasta, as well as pork.
- Vitamin B5 (Pantothenic acid) - it forms a coenzyme that helps in the transmission of nerve impulses. It can be found in meat, poultry, fish, milk, vegetables, and fruit.
- Vitamin B6 (Pyridoxine) - it helps convert typtophan into serotonin, a brain chemical. It can be found in eggs, meat, fish, poultry, and dairy products.

- Folic acid- it is essential for metabolism of long-chain fatty acids in the brain. It is found in bananas, orange juice, lemons, leafy vegetables, dried beans and peas (University of Iowa Health Science, 2003).

Vitamin C, found in broccoli, legumes, and potatoes and vitamin E, found in almonds, sunflower, and whole-grain flour are antioxidants.

Minerals such as magnesium, found in whole grain, nuts, and green vegetables; potassium, found in milk cheese, kiwi, oranges, prunes, and fish; and calcium, found in milk products and fish play a role in nerve function (University of Iowa Health Science, 2003).

Unlike malnutrition and its obvious effects on the brain development and functioning of children, undernutrition is more insidious and often arms children silently. When children's nutrient intake is chronically limited, it affects their social interactions, inquisitiveness, and cognitive functioning (Center on Hunger and Poverty, 1998). The negative impact of undernutrition begins prior to birth in the form of low birth weight babies. The Center of Hunger and Poverty (1998) states, "In the case of very low birth weight infants, permanent cognitive deficiencies associated with small head circumference may reflect diminished brain growth". Furthermore, the Center of Hunger and Poverty (1998) articulates, "Research shows that increasing independence and the development of social skill are central to a child's early development. When these activities are curtailed due to undernutrition, a child's overall cognitive development is threatened". Similar to malnourished children, one of the more significant effects of undernutrition is iron deficiency. Recent studies demonstrate that deficiency anemia impacts negatively upon a child's cognitive development (Center on Hunger and Poverty, 1998).

Millions of young children throughout the world begin the day without breakfast. Many studies have indicated that breakfast is important for enhancing a child's learning and mental performance. Chaudhary (2002) states, "Breakfast foods supply carbohydrates (glucose), which the brain cells use for energy. After a night of fasting, blood sugar levels are low and need to be replenished". In order to sufficiently maintain brain fuel glucose levels, children should be eating several small meals every day. Hence, the brain receives fuel in a more consistent manner.

### **How do We Ensure Feeding the Brain?**

To ensure that the young brain is sufficiently nourished, it is imperative to put in place nutritional patterns that enhance neurodevelopment. The key to knowing if a child's nutritional intake is adequate is to provide a variety of healthy foods each day. This undertaking can be accomplished by following

a recognized food guide. For example, in Canada, the Canada Food Guide for Healthy Eating is the basic education tool to help plan nutritional meals for children.

Canada's Food Guide to Healthy Eating is based on the following guidelines: enjoy a variety of foods; emphasize cereals, breads, and other grain products, vegetables and fruit; choose lower-fat dairy products, leaner meats and foods prepared with little or no fat; achieve and maintain a healthy body weight by enjoying regular physical activity and healthy eating; and limit salt, alcohol, and caffeine. Subsequently, the Canada Food Guide outlines the kinds and amount of foods children need each day. The Food Guide is displayed under four food groups: grain products, vegetables and fruit, milk products, and meat and alternatives.

In the context of developing countries where malnourishment of children is often epidemic in scope, following a system such as the Canada Food Guide to Healthy Eating is an unattainable expectation. However, there are solutions for nations as they strive to feed their population. The report from UNICEF and the Micronutrient Fund (2004) puts forth several solutions to alleviate the intellectual development impairment caused by a vitamin and mineral deficit diet.

- Food fortification- adding essential vitamins and minerals to foods that are regularly consumed by most people (such as flour, salt, sugar, cooking oil and margarine).
- Supplementation- reaching out to vulnerable groups (particularly children) with vitamin and mineral supplements in the form of tablets, capsules, and syrups.
- Education- informing communities about the kinds of foods that can increase the intake and absorption of needed vitamins and minerals.
- Disease control-controlling diseases like malaria, measles, diarrhea, and parasitic infections can also help the body to absorb and retain essential vitamins and minerals.

Compounding the effect of nutrient inadequacies is the global impact of obesity. The International Obesity Task Force (2004) states that one in every ten school children in the world is overweight. The report submitted to the World Health Organization included the following findings: the number of overweight people is greater than the number of hungry people, a third of all death globally are from conditions linked to weight, and the prevalence of overweight people is much higher in rich countries, however, the rates are rising in developing countries.

## Summary

Brain nutrition has received increased interest during the past several decades. Scientists are focusing on the effects of the foods we put into our bodies and how nutritional patterns impact the functioning of the brain. Consequently, there is much evidence available pertaining to inadequate nutrition and its relationship to the cognitive development of children. Studies indicate that certain nutrients are essential to neurodevelopment and brain functioning. For example, much research has been conducted on the role of polyunsaturated fatty acids and its effect on brain development.

Nutrients influence the neurodevelopment of children in many ways. The UNICEF report (2004) revealed the relationship between vitamin deficiency and brain dysfunction; for example, the B-vitamins play a critical role in brain growth. Other nutrients that influence brain development include docosahexaenoic acid, arachidonic acid, protein, folic acid, zinc, iron, calcium, as well as others.

In conclusion, it must be noted that brain development is most sensitive to nutrient deficit during the early years of life. "Inadequate brain growth explains why children who were malnourished as fetuses and infants suffer often lasting behavioral and cognitive deficits, including slower language and fine motor development, lower IQ, and poorer school performances" (Zero to Three, 2003).

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## **Young Children Affected or Infected by HIV/AIDS: A Comparison of Living Situations for Children Aged 0-8 Years in Windhoek, Namibia<sup>6</sup>**

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### **Introduction**

It is now well known that over 13 million children have been orphaned and/or have been subject to trauma, disruption of lifestyle, poverty, stigmatization, abuse and other forms of victimization by the HIV/AIDS pandemic.

This article is adapted from a study which examined what it means to be young, orphaned, infected or affected in other ways by HIV/AIDS. Voices of the children and their caregivers were used to describe experiences within three types of settings: community safe houses, non community based 'safe houses' and residential settings.

It was shown that each setting had strengths and constraints. Children in 'safe houses' were better off in terms of access to health services, food and clothing but they were more likely to exhibit behaviors associated with lack of bonding (in community houses) or to suffer from exclusion and discrimination (in non community based settings). Children in residential settings had a greater chance of having their psychosocial needs met and of being integrated into the community. These children however were more likely to be suffering from health and nutrition deficiencies. In all situations, children exhibited hope by describing a vision of a long term future for themselves.

The authors conclude that programs which facilitate permanent 'family' situations have the greatest likelihood for the long-term health and wellbeing of young children infected and affected by HIV/AIDS (the target population) and suggest programs and resources which could support these situations.

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<sup>6</sup> This article reports on some of the findings from the research project entitled An Assessment of Services Provided to Children Affected and Infected by HIV/AIDS in Windhoek, Namibia. The authors wish to acknowledge the generous support of the World Forum on Early Childhood Development, International Networking Fund; the University of Namibia and the University of Western Sydney. For more information on the project, contact Dr Jacqueline Hayden [j.hayden@uws.edu.au](mailto:j.hayden@uws.edu.au)



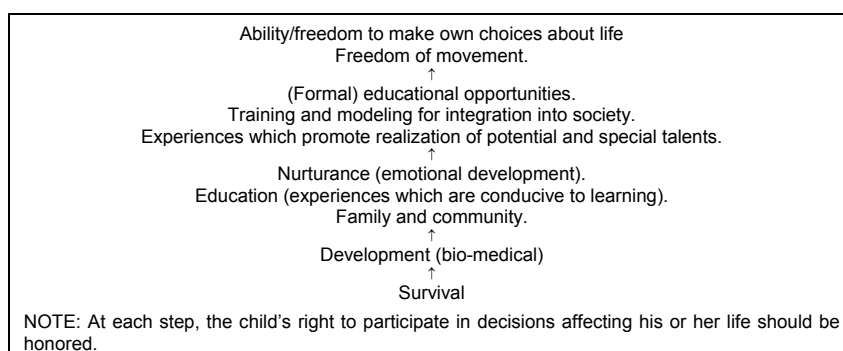
## Review of the Literature

### *Typography of human needs and rights*

In 1970, Maslow articulated the hierarchy of human needs which culminates in the self-actualized personality (Maslow, 1970). The *UN Charter of Human Rights* (United Nations General Assembly, 1948) and the *UN Convention on the Rights of the Child* (United Nations General Assembly, 1989) have identified basic rights which reflect these needs. Human beings need and have a right to conditions that ensure survival – nourishment, shelter, protection from violence and harm. Beyond this they need conditions that allow for growth and development – adequate supplies of food and water, disease free environments and access to health services. Children need nurturance and protection from adults. All human beings need positive, reciprocal affiliation with others in order to develop and sustain emotional health and well being. Exposure to conditions conducive to cognitive development and stimulation (learning) and membership within a family and community grouping are basic needs at this level. As children mature they have a right to free and compulsory formal education. They need to be exposed to positive role models and to engage in activities which provide skills for living. Human beings need to be able to test and develop their unique talents and individual characteristics. Finally human beings need and have a right to seek conditions that allows them to fulfill their potential and follow their own interests. To do this they need to have freedom of expression, choice and movement. At all stages, the individual's right to participate in decisions affecting her or her life need to be honored.

This typography of human needs and rights is illustrated in Box 1 (adapted from Maslow, 1970; United Nations General Assembly, 1948, 1989).

Box 1: Typography of human rights and needs.



### *HIV/AIDS and young children*

The statistics on HIV/AIDS and its impact on children have been documented for many years. Of an estimated 40 million people living with HIV today, more than four million are children under the age of 15.

More than 13 million children under the age of 15 have lost one or both parents to AIDS, most of them in sub-Saharan Africa.

The *State of the World's Children* (United Nations International Children's Fund, 2002) continues to name HIV/AIDS as the most critical issue facing children today. The figures of affected and infected children continue to rise. By 2010, it is estimated that more than 25 million children will be orphaned as a result of the pandemic. With infection rates rising, HIV/AIDS will continue to cause suffering among children for at least twenty more years.

Infected and affected children are likely to suffer psychosocial distress and are at risk of exclusion, abuse, discrimination, and stigma. Adequate nutrition, basic health care, housing and clothing, the risk of being denied an education, loss of inheritance, abuse and/or the effects of running a child-headed household are some of the impacts of the pandemic on young children (USAID, USAIDS, & UNICEF, 2002).

Ironically, some services which target these children have exacerbated their exposure to abuse, neglect and exploitation (The Children's Institute, 2001). Affected children who disclose their situation in order to seek support (such as with school fees) can become subject to abuse and discrimination. Children who move into relative or other 'foster care' situations can suffer from stigmatization and discrimination in food allocation, education and workload in comparison with the foster parents' own children. Morbidity, stunting, nutritional wasting, and failure to thrive have been shown to be prevalent in this population of children infected and affected by HIV/AIDS (Lusk & O'Gara, 2002; The Children's Institute, 2001; Summary of the National Children's Forum on HIV/AIDS, 2001).

That children in the earliest years of life are especially vulnerable to the effects of the HIV/AIDS pandemic has not been highlighted in the majority of studies. This seems surprising in light of the current knowledge base about the long-term effects on the early years of life.

### *The early years of life*

Brain imaging techniques have confirmed that the earliest years of life are a critical stage in the determination of biological, neurological, psychological and emotional/social health and wellbeing for individuals and that key environmental factors and nurturing experiences during early years are

significantly correlated to psychological and biomedical outcomes in later life. Early experiences including bonding and attachment, the development of security and trust through consistent care taking, freedom to interact with surroundings, predicability, success experiences, responsiveness, exposure to opportunities for cognitive and emotional development and other nurturing interactions are now known to be significantly related to long term developmental outcomes (Love, Schochet, & Meckstroth, 1996; Marmot & Wilkinson, 1999; Pence, 1999; Shonkoff & Phillips, 2000; Wadsworth, 1999; Zigler & Gilman, 1998).

Similarly studies have highlighted the long-term outcomes associated with connectedness of families and individuals. Young children whose caregivers are accepted as a members of a close knit group or community have been shown to be less likely to become socially alienated and/or depressed in later life (Leeder, 1998; Parcel & Menaghan, 1994; Wong, 1998).Conversely, social isolation has been shown to be related to the development of poor mental health and increased rates of morbidity and mortality (Marmot & Wilkinson, 1999; Maton, 2000; Nicholson, Tually, & Vimpani, 2000).

To our knowledge, conclusions about the importance and long-term effects of the early years have not been correlated to research concerning implications of the HIV/AIDS pandemic on young children<sup>7</sup>.

In an attempt to address this gap in the literature, the authors undertook a case study to investigate what it is like to be young, orphaned, infected or affected in other ways by HIV/AIDS.

This article describes experiences of the target population from the perspective of supports and constraints that are found in three types of living situations.

## **Methodology**

An ecological framework was used to document the supports, constraints and experiences of OVCs (orphans and vulnerable children) aged 0- 8 years old, their caregivers and the affiliated organizations. The urban area of Khomas region (a designated high prevalence area for HIV/AIDS) was targeted for the study. Interviews were held with directors of organizations, heads of centers, caregivers and children. Most children were orphans or had mothers who were known to be HIV+. About half of the children in the study were known to be HIV+.

Thirty-five interviews were held in 9 settings.

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<sup>7</sup> A recent publication is a notable exception to this gap in the literature. See Consultative Group on Early Childhood Development (2002) *Coordinators Notebook on HIV/AIDS and Early Childhood Vol. 26*.

Settings participating in this study were categorized as

- Residential houses (rh) – these are the homes of caregivers where one or a small number of the target population reside. The children are usually related or well known to the caregiver.
- Community safe houses (sh) – these house are situated within communities and cater to groups of children who are permanently or temporarily without parental care.
- Non community safe houses (sh) – safe houses which are situated within a compound.

## Findings

The most outstanding finding from this study was that for many children, situations of care were meeting most if not all of their needs and rights. Despite many obstacles, the majority of caregivers in this study expressed love and were obviously working hard to make conditions as positive as possible for the children. Nonetheless resources, services, funding and other supports are needed to ensure sustainable and positive experiences for children infected and affected by HIV/AIDS.

A summary of positive findings is provided below. In the subsequent section, the extent to which the needs and rights of children in the study were being met under different circumstances is presented.

## Positive experiences

Despite reporting on hardship and deprivations, Residential caregivers and those in both types of safe houses were united in stating that the current situation was the best possible under the circumstances. Comments included

*This is a very stable situation.*

*There is no better place for the children.*

Caregivers in safe houses

*We cannot replace family but we give them love and care.*

*At least they are healthy under this difficult situation. And they have a room.*

*The children come from difficult circumstances. Now they have their own bed. They sit at the table with a Mummy. They have shelter.*

*The children they have a place to sleep and eat, they have a home.*

*Some of these children have nothing, nobody... They are better off here.*

*I think they get everything...I take them to the swimming pool. We buy toys.*

Many children were able to identify positive aspects of their situation

## Residential houses

*(I like) playing ...when (grandma) tells me stories. watching TV at neighbors. We eat nice food.*

Child in rh

*(I like) my (siblings). (He has four siblings).*

*My mom (sic) takes care of me. She loosens my hair and washes the clothes. She cleans the home. She gives me food. We eat bread. (There are) birthdays and Christmas. We watch TV and video. We have porridge and chocolates.*

Child in rh

## Safe houses

*I like it here. I get macaroni.*

Child in sh

*The food is good. Sometimes we have ice cream and apples. We also play around with toys and games.*

Child in sh

*We play with our friends. Aunty T (the caregiver) gives us nice things like lollipops. We play around the house.*

Child in sh

*I like playing with the children. I like cleaning our rooms*

Child in sh

*I like playing with friends...The bread is nice.*

Child in sh

Observations by researchers included positive aspects of children's experiences.

*W (age 5) is a very outspoken little boy. He can express himself well and he is very talkative He is friendly and smiles a lot. . He has a high level of communication and he seems very healthy although he looks very small for his age, and he did not look too clean...*

RA re child in rh

*J (age 4) is a very friendly little girl. She is not shy at all. Her level of communication is good and she was able to respond well. She looked healthy and clean. She smiles a lot and could express herself well.*

RA re child in rh

*B. (age 9) appeared collected and happy. He was very open-minded and confident. He seems to have accepted his situation quite well. He also seemed to understand that his parents died and this Home was the only other place he could go. He spoke in English.*

RA re child in rh

*The children were clean and appropriately fed. The older children coming from school seemed happy.*

RA re children in sh

*D (age 5) was obviously well looked after, although for his age his speech was poor.*

RA re child in sh

Children who attended a day care centre and remained in residential homes had many advantages over other children. They were assured good nourishment and assistance with medical needs. Their residential caregivers were given respite during 'school' hours. They interacted with other children who attended the centre and were not stigmatized by their situation. The day care centre also provided stimulating group experiences appropriate to the age of the children. This would assist with integration and achievement when the children entered the public school system.

Children in residential homes who were school age and accessing the programs of the large organization (lunch and after school tutoring) were similarly advantaged. These programs alleviated stress for residential caregivers regarding food for the children. These children also received uniforms, other clothes and goods such as blankets from the organization.

*I am assisted by the support from (large organization) - the meals they are offering during weekdays to children, the food, blankets and clothes that they give.*

Caregiver in rh

## **Meeting needs and rights of children**

### *Survival*

The majority of children in safe houses appeared to be having consistent and appropriate access to food and medicines. Some caregivers and children in residential settings reported to be lacking in basic needs such as food, clothes and electricity.

*Sometimes we spend a day without eating till my daughter comes home from work and gives us something to eat.*

Caregiver in rh

*Their clothes are torn and they are getting cold during winter and they are also barefoot.*

Caregiver in rh

*Sometimes we don't have electricity or bread to take to school.*

Child in rh, age 8

## *Health and wellbeing*

Residential caregivers tended to be in their senior years and reported illness, exhaustion and constant worry over finances and/or over how the children would fare in the future. Many children in residential settings presented as having health and nutrition needs.

*D. was not able to respond well to the interview. She's very withdrawn and shy. One can really see that she is living in a poverty stricken house. Her clothing was not well, especially regarding the weather conditions on this day. She was too underdressed. She also looked underfed. For a child of seven years, she was very small. She looks more like a four year old.*

Observation by RA re child in rh

*It really can't provide decent clothing and good food for (child). Sometimes we even spent a day without eating till my daughter comes home from work and gives us something to eat.*

Caregiver in rh

Children in residential settings also lacked space, furniture, privacy, toys and space to play.

In answer to the question, 'what are the current needs of the children in your care?' Residential caregivers identified the following:

### Children need

*..funds for paying the school fees, food, clothes, hospital if they are sick as well as outstanding balance for the house and water and electricity.*

*..clothing and shoes. financial support, better living and accommodation*

*...clothes: (large organization) is only sometimes providing clothes otherwise they are wearing torn clothes.*

*...school fees and books ...and we don't have a TV at home.*

*... food. the food (here) is not enough and they are eating only one type of food.*

*..clothes.*

*..space. They are sharing the sleeping room with their uncles, aunts and parents and it's difficult to study under this situation.*

On the other hand, there was evidence that the children were well integrated within their communities, that they had friends and that they were not suffering from discrimination because of their orphan or other status. The children who were attending a community day care/preschool programme were accessing medicines, nutritious meals and age appropriate cognitive and social experiences, including school readiness activities.

### **Safe houses**

Children in the safe houses did not appear to be needy in terms of food, clothes or shelter. Many children in the study presented as ill<sup>8</sup>. Some children may have been experiencing trauma or other disorders associated with recent change in their situations

*They always get shocked when they are removed from their parent however bad the home was...It feels like death.*

Caregiver in sh

To our knowledge no child in this study (aged 0-8 years) had been psychologically assessed nor were they accessing formal counseling of any sort.

### **Community safe houses**

Children appeared to be well dressed, clean and to have adequate food supplies. Medicine was given where needed.

There was some concern about the ability to meet psychosocial needs for young children in large groups, especially in settings with many school age children whose needs may be seen to be more prevalent.

Individual attention for babies, two way interactions between children and adults or older children, cooperative group play, exposure to stimulating and challenging experiences through a variety of materials and activities, opportunities for large muscle development, opportunities for quiet, reflective experiences were not observed during visits to houses. Experiences associated with school readiness such as talking, looking at written symbols, singing, counting and similar activities were not witnessed during the study period.

### **Non community safe houses**

Young children in the non-community safe houses seemed lacking in age appropriate toys and activities, but they did have access to space for running and playing games. Caregivers were long term and peer groups were stable. Children in these settings did not tend to interact with children outside of the compound.

In answer to the question, *what are the current needs of the children in your care?* Caregivers in safe houses identified the following:

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<sup>8</sup> This was deemed to be because of their HIV+ status or because of initial reactions to a new programme of antiretroviral.



## Children need

- ...A family must be involved and they need a social life.*
- ...support to build confidence to themselves and acceptance.*
- .. a better environment for studying.*
- ... a pre-school teacher.*
- .. .definitely, a psychologist.*

Caregivers in sh

## Sense of self

### Residential houses

Children in residential houses were more likely to know where they came from; to have a sense of themselves and their own 'stories'.

### Safe houses

Many children in both community and non-community safe houses lacked a sense of their place and history. Many children (and caregivers) did not know about their background

*K was brought by the police. His parents are in prison. He is from Okahandja. The police never came back to inform him about anything concerning his family.*

Caregiver in sh re child age 6

*J came when he was only 1 year old. He lost his mom during childbirth. He was brought by the social workers and we've heard nothing about his relatives since.*

Caregiver in sh re child age 4

*F came from hospital. He was 5 months. He was born in Katima. His mother was positive. He came as Baby F; no mother's name, nothing. No details of family.*

Caregiver in sh re child aged 2.5

Narratives by children often revealed a sense of confusion and/or rejection.

*They put my father in a big hole and now I live here*

Child in sh

*Do you know who brought you here? No*

Child in sh, age 6

*He changed houses in the compound a short while ago. It seems as if he does not remember anything before that.*

RA about child age 5.

*I believe he is not well informed about himself. He does not know his own age.*

RA re child in sh

Some children believed that something wrong with them had resulted in their current predicament.

*My mother is in Owamaboland. She doesn't want me to live there (Why not?) I don't know.*

Child in sh

*My mother does not want me anymore.*

Child in sh

*Why are you here? I am sick.*

Child in sh

Information about and access to resources for stimulating cognitive, emotional and psychosocial development in young children was deemed to be a need for all children and all caregivers in this study. Access to counseling and other therapies to overcome disruption and trauma in the children's lives could have significant effects on their current and future health and wellbeing.

## *Education*

### **Residential houses**

*(Sometimes) children are sent back from school because of outstanding school fees.*

Caregiver in rh

Problems with accessing school fees and school uniforms were identified by several residential caregivers. A number of others were accessing school uniforms and vouchers for school fees from a large organization. This was mentioned as being invaluable to those who were benefiting from the programme.

At least two children in residential homes were beyond school age and had never attended any educational institution. It was reported that one four-year-old child had been barred by a local kindergarten because of his HIV+ status.

Space and assistance for studying (attending to homework and other educational activities) was deemed to be a need

### **Safe houses**

*School age children in safe houses had access to uniforms and school fees. However there tended to be little or no designated space and time for homework and other school related activities*

## **Non-community based safe houses**

*The children make progress. The schools also give reports that the children are improving.*

Caregiver in ncsb

Children living on the compound had access to all commodities needed to attend school. Space and designated time for 'homework' was available.

### *Freedom of expression, choice and movement*

For young children these factors are associated with 'normalcy' and can be assessed by examining the visions that they have for their futures (reflecting a perceived ability to achieve these visions).

## *Normalcy*

### **Residential houses**

Children in residential houses appeared to have their psychosocial needs met to a greater extent than other children: love, attachment, consistency, 'normalcy', a sense of their own history and family ties and integration within their communities were most apparent in these situations.

### **Safe houses**

Caregivers in safe houses often expressed feelings of love for the children. However conditions such as overwork, high ratios of children to caregiver, caregiver illness and stigma attached to living in a safe house were seen to result in inconsistencies in care giving which can result in stress and distress in children.

## **Non community based safe houses**

In the non-community based safe house, consistency of care giving and of peer group was high. The children, however, were relatively isolated within their compound, did not interact with non OVCs (except at school) and seemed constrained in opportunities to be part of a 'normal' community life. The fact that some children had remained in the safe house into adulthood reflects their sense of non-inclusion into society.

*They don't want to be told that they are in an orphanage (sic)...Even if an orphanage is trying to offer the basic needs to cover all the needs. The children at the orphanage are missing out on real family life. When the children complete matrix they feel insecure.. they do not know what the future looks like....*

Caregiver in non-community based sh

## Visions of future

While it might be expected that images of adulthood have been tainted by experiences with sickness and death for children in this study, for the most part children answered the question 'What do you want to be?' in age appropriate ways. Responses seemed related to life experience and included doctors who could cure people, police workers who would 'kill' or arrest bad people, and on several occasions, 'shovel-ers' or others who put people in the ground. A church related future was envisioned by some children. In all cases, responses did not reflect despair or a sense of impending death. Responses from children in the three settings did not differ in any noticeable way:

'What do you want to be?

*(I want to be) a doctor. To operate people.*

*I want to become a doctor so that I can heal sick people so they won't die and.. they can return home to their families.*

*I want to be a Christian, to pray everyday and to go to church.*

*I want to become a soldier...because a soldier took Jesus and put him on the cross*

*I want to become a policeman and shoot the children (sic) and drive away.*

*I want to work with shovels and cleaning the house when people die.*

*I will clean the yard, shoveling.*

*I want to work and earn a lot of money to be rich and buy a lot of things and many things to eat.... buy a lot of furniture and a big house.*

*I want to buy clothes.*

*I want to work for company and buy myself a big house and a lot of FOOD.*

*I want to buy a house and stay with my children.*

*I want a BMW.. a big one!*

Children

**BOX 2: Summary of how needs are met for children affected and infected by HIV/AIDS in three types of living situation**

<b>Typography of needs and rights</b>	<b>Extent to which needs and rights are being met in residential houses</b>	<b>Extent to which needs and rights are being met in community safe houses</b>	<b>Extent to which needs and rights are being met in non community based safe houses</b>
Survival	Precarious for some	Needs are being met	Needs are being met
Health	Lack of nourishment and other basics noted in many situations*.	Access to food, clothes and health services. In some, inadequate sleeping accommodation. Little or no privacy or personal space.	Access to food, clothes and health services. High standard accommodation. Lots of space and room for privacy
Wellbeing  Psychosocial needs of young children  Needs associated with trauma and post trauma	Stability, bonding and love apparent in most situations  Access to 'friends'.  Integration within the community  Consistency in caregiving, evidence of bonding, love, but lacking in stimulation for development and cognition*  No counseling: stability and consistency of care may be addressing some of the needs	Children in one home lacked personal space and experienced bullying by older children  Mostly love and caring but lacking in consistency and in stimulation for development and cognition.  No counseling: in some cases, turnover and living conditions were not conducive to self-healing.	Stable and long term relationships.  Not integrated with community and/or children who are not OVCs  Consistent, long-term caregiving with stable and loving caregivers- lacking in stimulation for development and cognition.  No counseling: Stability of situation may be addressing some of these needs.
Education	Deficiencies in access to uniforms, school fees, space for homework. Some children are not in school*	All children accessing school  Little or no space for study/homework Stimulating experiences for very young and preschool age children need attention	All children accessing schooling. Designated time and space for homework. Children tend to do well
Freedom of choice, expression, movement	Normalcy experienced  Children have vision of a 'better' future	Some normalcy and interacting with community.  Children have vision of a 'better' future	Children branded as 'orphans'. Children have vision of a 'better' future  but caregivers reported concerns that they may have 'nowhere' to go as adults.

\*Children in residential settings who had access to day programs such as school lunch programme and day care programme which serve meals were not experiencing these deficiencies.

## Stigma and discrimination

Despite existing laws and regulations, children and caregivers in all situations in this were subject to stigma and discrimination in several ways.

Caregivers reported that relatives had deserted/neglected children who were known or suspected to be HIV+. Some children were 'blamed' for a parental death. In at least one case, a child was barred from kindergarten because his HIV+ status was known. Children in the study reported feelings of guilt and 'badness' because of their status.

*Everybody was blaming my baby for my sickness. They did not want to touch him because he was positive. They really don't like him and I was thinking of giving him up for adoption.*

Caregiver in rh  
Caregiver in sh

*I cannot play with other children because my blood is bad.*

Child who is HIV+

*The other boys on the street won't play with S. (because of his HIV+ status)...He goes out anyway and starts kicking the ball...He has taught me so much about courage.*

Caregiver in sh

A second form of stigma was reported by caregivers in a non-community based setting. They stated that children did not like to be branded as 'orphans'.

*They don't want to be told that they are in an orphanage...*

*When the children complete matrix they feel insecure. Because they do not know what the future looks like or where they should go.*

Caregiver in sh

## Discussion

### *Children's needs and rights*

This study revealed positive experiences for children in three types of settings. However needs associated with sustaining health, with access to social and family connections and with cognitive development and school readiness were unmet for many children in the study. Hunger and/or lack of nourishing food were reported by several (residential) caregivers.

Experiences associated with healthy psychosocial development were not witnessed for the many of the (youngest) of children in this study.

### **Residential houses**

More children from residential settings were reported to be at risk of poor health, poor nourishment or lack of access to school than was reported for other settings.

Many residential caregivers reported feeling exhausted and/or overwhelmed by their role. Nonetheless, children living in residential settings with loving relatives were deemed to have the greatest potential for having rights and needs met.

Some factors were shown to qualify the positive attributes of this situation. Freedom from financial worries and access to programs (such as day programs for preschool aged children, lunch programs and other school support programs for older children) substantially contributed to the health and well being of children and caregivers in this situation.

Most caregivers were in need of support on several levels. Training and support groups could enhance the positive characteristics of this situation. Nearly all caregivers identified a desire to engage in income generation as a way to alleviate financial stresses. Seed grants and consultation on this issue could make a substantive difference to the situation for the children and caregiver.

### **Safe houses**

Children in safe houses generally had their survival needs met, including access to food and shelter and protection from harm. However children in safe houses could be constrained in their psychosocial development and other areas of wellbeing. A number of factors were seen to contribute to, or constrain, the quality of life in the safe houses. The need for standards of care including space and adult ratios, criteria for recruitment and selection of caregivers and appropriate working conditions were seen to be critical in ensuring that safe houses meet the needs of young children. Infrastructure to supply back up and emergency care and to ensure accountability and monitoring was similarly shown to be a significant gap in current service delivery.

The majority of caregivers in safe houses in this study reported satisfaction with their roles. Despite illness and poverty in some cases, caregivers in supportive situations are more likely to provide loving and sustainable care for the children in safe houses than those who are stressed and unsupported in their positions. In one safe house caregivers reported difficult working and living conditions, including too many children for adequate supervision and lack of privacy for caregivers. Policies, guideline and standards and position descriptions for caregivers in safe houses could alleviate many issues.

### **Non-community based safe houses**

Caregivers in non-community safe houses reported high standards of living, good working conditions and collegiality with fellow caregivers. Turnover in these situations was extremely low. Some caregivers had worked in their positions for over 20 years. Children were living according to high standards of care. However children were not seen to be part of a community and could have feelings of exclusion and alienation exacerbated by being branded as 'orphans'. Integration into the community wherever possible was seen to be a more sustainable and healthy environment for children.

#### *Training*

Caregivers of OVCs especially those infected and affected by HIV/AIDS need training in meeting psychosocial needs of young children and they need access to support personnel, such as specialists and/or consultants deal with children experiencing trauma or post traumatic effects.

#### *Stigma and discrimination*

There is a need for public education, awareness raising campaigns to reduce discrimination and for supports to facilitate children in coping with stigma and discrimination when it does occur.

### **Conclusion**

The study has identified positive and negative attributes associated with three types of living situations for OVCs. It was deemed that children in residential settings had most potential for stabilizing, normalizing and providing love and nurturance to young OVCs. Residential settings however, were often impoverished, thus constraining the positive aspects of this situation.

Training, income generation projects and other supports could alleviate a great deal of stress and distress for children and their caregivers in residential homes. Targeting resources in these areas could reduce the length of stay for children in safe houses and will have significant benefits for children in the target population. A second support programme for residential caregivers involves the development of day programs for children. Daytime preschool programs which provide meals, medicine and stimulating experiences for young children, and school related programs which provide lunch, tutoring and assistance with school uniforms and fees provide the means by which many children can remain in residential settings where they are most likely to access loving care and to become fully integrated into the community.



It is anticipated that the findings from this and subsequent studies will be used to raise awareness of the issues, to make recommendations for targeted assistance to the population and to lobby funders and policy makers for further support for research, policy development and appropriate programme support.

Readers are invited to contact the authors for further information about this study<sup>1</sup>.

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## Experiential Learning

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*What if hot had to be cold? What if young had to be old? What if shy had to be bold?*

**What if...**doctor's had to be patients? What if a fledgling doc had to get wheeled to the x-ray lab – then wait; sitting in the hall wearing an embarrassing gown with hairy or unshaven legs, as the case may be, peaking out from the too-short hem; feeling his or her exposed skin sticking to the plastic wheelchair seat?

**What if...**all legislators, before voting on funding cuts for public transportation or child care subsidies, had to commute by bus with a squirming toddler: drop her off at child care; rush to make the next bus connection to get to work on time; then reversing the process rushing to arrive before late pick-up fees kicked-in; to retrieve the now tired and hungry, as well as squirming child?

**What if ...** a parent of an ADD child had to spend a day in her child's body: in and out of the time-out chair or principal's office; getting caught teasing the gerbil instead of doing long- division; carrying home the dreaded note that has to be signed before returning the next day?

It all boils down to the same thing – *walking a mile in another person's shoes*. That is the essence of experiential learning. Experiential learning opens doors – and eyes.

Experiential education can deliver your message; engage your audience and - keep them awake. Experiential education creates experiences. What is it, why does it work and how to do it?

### The Learning Part

The brain uses three main processes: sensory input; organization and interpretation of input; output through motion. Information comes in through the senses; it gets sorted, integrated and interpreted; and movement results.

Experiential education makes this learning process 'user friendly'. Computers provide 'pull down menus', 'point and click' features or 'prompts' to make learning to use a computer easy while providing sensory input through the activity itself.

Parent educators don't have children with a 'pull down menus' on their foreheads to demonstrate the morning's tantrum over having to leave the park. There is no 'point and click' magic to bring little brother pinching his

older sister during church to the screen. A portable 'prompt' that will flash on the bathroom mirror with hints about how to handle a five-year-old clamping his mouth closed instead of brushing his teeth has yet to be developed. Therefore in parenting classes we improvise. When parents take part in activities that provide experiences on which to base new skills the learning becomes 'experiential'.

### **Sensory Input**

Toddlers learn what a ball is . . .

*By trying to bite it, finding that it rolls when dropped, feeling its shape while clutching it to their chests.*

*They learn size by how far their arms must stretch to encompass its smooth red surface; weight by how far down they must bend while holding it; their own strength by how hard they must push to move it.*

An adult learns how to drive by . . .

*Imprinting the shape of the brake pedal and the force needed to stop the car on the soles of her feet; discovering where elbows must hang while clutching the steering wheel; making sense of images seen through the rectangular shape of a car's mirror.*

Apply these ideas to Wednesday's upcoming class on bedtime routines. What does a routine feel like, look like, sound like?

### **Try this**

*Divide into twos or threes, each person pretending to be a parent or child in an imaginary family. Each 'family' develops a bedtime plan.*

Drawing a picture of a toothbrush onto a chart; listening to pleas for two stories at bedtime; or having to negotiate a bedtime snack from ice cream to warm milk, makes the process real.

Experiential learning simulates real life, giving adults sensory input and practice time for their own skill development.

### **Interpretation and Organization**

Remember back to when you were three or four years old? What comes to mind?

Was it the ride on Grandpa's shoulders at the grocery store when your legs got tired? Was it lining up the Easter cookies in rows of pink, yellow and green and breathing in the sweet anise flavor infusing the kitchen? Was it

catching frogs in the irrigation ditch that ran through the empty lot next door, reliving the feel of their slick skin on yours?

Follow a recall of such memories with the question, "What do you think will be your child's memories of her early years?"

Walking in little Annie's footsteps today, is easier with the memory of our own pink-frosted cake, the one mom made for our first ever birthday party, fresh in our mind. We use the past to interpret the present.

### **Metaphors**

In literature hair can be spun gold, clouds cotton candy and eyes glittering jewels. Metaphors provide different ways to organize information. In a parenting class what can *training and boundaries* be? How about ping-pong balls? Yes, ping-pong balls.

#### ***Try this***

*Give out ping-pong balls and paper cups, then say, "OK. You have two minutes."*

*Silence. Then: "What do you mean?" "What are we supposed to do?"*

*Continue: "Hmm. What if you were my children and I said, 'Clean up the kitchen.' 'Make your bed.' 'Stop throwing that ball inside.' But the kitchen stays a mess, the bed doesn't get made and the ball bounces from ceiling to floor?"*

*"That's different. Surely they know what we mean." comes the reply.*

*"Do they? What does 'clean the kitchen' mean? Are we talking about refrigerating food, loading the dishwasher, or just bringing plates to the sink?"*

*Might a child staring at an unmade bed be thinking: 'How do I get a fat pillow into a flat pillowcase?' 'Which end of the sheet goes where?' 'How do I make the blanket smooth?'*

*Or, 'What's wrong with throwing my ball? That's what balls are for.' (Nothing really, it's where it gets thrown.)"*

The messy kitchen, the bed and the unwanted indoor gym are all *ping-pong balls*; metaphors to help understand *training and boundaries*.

### **Motion**

Adults arriving dragged out at the end of a day revive when they get to pretend to be their children squabbling over who got to the television first. Tossing ping-pong balls, exchanging seat to form break-out groups or

walking up front to volunteer are ways of moving. Movement strengthens learning.

But the bigger movement we want is - change. The goal of parent education is to motivate, encourage and support change: change in the way parents and children co-exist.

E-motions are forms of movement: they move us from thinking with our heads - to feeling with our hearts.

Memories, such as the joy we felt on Grandpa's shoulders or the pleasure evoked by Easter cookies, rekindle the same feelings today. Experiencing those feelings moves learning from the head to the heart – the birthplace of yearning.

*Yearning anchors learning - and fuels change.*

Experiential learning keeps things moving: whether in class with bouncing balls; internally from the head to the heart; or at home from the heart to the hearth – to the tiny hands we hold in ours.

### **Types of Activities**

Let's look at packaging. What form can experiential activities take? Here are three types.

- Demonstrations
- Role-plays
- Structured tasks

### **Demonstrations**

Demonstrations take place in front of the group: by the presenter alone, with volunteers, or by participants alone.

One presenter uses a mirror to demonstrate *reflective listening*. A volunteer takes the role of the child. The volunteer might say, "I hate it when my little brother messes up my dollhouse."

The presenter then angles her mirror to *reflect* back the comment. "It really upsets you when your little brother makes a mess of your dollhouse."

### **Role-Plays**

The emotions experienced during role- plays mirror life, allowing adults to experience different perspectives. Instead of discussing how to get little Matthew to quit squirming, role-play the wait at the checkout stand.

**Try this**

Divide the group into pairs, one playing the 'adult' (A), the other the 'child' (C).

*C bends down or gets on her knees to simulate a child's size.*

*A holds the kneeling child's hand above C's head.*

*In less than a minute the 'child' will be squirming around and the 'adult' saying, "Quit squirming!"*

*Ask the children why they squirmed? "To get some blood moving." "My arm was going numb."*

*Children's behavior often makes sense when we look at it from their perspective.*

*Walking in a child's shoes moves the focus away from how to make the child stand still; a basic mental shift needed to motivate change.*

**Structured Tasks**

Structured tasks may be demonstrations, role-plays, or lead to individual or group work.

**Try this**

*Ask each person to list three things she does well. Pair up and trade lists. Acknowledge one thing from each other's list.*

*Mary wrote: "I make great chili. I am a pretty good skier. I grow prize-winning tomatoes."*

*Mark looks at Mary's list and says, "Mary, you make great chili."*

*Follow up with plans to comment on a child's strengths over the coming week; or pass out post cards and write notes doing so, with the homework being to mail the card to the child.*

Experiencing being appreciated helps adults understand its value.

**Honor It**

Think of the ages of the children whose parents are sitting in the too-small chairs at your parenting class. Mentally total up all those ages: 5 years, 4 years, 12 years and so on; the result is an awesome accumulation of experience. Honor that number.

**Keep on Keeping on**

Silence is not fatal. Allow time for responses to begin. If the presenter exudes comfort with silence, group members gain courage to speak.

If speaking before the group is too uncomfortable and the silence endless, provide post-it notes for people to write down ideas and pass them forward.

If people do not read or write, use art or craft projects or simulate game shows to encourage participation. Experiential education crosses language and cultural boundaries because the mother tongue of experience is universal.

Fill your parenting classes with ping-pong balls; invite remembered yesterdays to enrich today; let business-suited adults turn into tantrum-throwing three-year-olds; and the only glazed eyeballs in your classes will be the ones you supply as props for learning about boring communication styles.

### **A Recipe for Creating Experiential Activities**

#### **Identify a small segment of the topic.**

*Example:* When discussing bedtime, focus on the need for a routine.

Experiential Goal: Practice involving children in the planning process.

#### **Devise an activity to invite participation.**

*Example:* Divide group into 'families' of 3 or 4 members each.

Have each *family* member decide their role and age: mom, dad, child.

Have the *family* come up with a plan for a bedtime routine.

Pass out art materials to create a poster of their routine.

#### **Process activities as a group.**

*Example:* Have each *family* share their routine.

Ask what was hard about doing this.

Ask what was easy about doing this.

Ask what they learned.

#### **Optional: Handouts or Text**

Refer the class to a chapter in a text that covers this topic.

Provide a related handout with tips relating to the activity.

Provide art supplies for them to do this at home.

Ask for a volunteer to type up tips to be handed out at the next session.



## **Policies and Plans on Early Childhood Development (ECD) in Nepal**

*Laba Prasad Tripathee*

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### **Background of Nepal**

The education system in Nepal comprises one or two years of Early Childhood Development / Preprimary schooling Program (for 3-5 years age group), five years Primary (6-10 years age group), three years lower secondary (11-13 years age), two years secondary (14 and 15 years age) and two years higher secondary education as school education. The higher education consists of 3 years Bachelor's degree, two years Master's degree and three years PhD programme.

Nepal is one of the landlocked countries in the world. The kingdom is also called the country of Mount Everest or the country of Lord Buddha's and of Sita's birth place. The country lies between India and China. Physically the country is divided into three major regions i. e. the Tarai- the southern plain region having an altitude of 1000ft. The hill region- having an altitude of above 1000 to 7000ft where there are some mountains and some valleys. The Himalayan or the mountain region-which is above from 7000ft to 29848ft, is the most difficult region for its overall development. The 16000ft line is called the snow line above which there is snow coverage throughout the year. The population of the country is nearly 23.1 million and the area is 147181 square kilometer. About one third of the land is higher mountain and without any vegetation but with snow throughout the year. Nepal is a unique country which maintains a good harmonization in respect to culture, religion, social customs and behavior. Nepal is also proud of having record 13-15 heritages in UNESCO's list.

### **Commitment in the international forums**

Nepal has fully endorsed and committed to maintain the rights of the child as agreed in the conventions on the rights of the child. The rights of the child include survival care, growth, protection against violence, trafficking, exploitation, and discrimination, and a congenial climate for physical, mental and social development. Investments made to early interactions for the child's development and learning have a positive impact on developing a child into adolescence. The child's brain has remarkable capacities for self-protection and recovery. But the loving care and nurture children receive in their first year or the lack of these critical experiences leaves lasting imprints on young minds.

The convention on the Rights of the child (61st plenary meeting Nov. 1989) article 1 has defined a child to mean every human being below the age of eighteen years unless the law applicable to the child's, majority is attained earlier.

The conventions on the rights of the child have covered that (1) states/parties recognize that every child has the inherent right to life, and (2) states/parties shall ensure to the maximum extent possible the survival and development of the child (Article 6). The article 18 of the conventions states "For the purpose of guaranteeing and promoting the rights set forth in the present convention states/parties shall render appropriate assistance to parents and legal guardians in the performance of their child rearing responsibilities and shall ensure the development of institutions, facilities, and services for the care of the children.

The acronym Early Childhood Development (ECD) refers to a comprehensive approach to policies and programs for children from birth to eight years of age, their parents and caregivers. Its purpose is to protect the child's right to develop and attain his physical potential. Community based services that meet the needs of infants and young children are vital to ECD and they should include attention to health, nutrition, education and water and environmental sanitation in houses and communities. The approach promotes and protects the rights of the young child for survival, growth and development.

With health, nutrition, water, sanitation, hygiene, education and child protection programs already available, it is vital to care for the whole child. *Pastoral da Crianca* is an example of the convergence of early childhood services through the health sector. In Columbia, the project for the importance of education (PROMESA) chose the education sector to integrate services. In education programs, groups of mothers learn how to stimulate the physical and intellectual development of their children from birth to age six.

If a country hopes to loosen the strangleholds to development that are currently wrapped tightly around the lives of families then it must follow four equally essential things, at the same time.

- It must continue to make child survival a priority.
- It must assure that surviving children are healthy and possess the skills to thrive and to live full and productive lives.
- It must prepare parents for their pivotal role in childcare and build the capacities of communities to support them.

- It must create a society that is free from violence and discrimination at all levels and that values the lively contributions of children and women.

There is no single formula for success in implementing early childhood care programs. Experience has shown a variety of ways that are especially effective when used together.

- Educate and empower parents and caregivers.
- Deliver services directly to children using home visits, home day care, integrated child development centers and formal and informal learning activities.
- Promote Community partnerships to improve the physical environment and the knowledge and practices of the community, allowing for common action and expanding the base for political and social negotiations.
- Strengthen national resources and capabilities.
- Increase demand and awareness of policy makers, planners and the general public.
- Develop national child and family policies that allow parents to devote increased time to meet their child-rearing and childcare responsibilities and that encourage increased possibilities for childcare by grandparents and other adult family members.
- Develop legal and regulatory frameworks that increase awareness of rights and availability of legal resources among both women and children and that promote more effective use of legislation and improved compliance.

### **Concept of Early Childhood Care and Development**

Early Childhood Care and Development is a relatively new field. It combines elements from the areas of infant stimulation, health and nutrition, early childhood education, community development, women's development, psychology, sociology, anthropology, child development and economics, among others. International attention of ECCD arose from the recognition that health, intellectual, emotional, spiritual, and physical development are important elements in a child's life; socialization and attainment of culture all interact and are inter-related in a young child's life.

Early Childhood Care for Development includes all the supports necessary for everybody to realize his/her rights to survival, to protection and to care that will ensure optimal development from birth to age eight. To understand more about what this means it is important to have a common understanding

of what is meant by the key terms; Early Childhood Care and Development. Each is described below:

### *Early Childhood*

- As it is currently used internationally, early childhood is defined as the period of a child's life from conception to age eight.
- Second, the international definition of early childhood includes pre-natal development and continues through the early primary school years (age six to eight) because of the importance of the continuity of experiences for children.
- The experiences of a child in transition into the primary school (age six through eight) are critical if what is learned prior to school is to be sustained, and if a child is to do well in school and in later life.

### *Care*

- In the 1980s the term Care was added to the phrase Early Childhood development to move policy makers and programme providers away from thinking that early childhood programs were synonymous with preschools. Childcare programs were conceptually and literally separated from preschool, they were often linked to health, women's work and/or social services. In an attempt to include these programs within a broader early childhood framework, the phrase became early childhood care and development.
- Children with consistent, caring attention are generally better nourished, are less likely to be sick, and learn better than children who do not receive such care. Conversely, neglected children are prone to sickness and malnutrition and are less equipped and motivated to learn.
- The definition has evolved further; Care is now being defined as a process that results in the creation of an enabling environment.
- In summary, Care is the integrated set of action that ensures for children the synergy of protection and supports for their health, nutrition, psychosocial and cognitive aspects of development. Therefore Care is one of the key factors in the promotion of children's optimal development.

## *Development*

- Development is defined as the process of change in which the child comes to master more and more complex levels of moving; thinking, feeling, and interacting with people and objects in the environment.
- Learning is also crucial to development. It is defined as the process acquiring knowledge, skills, habits and values through experience, experimentation, observation, reflection, and/or study instruction.
- If we see our task as providing appropriate Care in support of children's development; we must go beyond sectoral concerns and understand how to provide the kind of Care that leads to the survival and the maximum development and protection of the young child.
- This understanding will then guide us in creating child-friendly, family-focused, and community based programs that support the child's development.

In summary, programming in early childhood care for development is about meeting the child's multiple needs by taking into account health, nutrition and psycho-social stimulation, while at the same time strengthening the environments in which children live. Thus ECCD programming in addition to addressing the specific needs of children includes such things as;

- Working to strengthen the providers of day care operations and striving to support women and families through the provision of economic supports,
- ECD programming is also about community process,
- Stimulating social mobilization.

## **Nepal's National Vision**

- Nepal is the signatory to national Commitment to Education for All (EFA) objectives as articulated in the Jomtien Declaration of 1990.
- The constitution of Nepal (1990) and the Child Rights and welfare Act (2048) has made clear provisions to safeguard the Rights of the Child.
- Following Nepal's commitment on EFA in Dakar, Nepal, has prepared and approved for implementation the National Plan of Actions on Education for All, 2001. The EFA, National Plan of Actions has included the following points.

- HMG Nepal acknowledges the importance of early childhood care and education, at early stage 3-5 yrs of age not only for the immediate well-being of the child but also for future development.
- The HMG, Nepal has taken systematic steps for the development of ECD in the country since the 7th National Development Plan. Accordingly, the 9th plan (1997-2002) has targeted to establish ten thousand early childhood centers by the end of the plan period.
- The BPEP II (1999-2004) has developed ECD programs to ensure flourishing of the inherent potentialities of a child (3-5 years). The emphasis of the programme is to provide activities on overall early childhood development. The programme has been developed to support community and the parents so that ECD ownership is taken up by them.
- The HMG/N intends to support community based ECD programs in collaboration with the other government and non- government agencies. The role of the government will be to facilitate the development of ECD through the provision of training at various levels., development of curriculum and activity materials, support in the establishment of the ECD centers and provide monitoring and supervision. The local communities will be encouraged and facilitated to take initiatives for the development, operation and monitoring of the ECD centers. Support of the local bodies including VCDs, CBOs NGOs, and INGOs will be utilized for the development and substance of the ECD centers.
- The government of Nepal also recognizes the important role of the various organizations (mainly the private sectors) that are providing nursery and kindergarten services and intends to let the provisions continue.
- The seventh amendment to the Education Act (2002) has incorporated pre-primary education for 3-5 year-old children. The Act has made provision that the government can provide grants to the Child Development Centers established in collaboration with VDC and Municipalities. The pre-primary school is termed as that school that provides one year's pre-primary education to the children that have completed four years of age.
- The Education Regulation based on the Seventh amendment Education Act has clarified the structure, modalities and community involvement in managing and programs like "Education for All" will make additional contribution to human development. The provision of free education for the poor, backward communities, girls, disabled and indigenous groups will contribute towards raising the educational standard of every Nepali citizen) implementation of ECD programme in the country.

- The participants who attended the workshop cum seminar on integrated planning in ECD, Aug. 2001 organized by Seto Gurans National Child Development Services have suggested ECD vision as "provide stimulating and child friendly learning environment to enable every child to develop up to their optimum potentials through well managed services and supported by national policies community participation and backed up by professional support services within the frame works of child rights."

### **Policies and Programs in 10th Plan**

The tenth five year plan (2002) in its main objectives has mentioned "ECD as the main focus to prepare children for enrollment to the primary level of education rephrasing their physical, mental, social and emotional development (holistic development)." The other child development objectives, strategies and programs in the 10th Plan are:

- To ensure the all-round development of children by establishing the community based child development centers.
- To provide pre-primary education to children below 5 and prepare them for primary education.
- To enhance the capacity of each organization that is involved in running children development programs.
- To set up the child development centre with the participation of the local bodies by linking it up with parents' awareness programs and to encourage the operation of one- year pre-primary classes on local resources in the institutional/community schools. The interim poverty reduction strategy paper (July, 2001) of the government has taken education as the main vehicle for poverty alleviation. The paper has planned the objectives, strategy, and programs and expected out-comes.

### **Status of ECD**

Community based ECD policy has been included in the Educational Act (Seventh Amendment) and Educational Regulation 2002.

Packages on ECD - ECD trainers package contains: learning resources materials; two volumes for facilitators training, ECD curriculum (for 3- 5 years children) materials development package, paper materials development guide- line for facilitators two volumes, parental awareness manual, flip charts and ECD magazine have been developed. ECD guide- lines prepared. Evaluation criteria of ECD centers are developed. Basic and re-curent training for 210 graduate trainers is provided. NGO/ INGOs co- ordination

meetings have been regularly conducted. Audiovisual materials (video, cassette, poster, pamphlets) for community mobilization are developed. Five thousand seven hundred ECD centers in 58 districts have been established.

Community based ECD programme involving local government was piloted in Illam district and this model will serve as the guide for expanding the quality ECD centers under the EFA 2004-09.

Strategic paper for early childhood development in Nepal is being prepared.

### **Strategies taken for development**

At the moment there are two types of programs for 3 to 5 year-old children; school based and community based. The EFA 2004/009 has plan for establishing and supporting of community based ECD 13000 centers by 2009. The Strategic Paper for Early Childhood Development in Nepal has made provision for the following strategies:

- By 2007, each VDC and municipality ward will have at least one and four ECD centers respectively.
- VDCs and Municipalities will take full responsibility to establish and operate these centers with government support as well as with the resources mobilization at the local level.
- VCDs and Municipalities will collaborate with NGOs / INGOs, CBOs and other community level organizations as required.
- Private enterprises will be encouraged to run and support ECD centers.
- Community based ECD centers will receive support from all concerned ministries and other agencies. MOES with the support of ECD council will work as a coordinating body. The major areas of focus will be on the following.

### **Development of policies and programs**

Policies will be developed regarding the management and financing of ECD Programs.

There will be three types of programs: (a) School-based programme including pre-primary and (b) community-based programme for 3-5 years age group and (c) programme for children less than 3 years of age.

The government will adopt two different modalities of support for urban and rural areas.



Demand driven approach with partial government support for urban and accessible areas: and the approach of full government support and facilitation for establishment and operation of ECD centers in the areas of deprived and disadvantaged communities.

Involvement of the community and the local government will be fundamental parts of community-based ECD programme. Partnership with I/NGOs will be promoted in order to expand ECD programme in terms of quantity and quality.

### *Integrated approach to ECD*

Strategy to integrate the health, nutrition, sanitation and education activities will be adopted. Community based ECD centers will receive support from all concerned ministries and other agencies. MOES with the support of ECD council will work as a coordinating body.

### *Adoption of Community-based approach*

In order to enhance efficient implementation for the ECD programs and ensure sustainability, the expansion of community-based ECD programme will be promoted.

### *Delegation of authority to local bodies*

Guidelines will be developed to manage the decentralization authority to the local bodies to run ECD programs. Each VCD and municipality will map the need of ECD centers in the respective areas and open or approve the ECD centers according to the needs. VDCS and municipalities will take the responsibility to establish and operate these centers with block grants and technical supports from the government as well as with resources mobilized at the local level. VDCS and municipalities will collaborate with INGOs/NGOs/CBOs and other community level organizations as required. Capacity building programme will be organized for the local bodies to run and manage the ECD programs. District and local body will be authorized to run the ECD centers with partnership among NGOs, CBOs and local bodies.

### *Implementation of low cost programs*

The government intends to implement cost effective ECD programs by encouraging the use of locally available educational materials. It has also emphasized the importance of recruiting teachers/facilitators from the local community and provide preference to women in the recruitment process.

### *Implementation of parental education programme*

The non-governmental and social organizations will be encouraged to launch parental education programs. The policies and strategies as specified in the BPE Master Plan and the Tenth plan will be consolidated and expanded.

### *Utilization of Information, Education and Communication (IEC)*

A comprehensive IEC programme for ECD including awareness raising among parents will be designed and implemented with these aspects in view. The government will make necessary institutional arrangements to ensure effective implementation of ECD programs.

### *Effective institutional arrangements*

MOES recognizes the importance of coordination, monitoring and evaluation of child development programs run by the Government, national and international Non-governmental Organizations and other related organizations. Moreover, it has also emphasized the need for institutionalizing the coordination, monitoring and evaluation activities. It is aware the 'fragmented and isolated efforts by different sectors and agencies are costly and therefore a coordinated and integrated approach with cross-sectoral linkages is essential'.

## **Future Challenges**

- The gross enrolment ratio of ECD i.e.; the access to ECD using the ratio of the number of children who are enrolled to ECD centers as compared to the actual number (population of 3-5 year-old children) was 8.1 in 1997. The percentage of the new entrants at grade one having ECD programme experience was 13.5 in the same year.
- Assuming the current population of 5 year-old children (about 647181) and considering that one ECD class will accommodate at the most 25 children, there will be a need to establish 25887 ECD classes to provide one year of pre-school education service to all the population of 5 year old children. The number of required ECD centers to meet the ECD service need of 3 to 5 year-old will be almost three times the current status.
- There is a need to make quantum jump in expanding the number of ECD centers in order to meet the EFA goals. There will also be a need for developing institutions to train facilitators. Although the training provision in the country is far too insignificant to meet the needs, development of new institutions and sustaining them is still a challenge.

- Also, given the current situation that about half of the population are still illiterate and are under the poverty line, mobilizing population to start ECD centers and to sustain the operations of the centers at the community level would be difficult.
- Achieving a 50 % improvement in levels of adult literacy by 2015, especially for women, and equitable access to basic and continuing education for all adults is a task of a great challenge.
- Eliminating gender disparities in primary and secondary education by 2005 and achieving gender equality in education by 2015, with a focus on ensuring girl's full and equal access to as well as achievement in basic education of good quality.
- A lack of coordination between the governmental non-governmental organizations may be experienced in connection with the implementation of programme in the target community unless a strong legal basis is provided.

## **Summary and conclusions**

Nepal being a mountainous country has to face many issues of development. Some of the issues are poverty, difficulty of transportation and communication, a large population of the disadvantaged group, low literacy rate, and multiple ethnicity, many spoken languages and diversified culture. Priority and the strategy of the Government to solve these issues are to develop good access to quality education in the country.

The constitution of Nepal (1990) has made provision to safeguard the Rights of the Child. The Article 26 (8) of the Constitution says "the state shall make necessary arrangements to safeguard the rights and interest of children and shall ensure that they are not exploited, and shall make gradual arrangements of free education".

The Department of Education has developed and implemented community based ECD programme since 1999. DOE is responsible to lead and co-ordinate different aspects and activities on ECD programme for 3-5 years children for their holistic development (physical, mental, social and emotional development).

The conflict ridden situation of the country is one of the areas to be addressed by the government and the people for development of education. The civic society and the parents have a great role to play in running the ECD centers. The conflict stricken condition in the country will unfortunately have a tremendous effect on the quality of the early childhood education.

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## **Early Child Care in nepal: Concept, Myths and Realities**

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This paper presents a description of the concept of early childcare and of various programs targeted to the development of children at early age. It basically deals with the programme for children from zero to three years of age and raises various concerns on the care and development of young children. It also lists a number of traditional concepts, ideas and opinions that are found useful or even practiced by many people in the process of child care and child rearing in Nepal.

### **Concept of Early Child Care**

The concept of early childhood as it is understood today is not very old. In the beginning of civilisation, a person was only an "adult." Individuals were regarded as young, middle-aged or old. In the last 200 years, two other important periods of life - childhood and adolescence - came to be recognised (Austin, 1976). Since the beginning of recorded time, the importance of the influence of experiences of early years on future growth and development has been recognised. Prior to 1700 A.D. the care of children was almost entirely a family responsibility, often including the role played by grandparents, aunts, and uncles. The society rarely intervened in the lives of children. But later on the society has been showing increasing concern about the needs of children and offering an increasing degree of assistance to them. The development of the early childhood care and education is largely influenced by the works of several educationists, psychologists and cognitive theorists.

Generally, early childcare programs are known by various names: Early Childhood Care (ECC), Early childhood care for survival, growth, & development (ECC-SGD), Early childhood education (ECE), Early childhood care and education (ECCE), Early childhood care and development (ECCD), Early childhood development (ECD). They are also known as Day Care Centre (DCC), Child Care Centre (CCC), Nursery school, Kindergarten school, Pre-school and Pre-primary school. As the development of a child begins from its mother's womb, many ECE programs have included the early childhood period from zero to six years of age. According to UNICEF, Early Childhood (development) refers to a comprehensive approach to policies and programs for children from birth to eight years of age as well as their parents and caregivers. In most of the developing countries early childcare and education programs cater to the need of children from zero to six years of age. Whatever the name, an early child care programme aims to protect the

child's rights to develop his or her full cognitive, emotional, social and physical potential. Any form of early childcare programme should embody a developmentally appropriate practice, which attends to health, nutrition, security and learning.

In Nepal, the recent document of the government, EFA/NPA, has underlined three types of early child care programs: (a) school-based programme including pre-primary, (b) community-based programme for the 3-5 age group and (c) programme for children under 3 years of age.

### **Program for Children under Three-Years of Age**

When we say 'under three years of age' we include basically three stages: period before birth, infancy (birth to one year), and toddler (one-three age group). It recognizes that the development of a child begins from its mother's womb, right from the time of conception.

In order to provide proper care for the development of children at an early age a number of home-based, family-based and centre-based early child care programs are being operated. Home-based early child care programme focuses on developing skills in mothers and caregivers as educators and caretakers of their own children. A family day-care provides a mother-like person in a home-like setting who looks after a group of children. In this setting usually a worker usually takes care of 5 or 6 children in her own home. Day-care services are provided to children from infancy to 6 years of age.

The philosophy of the centre-based and home-based day care services is normally the same as that of the pre-school education. The philosophy recognises the child as an individual and emphasises the need to stimulate development of the child's physical, intellectual, and psychosocial potentials. Home-based child care services are informal whereas centre-based services are rather formal. Play groups, nurseries, (some) day care programs and kindergarten schools are school-based or centre-based programs.

### **Situation of Organized Early Child Care Programs in Nepal**

A very few percentage of children below three years of age are taken care of by child care takers or baby sitters in Nepal. Although the government's policy papers have included programme for children aged 0 to three the efforts and programs targeted to children at this age group are almost non-existent except for some experimentations.

In 1980s the two major rural development projects namely, Production Credit for Rural Women in Nepal implemented by the Ministry of Local Development and Small Farmers Development Project implemented by the Agricultural

Development Bank initiated the **Entry Point Home Based Child Care Program**. In this programme mothers groups were formed with 6 to 8 mothers in each group. The children were brought to the house of one of the mothers in the group. The mothers looked after the children by turn. Parents involved in this programme were given training on the use of materials for early stimulation. The training and materials were provided by the project. This programme was technically supported by a national NGO, Seto Gurans National Child Development Services. The programme was implemented in some of the project districts. However after the termination of the project the child care programs also got gradually terminated.

The UN agencies basically the UNICEF and other INGOs such as Save the Children, US/Norway/UK have developed some **Parental Education** programs. The parental education programs are designed and implemented to impart necessary information to the parents about their children, to create awareness among parents about the importance of child development, to increase knowledge and skills about child development, and to sensitise parents about their responsibilities towards their child's development. The parental education programme developed and implemented by UNICEF and Save the Children/US are of a comprehensive nature. In this programme, parents' groups of 10 to 20 each are formed separately for male and female parents. The classes are held once a week for about two hours. For each group this programme continues for 15 weeks. The participants' convenience is kept in view while fixing the day for holding these classes.

The Save the Children, (US/Norway/UK) projects have developed "**Child-to-Child**" programs, which are being implemented in their project districts. This programme is developed for children aged 8 to 14 who are called upon to take care of their younger siblings but who lack adequate knowledge and skills for proper child care. It is based on the assumptions that most of the children are prone to some kind of accidents which can result in disabilities or loss of life, and that school enrolment of the children aged 8 to 14 is also low due to the lack of educational awareness. The participants after receiving training under the programme are better able to transfer their abilities and knowledge about personal hygiene and environmental cleanliness to their younger siblings thus promoting the latter's health, welfare and development. Child-to-Child Education Program helps children to strengthen their own abilities while sharing them with their younger siblings and it is thus doubly blessed.

Seto Gurans National Child Development Services with the support from UNICEF/ Nepal, Save the Children, US/Norway and CERID has developed a **Home-based Child Development** Program targeted to the children below three years of age. This unique and innovative programme assists parents and guardians in their efforts to support children's holistic development

through home based activities. The programme focuses on making the parents and guardians aware of their role and responsibility in child development and encourages them to use household environment and regular activities as the opportunities for children to learn. The children are encouraged to be involved in household activities and interact with the parents, guardians and other members of the family while the family members are engaged in daily household activities. A trained local lady facilitator forms the parents groups and organizes interaction sessions once in two weeks. She makes home visits and provides necessary support to the parents and guardians included in the programme. This programme has been experimented in one of the Village Development Committees (VDCs) out of about 4000 VDCs in the country.

### **Myths and Realities of Early Child Care**

From the ancient time to till today many families living in both urban and rural communities hold many concepts, ideas and practices. Some of them seem to have scientific background and some others seem to be based on mere superstitions. It is sometimes very difficult to label them as myths or realities but they are widely believed and practiced in the daily lives in the care and education of children at the early age. Some of them are presented below:

### **Myths and Realities During Pregnancy**

- In the Hindu Epic *Mahabharata*, Abhimanyu, the son of Arjun and Subhadra, learns about Chakrabyuha, a labyrinthine war tactic, while he was in his mother's womb. The story goes like this: *A long time ago very few warriors knew about Chakrabyuha. Arjun, the veteran warrior prince, a member of the Pandavas was one of them. Before the breakout of the Mahabharata war, Subhadra, the wife of Arjun, wanted to know about this warfare tactic. While she was pregnant one night Arjun told his wife about the tactic. But she happened to be asleep in the middle of the total warfare tactics that Arjun was telling her about. So Abhimanyu, the baby in her womb, could learn only half of the total warfare. While Abhimanyu was in his teenage the war between the Pandavas and the Kaurabas broke out. During this war while Arjun was away Abhimanyu had to use this war tactic, which he learned while he was in his mother's womb. As he knew only a half of the war tactic he could only break the circle of the opponents but couldn't come out of it. He was then after killed.* Since then many people believe that a baby starts to learn from the prenatal period. In this respect, there may be exaggeration but this made many people think about the baby in the womb and start to relate learning right from the prenatal period.



- Pregnant women are encouraged to listen to good things, look at good things and think positively during pregnancy. Why is it said so? Is there any relationship with looking at good things and the physical and mental health of the baby in the mother's womb?
- Regarding the sex prediction of a child, it is widely believed that if the child is a boy, the face of the mother looks smooth, bright and young. The child's head can be felt lying on the left side after the third month of pregnancy, the mother looks active, and the mother does not hesitate to eat any food. On the contrary, if the child is a girl the child's head can be felt lying on the right side after the third month of pregnancy, the mother looks clumsy, lazy and inactive, the mother becomes fussy about eating any food. Why?
- It is believed that if a pregnant woman touches her stomach during the Solar Eclipse the part of the baby's body the mother has touched would develop a dark spot on the skin. Is there any scientific reason for this?
- If the pregnant woman touches an infant or a toddler it would get sick or start to cry or suffer from Marasmus (Runche). Is this a superstition? Or are there scientific reasons behind it?
- Pregnant women are not supposed to visit temples during the pregnancy period. Why?
- Pregnant women are not supposed to stand at the door or sit on the threshold. Why? What implication is there in the development of a baby in the mother's womb?
- Expectant parents are not supposed to kill birds or animals during the pregnancy. Why?

### **Myths and Realities During and After the Birth**

- If the stars are not found auspicious at the time of the child's birth, the traditional birth attendant will not remove the placenta or cut off the umbilical cord. She will wait until the astrologer-priest finds the stars in an auspicious position. Is there any scientific reason behind this practice?
- In the well-to-do families, the astrologers and priests stand by to watch the birth of the child and forecast the child's astrological position (mul) by studying the movements of planets at that hour (ghadi) and the time (pala) of birth. It is said that the baby born under the mul of the father gives trouble to its father and if it is born under the mul of mother, it brings sorrow to the mother. In such a case the newborn baby is

secluded from the father or mother in the care of some other relatives until the time length mentioned by the priest elapses. Is this only a form of domination by the priests or are there any valid reasons behind it?

- In a family where there is the serial incidence of infant mortality a newborn baby is given away as if he or she were sold off to a dalit (damai, sarki or kami) and the baby even carries the family name of the dalit up to a certain age--until the parents feel sure that the child would survive. What could be the plausible reason for this practice?
- A woman whose baby happens to die young or who gave a stillbirth is often kept distant from young kids. Why?
- The newborn baby and mother are usually kept in a dark room where there is no ventilation or an adequate number of windows. It is believed that no cold air should be allowed to let in and blow over their bodies. However it is normal for the newborn child and mother to sit in the sun every day. What could be the scientific reasons for this?
- Whenever an infant is taken out of the home the infant is given a 'tika' from the backside of a mother's foot or from that of an older member of the family is given on the forehead of the baby. It is believed that such a 'tika' would shield the baby from evil spirits. This practice is widely prevalent even in the urban areas and educated families. Does evil spirit really exist?

## Conclusion

People living in different parts of Nepal with varied background and ecological belts--urban, rural, mountains, hills, terai (plains)--irrespective of their socio-economic and educational background hold some sort of outlandish beliefs and superstitions. Such beliefs and superstitions have been inseparable parts of the people's lives. In the case of childcare people also hold a number of beliefs and superstitions. Sometimes it becomes very difficult to say the traditional practices and beliefs are in fact 'myths' or 'realities.' Having in-depth studies in this area would be both interesting and useful.

It would be very hard to believe that we can teach a baby while it is still in the mother's womb. But many psychologists have proved that the mental health of a mother has a direct relationship with the healthy growth and development of the baby in the prenatal environment. So early child care programs targeted to children from conception to below three years of age, should besides the essential reproductive health services, include subject matters that help a pregnant woman to be free from stress, think positive, have the opportunity to look at and listen to good things for the healthy

growth and development of her baby. Early child care programs targeted to children from zero to three years of age should include programs for adolescent girls, pregnant women and nursing mothers. Moreover, in such a programme women and children have to be looked upon as an integral and composite unit.

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*International Childcare Practitioners  
Meet to Discuss Quality Services During  
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Early childhood leaders and practitioners from over 80 nations will gather May 17-20, to discuss the delivery of quality services to young children in diverse settings at the sixth World Forum on Early Care and Education. ***This international event will be held at Le Centre Sheraton Hotel in Montreal, Quebec, Canada.***

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The primary audience of the World Forum is early childhood professionals working in organizations or settings where services are delivered to young children and their families. Also in attendance will be early childhood trainers, consultants, NGO leaders, researchers; advocates and public officials. Presentations will be made by more than 100 early childhood professionals from over 80 nations, including: Australia, Bangladesh, Canada, China, Egypt; Hungary, Kazakhstan, Kenya, Namibia, Russia, Saudi Arabia, Sri Lanka, Turkey, United Kingdom, United States, and many more.

Topics to be addressed during World Forum 2005 include: Educating for Peace, Literacy, Working in Rural Settings, Children with Special Needs, Health and Nutrition, Working with Parents in Trauma, Distance Education, Preserving Culture, Understanding the Value of Play, HIV-AIDS, Exploring Diversity, Curriculum Models, Media and Violence, Children's Rights, and many more.

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