

## RETROSPECT AND PROSPECT

Optimal development of the infant depends on the awareness, skills of appropriate stimulation and conscious efforts of caregivers to provide an adequate environment. Effective caregiving, therefore, derives from the knowledge and understanding of growth and development of young children and need for appropriate environment. However, research studies have repeatedly indicated that infants from low socio-economic status (SES) families live in unfavourable home environment due to combined effects of poverty and caretaking inadequacy. Mothers are unable to provide adequate stimulation and care due to (a) lack of awareness, access and resources to implement much of what is known about early child care and (b) various stress factors resulting in maternal fatigue and a sense of low self-worth. This has serious implications as home environment has emerged in the review of literature as a salient factor influencing infant's development. Lack of appropriate stimulation and care in the early years can have detrimental effects on development. Thus mothers need supportive intervention to sensitize them regarding the role they can play in optimizing their child's competencies and development. Empirical evidence (e.g., Anandakshmy, 1982; Murlidharan & Kaur, 1993) from developed and developing countries indicate that ".... a programme of mother training can do much to prevent the inadequate cognitive and linguistic development characteristic of the disadvantaged child". (Schaffer, 1977, pp. 226-227).

In the present study an Infant Stimulation Programme (ISP) to train mothers through Anganwadi Workers (AWWs) of the ICDS Scheme was designed, these AWWs were trained on the use of the programme materials and the process of implementation of the programme in the community was examined. The impact of the programme was evaluated on the AWWs, mothers and infants.

Research is an endeavor to raise and answer questions. In-situ researchers often raise more questions than provide answers, this study too answers a few questions and raises several questions that need further consideration and research.

#### Questions Answered

The present study has attempted to answer three main questions regarding the Infant Stimulation Programme :

1. Does it increase the AWWs awareness regarding motor and mental milestones of infancy and stimulation activities to foster the same ?
2. Does it promote mother-infant interactions?
3. Does it enhance infant's motor and mental development ?

The results of the study indicated that :

1. After the training programme, the Anganwadi Workers had gained significantly in their knowledge regarding milestones of infant development and ways to foster it. These gains had sustained for six months after their own training as indicated by their competencies in implementing the programme to mothers.

2. The observations of mother-infant dyads indicated an increase in supportive interactions in the post-programme evaluation of the experimental group, the increase in verbal interactions were found to be significant. Observations and interviews regarding home related information showed that there was increase in the play materials in the experimental group and that unlike earlier observations, they were now being kept within easy reach of infants.

3. Significant gains in the mental development of infants of the experimental group were also seen as measured by the Bayley's Scales of Infant Development.

The findings of the programme suggest that the Infant Stimulation Programme as mediated by the AWWs to mothers and through them to infants was a viable and effective model both in terms of the programme content and approach. The module of the programme prepared in the study aided AWWs in implementation of the programme to infant caregivers. The video cassette on infant stimulation developed in the present study will enable larger dissemination of the programme.

The study indicates that AWWs, the grassroot level workers, can play a crucial role in ECCD programme and serve as trainers, caretakers and resource persons in the community. As AWWs are local members of the community they already had rapport with the mothers which facilitated the acceptance of the programme. Involving AWWs as mediator of the programme was thus a useful approach.

The ICDS programme lacked inputs for infants, developing the Infant Stimulation Programme and implementing it to the AWWs and mothers was the first step in providing the needed developmental dimension to the infancy component of ICDS programme. The next step would be to make efforts to include it as an integral part of the ICDS Scheme. Gill (1993) points out that as "AWs of the ICDS are already functioning as full day childcare centres in some states such as Kerala, the viability of modifying this ongoing programme should be ascertained" (p.297). Integrating the training on ISP as part of ICDS Scheme would be beneficial to both AWWs who work directly with infants in day cares and those who work with parents.

Thus the Infant Stimulation Programme by aiding the AWWs and mothers to be competent caregivers serves as a preventive measure from the detrimental effects on the child caused by ignorance of correct techniques of child rearing and neglect of their developmental needs.

In conclusion, the programme made considerable impact in the home and the community environment as reflected by the significant gains in AWWs knowledge and enhancement in mother's verbal interactions and infant's mental development. The developmental inputs given to the infant can to a great extent help in overcoming effects of unfavourable environmental conditions of the disadvantaged child. These findings are particularly encouraging and significant as they are in pursuance

of the National Policy for children (1974) which explicitly states that :

*It shall be the policy of the state to provide adequate services to children, both before and after birth and through the period of growth, to ensure their full physical, mental and social development. The state shall progressively increase the scope of such services so that, within a reasonable time, all children in the country enjoy optimum conditions for their balanced growth (p.7).*

While drawing conclusions from the study it is seen that there are two questions that need to be discussed :

1. What are the unresolved issues/questions that need to be further researched ?
2. How does the study relate to larger issues and concerns of intervention programme ?

#### Questions Generated

While the gains made by the subjects at different levels are heartening indicating the success of the programme to some extent in providing immediate gains, some questions that the present study generated for applied and theoretical considerations are as follows :

1. Firstly, the study has not considered the question of the effect of the Infant Stimulation Programme on the bidirectionality in mother-infant interactions and especially with reference to infant-initiated interactions and responses.

2. To what extent are the variables viz. training of AWWs, mother-infant interactions and infant development related ?
3. Are there any ripple effects created by the programme in the community as a whole i.e. effects on other mothers besides those in the experimental group ?
4. Does early intervention with mother-infant dyads influence father-infant interactions?
5. If the supervisor is trained to implement the programme, will there be any difference on AWWs' awareness and performances ?
6. Is the programme adequately self-sustaining to become an integral part of the ICDS, outside the preview of a research set up i.e. the supervisor trains the AWWs and the AWWs impart the training to mothers in all centers at regular intervals, under the supervision of the supervisors?
7. What will be the effects on the AWWs, mothers and infants if the video cassette of the programme is used to train the AWWs ?
8. Will the effects of the programme last ?
9. How much will the AWWs remember and be able to impart to the mothers on a long term basis ? Will they be able to sustain the programme with all the pressures and constraints within which they work ? Attempts to answer this question has been made and is discussed herein.

Will the AWWs be able to impart the programme to the mothers on a long-term basis? While it was seen that AWWs can "deliver" the programme to mothers a few months after their own training,

it needed to be seen whether these gains in competencies and skills (ie. the implementation and organisational skills) are sustained. One of the major reasons for selecting AWWs as programme mediators was that instead of a one-shot input given by the investigators, training AWWs would provide an investment in the community for a long term basis. The AWWs and their respective supervisors were followed up after one year to know whether there were any long term inputs by the AWWs regarding the programme. Interviews with the AWWs revealed that after the implementation of <sup>the</sup> scheduled programme, AWWs have also been using the programme during their monthly meeting and home visits. AWWs mentioned that they were now being frequently approached by mothers, with queries on infant care and development. This indicated that the programme implemented by the AWWs was able to create an interest and concern in the mothers. The supervisors also reported that several AWWs had given the complete programme during meetings, while a few had implemented a part of it. The AWWs who had not implemented the programme were using it as knowledge base to answer the queries of mothers.

Also during the second workshop conducted by the Infancy Project, Department of HDFSS, M.S.University, Baroda, a few AWWs of the experimental group were requested to <sup>be</sup> resource persons for training a new batch of AWWs. They were shown the video cassette of the programme to refresh their memories. The manner in which these AWWs conducted the programme indicated that their competencies and interest was maintained. Some AWWs mentioned that the exercise had served as a refresher course for them.

The trainees were also motivated by seeing their colleagues imparting the programme, thus both benefited from this experience. Verma, Mistry and Malhotra (1985) point out some of the advantages of this strategy. In training new recruits, experienced workers may be used as resources to serve both as a feedback to the administration as well as positive incentives to the workers.

While AWWs of the experimental group did not receive a refresher course, during the training programme, there was a recapitulation session held after each unit. This was beneficial for the trainees which was clear by the fact that majority of the AWWs scored higher on the recapitulation evaluation than at the immediate evaluation. Hence paraprofessionals need to be trained on the job followed by frequent refresher courses and constant supervision by professional workers (Verma, et al., 1985).

Use of video programme to train AWWs : As the video cassette was made towards the end of the study it could not be used during the training to train AWWs. However the video cassette proved very useful in providing the trainees a recapitulation of the programme. While it received a good response from the trainees, the cassette needs to be field tested, the criteria for which can be the same as that used for the programme.

Due to the limitations and delimitations of the study answers to many questions could not be obtained and follow-up studies are needed to investigate these issues.



*Research is, in many respects a limited knowledge-gathering tool. It is limited by prevailing methodological alternatives, available data-gathering technology, data-analysis techniques, existing scientific theories, and, of course, the ethics of using humans as research subjects. Yet this final limitation is perhaps the most telling in light of the overreaching goal of science to advance human welfare. The limitations that scientists accept on the research enterprise in the interest of safe-guarding human rights are descriptive of the values underlying their efforts. When children are research participants, researchers' obligations are especially great (Thompson, 1990, p. 14).*

### Suggestions

Suggestions emanating from the questions raised are :

1. There is need to further train the supervisors on the training programme and increase their involvement in monitoring and evaluating the programmes conducted by the AWWs for the mothers, so that the programme inputs are sustained.
2. The observation cum interview schedule holds scope for modifications in terms of : (a) including more items that focus on infant-initiated interactions and their responses to the mothers and (b) the organization of physical and temporal environment of the house (Caldwell & <sup>Bradley,</sup> 1978). Time and event sampling may be done to get a clearer picture of the quality and mode of maternal interaction.
3. Path analysis would be useful to empirically test the role of intervening variables in determining the relationship between early intervention and infants' development.

4. There is a need to conduct follow-up of AWWs, mothers and infants to study the sustenance of the effects obtained.
5. There is need to study the effects of the programme on maternal awareness regarding infant development and stimulation.
6. There is need to include fathers in the sample of the study.
7. There is need to compute correlations between mother-infants interaction and infants' development, to know the extent of the influence of home environment on infants' development.

The following sections highlights some of the major inferences drawn from research study leading to future directions and issues related to early intervention programmes; in terms of ECCD programmes, training, research and evaluation.

#### Early Intervention Programmes

The Infant Stimulation Programme can be considered an effective three tier model to train mother and paraprofessional in view of the fact that AWWs' have gained in their understanding of 'motor and mental milestones or that they can 'deliver' the programme to mothers with moderate degree of success as well as the direction of improvements in mother-infant dyad interactions and infants' mental development. However the nature of the programme i.e. the three level inputs via investigator to AWWs, from AWWs' to mothers and finally to infants raises questions such as: Is an observation of half an hour of mother-infant dyads the "true" picture of interactions, to what extent is the

observer's presence influencing the patterns of interactions ? Although a control group design, deals with many problems, these questions reflect the need for caution in generalising the research outcomes.

In the final analysis, the effectiveness of a programme depends on its acceptance and its use in the field. The query regarding how often do the AWWs use the programme package after completion of the study with the mothers and whether the mothers put it in practice at home, makes a follow up study of the sample imperative. The first follow-up affirmed that AWWs have been using the programme in their home visits.

The study has taken the first step in identifying needs of parents and grassroots level worker and developing a need based programme. Subsequent work will need to also focus on the complex interactions among what AWWs communicate to parents, what parents know and believe about child care and the impact of this knowledge on parental practice and child's development.

A wider application of the programme is possible by identifying the needs of that community in which the programme is to be implemented. Developing alternative models of the programme to meet the specific need of that group is another step that needs consideration. The development of varied and alternative models is necessitated due to several influencing factors (Verma, et al., 1985) which are as follows :

- \* Nature of the programme including its objectives and goal; for e.g. programme of ECCD for infants may need to be introduced through other programmes such as nutrition.
- \* Setting of programme i.e. rural, urban, urban slum, tribal etc.; for e.g. to reach remote areas more innovative programme like the mobile creches are needed.
- \* Job requirement of the trainees.
- \* Qualification of the trainees.
- \* Needs of the client.
- \* Commitment of funding and organizing agency.

#### Research and Evaluation

- \* The present study has analyzed data in terms of comparisons between infants whose mothers have received intervention with those who have not. Now that the Infant Stimulation Programme (ISP) is field tested, other early intervention programmes could be considered for comparison in order to ascertain the kind of programmes which are more effective.
- \* There is a need to operationalize the term "quality programme" by discerning the important features of programme content and its relation to children's development.
- \* Use of linear models in assessments of outcomes in early intervention studies is a limitation that can give misleading conclusions. To assess impact of the programme on child's development, besides developmental measures, environmental measures should also be used to consider influences of various factors at home.

- \* In the tool, Observation Checklist, making tally marks was preferred to running observations of mother-infant interactions, so changes were made in the tool to ensure that all interactions occurring during the observation in a time block were entered. As infant - initiated interactions were also needed to be noted at the same time, it was difficult to do justice to all interactions occurring at the time. Thus further work needs to be done to improve the Mother-Infant Observation Checklist.
- \* There is a need for longitudinal studies to examine long terms benefits of ISP and other intervention programmes. Longitudinal designs can reduce many methodological problems facing intervention.
- \* The inbuilt strategies to monitor and evaluate the AWWs before, during and after the Infant Stimulation Programme enabled smooth implementation of the programme. Involvement of the supervisors of the ICDS Scheme helped motivate and further the enthusiasm of the trainees besides ensuring proper co-ordination of AWWs' attendance in the programme.
- \* Using household as a unit of analysis in research is needed as it must be recognised that children's learning and development is not rooted with a single person or setting like the home or creche/school only but is also influenced by interactions in the household as well as those between the settings. Such analysis can reveal constraints in accepting programmes and suggest corrective measures and action. Approach to research needs to be more humane and sensitive.

### Research, Action and Policy : A Call for Integration

Independent efforts in isolation by policy planners is not enough, there is a need for an integrated perspective for effective intervention programmes. The first need is for better integrated approach between research, action and policy planners. Intervention studies have given many findings but are policy planners making use of it ? Are programmes for children benefiting from research inputs ? Although it is essential that research policy and programmes be closely related adequate efforts are not being made.

Researches have to be geared to the policy guidelines to make it socially relevant while allowing researchers the freedom to decide what should be researched. Researchers need to be sensitive to the extent to which infant care and its provision, intervention studies and policy plans are all embedded within the social context. Failure to acknowledge the social embeddedness of intervention research may lead to forming irrelevant research questions. Policy and programmes cannot be global or universal, they have to be adaptable to meet the needs of the people.

Isolated efforts by academician, voluntary organizations, government institutions alone cannot bring change in the present situation. Every parent/parent-to-be, every individual must directly, deliberately and forcefully make an attempt to contribute towards better ECCD programmes by sharing experiences and concern, encouraging expression and mobilizing community group for action.

One of the important policy implication relates to need of investing in quality of early intervention including training of ECCD personnels working with children, monitoring and evaluation. Another important policy implication relates to promoting dissemination of the training package through use of video, audio-visual materials and radio. Earlier, only those residing near the programme could avail the service, now due to video cassette etc. people from remote areas can benefit from programme inputs.

#### Training Infant - Caregiver

The study suggests that a critical relationship exists between training of caregivers and quality of caregiver-infant interactions which would subsequently facilitate infants' development. Research has established that compared with formal education, child related training or experience is a stronger predictor of caregiver's effectiveness (UNICEF, 1990). The strengthening of caregivers' competencies, however cannot be achieved by providing token training. Such training can only bring about short term gains that may not sustain after an interval of time. What is needed for long term gains is a thorough over hauling of attitudes and a shifting in priorities of meeting childrens' needs. As Kaul (1993) also reiterates the focus of the training should be on enhancing caregivers' personal qualities, skills, and improving their attitudes towards disadvantaged children. This is crucial as the quality of the programme ultimately depends on how it is implemented by the caregivers to the infants.

Anganwadi Workers and mothers were pre-tested before implementation of the programme to identify their needs, and know their background information such as the qualification and skills they possessed so as to know their level of understanding regarding developmental needs. This information helped in developing a programme that caters to their needs and to delineate communication strategies that they can comprehend easily. Thus identifying strategies of training in context to the socio-cultural milieu of the region ensures programme viability.

While planning the programme, emphasis was given to developing strategies to make mothers realize the need for early stimulation and their role as caregivers in optimizing infants' development. Unless they felt the need to know more about ways of enriching the home environment, implementation of the programme would be meaningless. Therefore the first session of the programme was an introductory one dealing with the relevance and the need for the programme. An introductory song highlighting the need for an age-appropriate and <sup>~ environment</sup> conducive<sub>~</sub> for infants was also given.

Encouraging trainees' confidence and self-esteem may be as important as provision of specific information about parenting. Early intervention programmes should help mothers develop appropriate caregiving skills, improve interaction with her infant, build self-esteem and decision making skills and develop



social supports. Such an approach can provide basis for identifying more long-term outcomes to gain self-sufficiency and empowerment (Thurman & Berry, 1992). According to Dunst, Trivette and Deal (1988), empowerment means "carrying out intervention in a manner where family members acquire a sense of control over their lives as a result of their efforts to meet needs" (p.1).

During the programme, AWWs and mothers were encouraged to share their experiences in bringing up their own children. At the end of each session of the programme there were discussions on the problems they faced in child rearing and the ways in which they met the multiple demands on their time. Several mothers who had older children besides the infant, expressed that the infant stimulation programme would have been more beneficial to them if it had been given at an earlier stage of their lives when their first child was a few months old. Besides providing information on child care, the training programme brought together many young mothers with common concern and interests. In addition to child care issues, the mothers also discussed problems related to alcoholism, unemployment, family violence, etc. which they faced. Overcoming these problems is essential because they have both immediate and long term effects on the mother and the child and these problems tend to transfer to the next generation (Baksi & Sriram, 1993). During the training, the AWWs' and supervisors' needs were respected (e.g., scheduled staff meetings were used to conduct the pre and post-test with

AWWs) and efforts were made to boost mother's self-esteem and sense of well-being (e.g., making mothers aware of their own strengths and suggesting ways to tap/use existing resources).

Training at different levels i.e. investigator trains AWWs and the AWWs trains mothers involved matching the training methods to the training needs of each group. The background variables of AWWs and mothers such as the fact that most mothers were illiterate were kept in mind while planning and implementing the programme messages. Use of innovative approaches to programme development was needed to meet the varied needs of the trainees. Methods such as drama, songs Bhavai and mythological stories such as Lord Krishna's childhood to explain milestones of development was well received by the AWWs and mothers. "Learning by doing", such as making glove puppets and clay models was another effective strategy for creating interest and involvement during the training. AWWs reported that they had also used these material while working with preschool children at the AWWs, thus these training aids served a dual purpose. Lullabies and songs depicting milestones of development were also popular with the AWWs and mothers and helped them learn and retain remembering the various milestones in a developmental sequence. Thus, use of variety of methods of training helped meet individual and group needs.

#### Appropriateness of Early Stimulation

The stimulation that the child derives from his environment appears to a large extent to depend on how it is mediated through

the adults in his life (Pilling & Pringle, 1978, p. 105-106). Therefore during the training emphasis was directed towards promoting supportive interactions between mother and infant by teaching mothers ways to read infants' signals and meet their needs. Based on field observations and consultations with experts, stimulation activities that encompass major development and learning need of infants were delineated and during the programme AWWs and mothers were made aware of them. Several traditional stimulation activities which are not being used by many mothers these days were included due to their inherent richness, simplicity and cultural validity (Khanna, 1992). Research has supported the need to continue the use of these traditional practices. For example, recent findings have shown that massaging infants, an age old practice, not only resulted in their weight gains but were also found to be more active, more alert and performed better on the Brazelton Scale as compared to the controls. (Scafidi, Field, Schanberg Bauer & Kuhn, 1990).

Guidelines were suggested to guide implementation of early stimulation activities; some example are as follows:

- \* Stimulation for infants should address his or her developmental needs based on individualized prescriptions that provide for all areas of child's development : i.e. cognitive, language, motor and social domains through an integrated approach.
- \* Developmental theories emphasizes learning as an interactive process. Infant caregivers should prepare the environment

for children to learn through active exploration and interaction with adults, other children and materials.

- \* However, while infants need a stimulating environment, parents/caretakers need to be cautious of the fact that over-stimulation can be as detrimental for the child as under stimulation. Anandalakshmy, pointed out in a seminar on child care (Baksi, 1989, p. 23) that "Children are active seeking beings and bring their own potential to interact with the environment".

There is no prescription or formulae to provide appropriate stimulation, but as Garbarino, (1993, p. 4) suggests :

*The best fit must be worked out through experience, within some very broad guidelines of basic human needs, and then re-negotiated as development proceeds and situations change. There should be opportunities for relationship in which children find materials emotional, and social encouragement compatible with their needs and capacities as they exist at a specific point in their developing lives.*

In the final analysis one can conclude that investments in Early Childhood Care and Development is vital. Earlier the intervention involving parents, community workers and children, the more effective is the impact. The study has been able to establish a linkage of impact of training the AWWs to train mothers on infants' development. Training workers from community as partners in infants' development can play a pivotal role in the communities' own capacity and perception to improve the climate for Early Childhood Care and Development.