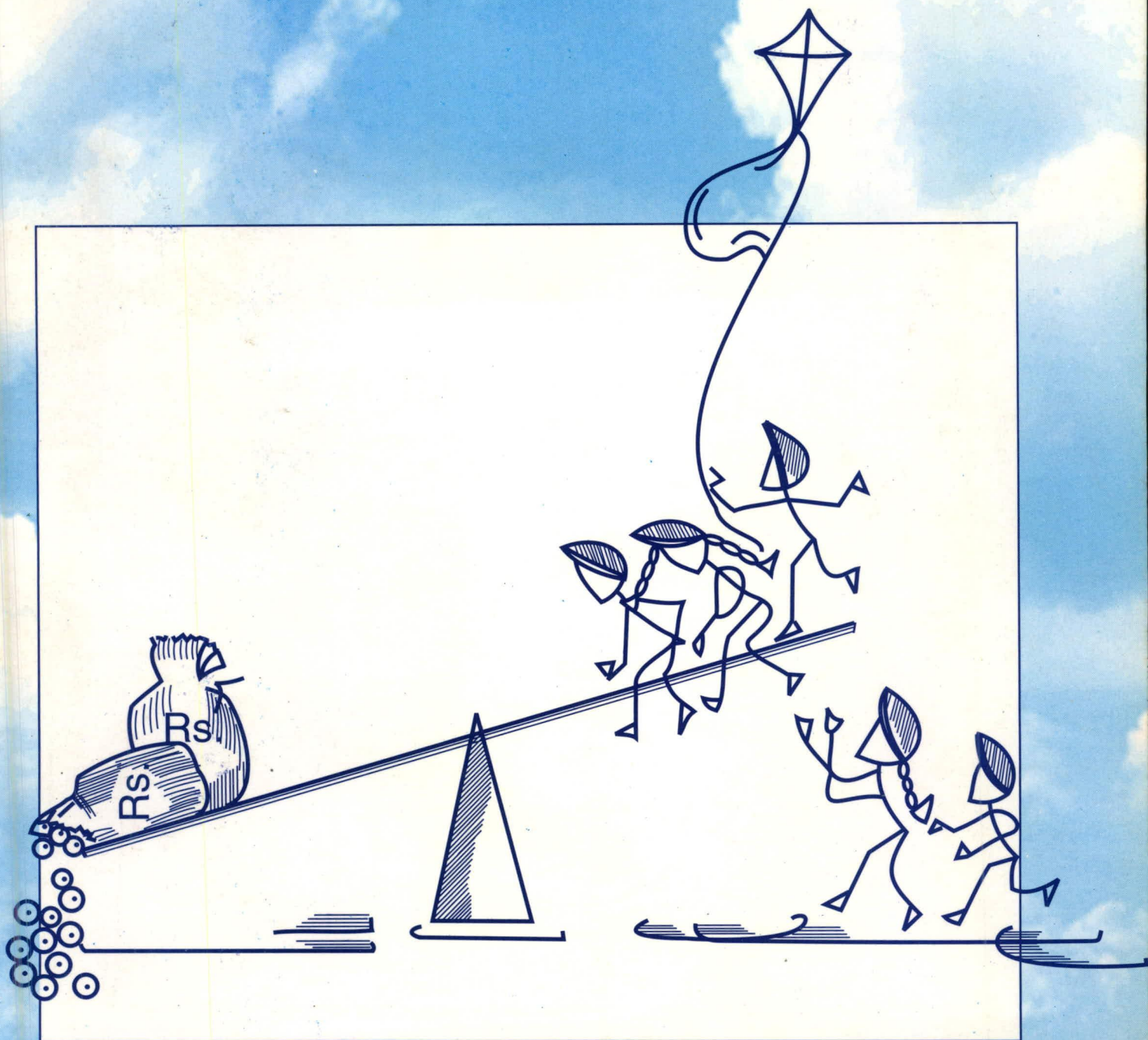


TAKING STOCK

Developing Indicators for Analysing Costs and Benefits of Early Childhood Care and Development Programmes

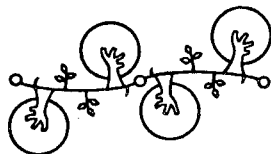


TAKING STOCK

**Developing Indicators for Analysing Costs and Benefits
of Early Childhood Care and Development Programmes**

**Report of a Brainstorming Workshop organised
by
Project ACCESS**

on
30 September and 1 October 1999
at



M.S. SWAMINATHAN RESEARCH FOUNDATION

We are deeply indebted to the Bernard van Leer Foundation (Netherlands) whose support made this brainstorming workshop possible.

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Cover Design : **K. R. Krishnan**

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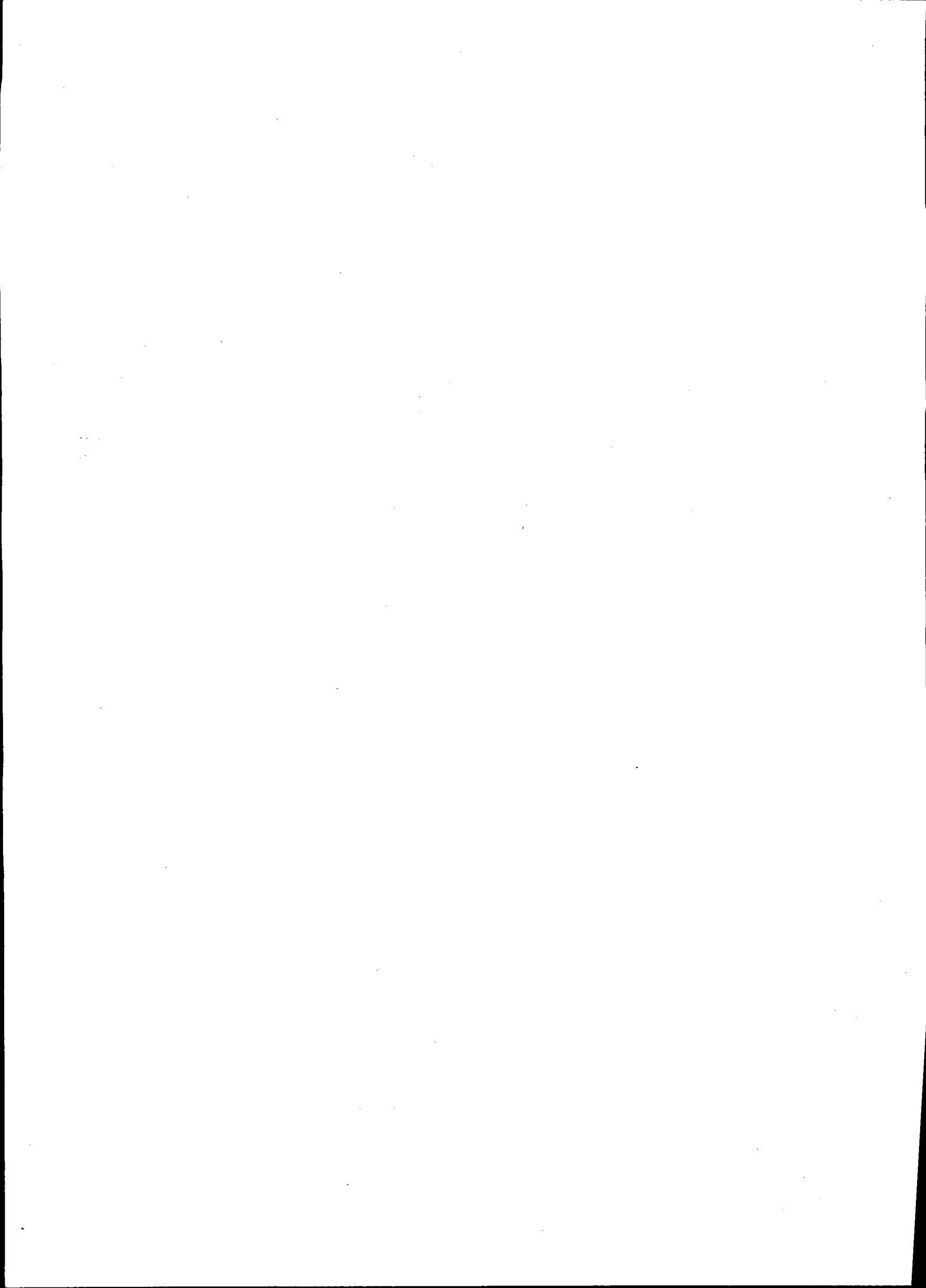
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- B. Qualitative and Quantitative Indicators to Evaluate Women's Groups
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About the Brainstorming

Early Childhood Care and Development programmes have in the past three decades expanded enormously in size with a corresponding huge increase of public investments in such programmes. With more direct and indirect, short - term and long - term benefits accruing to the different user communities, young children as well as other stakeholders, the links between programme characteristics, costs and outcomes need to become more visible.

In this context, it was thought to be appropriate to launch an exercise to assess the costs and benefits of existing ECCD programmes in order to make informed policy choices for the future. Since M.S. Swaminathan Research Foundation has neither the resources nor the capability to mount such an exercise, it was thought best to undertake a preliminary brainstorming and bring together a wide spectrum of experienced and concerned persons from diverse disciplines to arrive at a clearer understanding of what needed to be done. The aim was to take stock of the existing scenario, particularly in relation to the available approaches and tools for evaluation, alert policy makers to the need and available methodologies for large-scale cost-benefit studies.

The objectives of the brainstorming were:

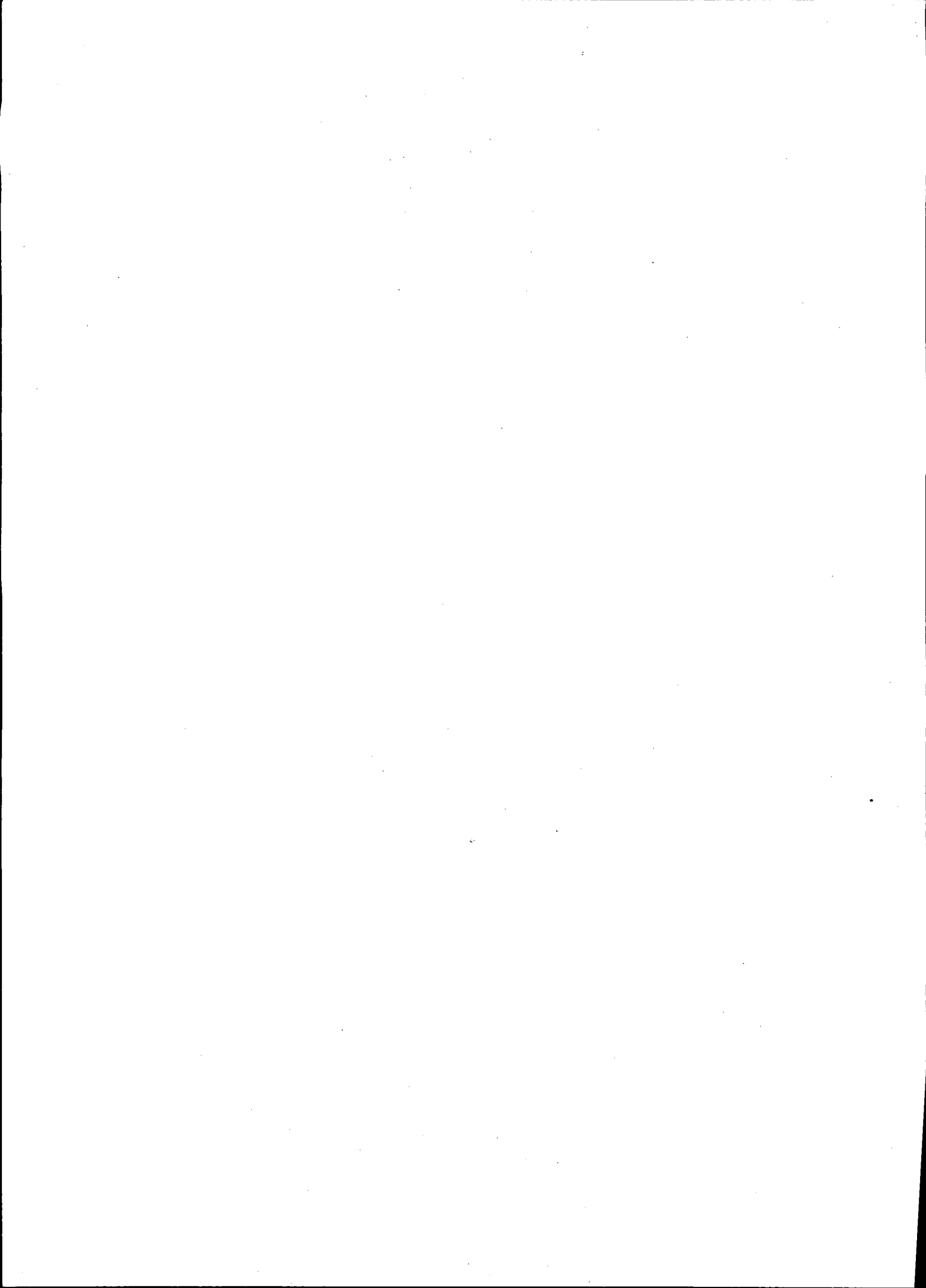
- To understand and refine multi-dimensional concepts for developing indicators.
- To list the possibilities for developing and refining costing tools.
- To discuss methodological aspects for a possible costing exercise at a micro level.
- To recommend the need for cost analysis studies at a macro level.

The strategy adopted for the brainstorming with a discussion paper (Annexure F) circulated some weeks before the workshop. Many resource persons from within and outside the country responded with their insights on the concept note as well as on the whole exercise. On-going studies on cost analysis, especially cost-effectiveness, were assembled as reference materials.

Specific contributions in the areas of child development, nutrition, women's perspectives and community participation enriched the brainstorming, with wide-ranging discussions on the monetisation of benefits, the use of quantitative and qualitative methods and the different approaches to cost analysis. Indirect and hidden costs which have implications for programme quality were also intensely debated, as were the strategies need to capture field realities, in order to evolve the tools/framework for further study.

This report attempts to crystallise the discussions and highlight the insights that could point the way for policy makers to undertake such studies.

Mina Swaminathan



Programme Schedule

30 September 1999

- 9.00 - 9.30 a.m. **Introductory Session**
- Welcome Address* **Dr. P. C. Kesavan**
 Executive Director
 M.S. Swaminathan Research Foundation
- Introduction to the* **Ms. Mina Swaminathan**
 Workshop *Director, Project ACCESS*
 M. S. Swaminathan Research Foundation
- 9.30 - 11.00 a.m. **Session I**
- Chair* **Dr. S. Anandalakshmy**
 Consultant, Child Development and Education
- Panellists*
- Child Outcome Measures
- Dr. M. K. C. Nair**
 Head, Department of Paediatrics
 Child Development Centre, Trivandrum
- Child and Community Outcome Indicators for ECD
 Programme Evaluation
- Dr. Adarsh Sharma**
 Additional Director (TC), NIPCCD, New Delhi
- Dimensions for Implementors/Policy Makers
- Dr. Anuradha Rajivan I.A.S.**
 Chairperson / Managing Director, Tamil Nadu
 Corporation for Women Development, Chennai
- Measurement of Nutritional and Health
 Outcomes in the Area of Programme Evaluation
- Dr. Tara Gopaldas**
 Director, Tara Consultancy Services, Bangalore
- 2.30 - 6.00 p.m. **Session II**
- Chair* **Ms. Lakshmi Krishnamurthy**
 Alarippu, Bangalore
- Panellists*
- Impact of Child Care Services on Working Mothers
- Ms. Rajalakshmi Sriram**
 Department of Human Development and Family
 Studies, Baroda University
- Urban Situation and the Methodology of Community
 Resource Mapping
- Ms. Renu Khosla**
 Research and Training Co-ordinator
 National Institute for Urban Affairs, New Delhi
- Community and Other Stakeholder Related Indicators
- Ms. Kamini Kapadia**
 Convenor - Maharashtra FORCES and Director
 Committed Communities Development Trust, Mumbai

1 October 1999

Day 2

9.30 - 11.00 a.m.

Session III

Monetising Costs and Benefits

Chair

Dr. A. Vaidyanathan

Professor

Madras Institute for Development Studies, Chennai

Panellists

Dr. Jandhyala B G Tilak

Senior Fellow & Head

Educational Finance Unit, National

Institute of Educational Planning and

Administration, New Delhi

Dr. V.R. Muraleedharan

Associate Professor of Economics

Department of Humanities and Social Sciences

Indian Institute of Technology, Chennai

11.15 - 1.30 p.m.

Session IV

Open Forum on Implications for Policy

Chair

Ms. E. V. Shantha

Consultant

Discussants

Ms. Girija Vaidyanathan I.A.S.

Special Secretary

Department of Finance, Government of

Tamil Nadu Chennai

Ms. Patrice Engle

Chief (Child Development, Nutrition and

Disability Section) UNICEF, New Delhi

Ms. Isabelle Austin

Chief, UNICEF, Chennai

Dr. Adarsh Sharma

Additional Director (TC), NIPCCD, New Delhi

Dr. S. Murugan

Additional Director

Tamil Nadu Integrated Nutrition Project

Chennai

Vote of Thanks

Ms. Rama Narayanan

Project In-charge, Project ACCESS, MSSRF



I

MEASURING BENEFITS

In analysing the costs and benefits of ECD programmes, indicators would be needed to

- Study the appropriateness or cost utility of the programme for the population which it is meant to serve
- Establish the validity of spending money on different schemes/programmes
- Enhance understanding of strategies to reduce costs and increase benefits
- Choose schemes/programmes which have similar objectives but are more cost effective when compared to others, and
- Facilitate understanding of possible convergence of schemes/programmes

Definitions

What are indicators? One definition is the following:

“Indicators are quantitative descriptions of social conditions intended to inform public opinion and national policy making. These delineate social states, define social problems and trace social trends which, by social engineering, may hopefully be guided towards social goals, formulated by social planning” (Duncan, 1974). This definition clearly points to the purpose, scope and rationale of developing and using social indicators. In simple language, an indicator could be termed an evidence that something has happened, or that an objective has been achieved.

Having defined indicators, the next task is to evolve appropriate ones. Who should be involved in this process? Every ECD programme reaches out to different stakeholders in order to achieve its goals and objectives. The perspectives of the different user groups, or beneficiaries, such as young children, pregnant and lactating mothers, parents, teachers, programme managers, helpers, community leaders, researchers and professionals, politicians, Government, NGOs and funding agencies need to be in

volved. Less explicitly identified user groups receiving indirect benefits - such as employers who gain from parents' availability for work, primary school teachers, who receive better prepared children into school, and older siblings who are released from child care responsibilities could also be involved.

To facilitate the process of identifying indicators it would be worthwhile to consider the ECD programmes component-wise, in terms of inputs, process, outputs and outcomes. **Inputs** refer to those *direct and indirect resources* (human, capital and others) needed for planning and implementation of activities at different stages of the programme. **Process** refers to what actually happens from day to-day in simple terms, it refers to *what is being done and how it is being done*. The various actions and interactions taking place over a period of time can be seen in terms of various inputs/costs incurred. **Outputs** refer to those *measurable products* attributable to an input or a combination of inputs in a programme. **Outcomes** have a broader framework, referring to an *end state*, which may or may not be the intended effect of inputs, processes and outputs.

A total analysis would include the following aspects:

- The ratio of benefits to costs, popularly termed as *efficiency*
- *Effectiveness*, or the extent to which programme objectives are achieved
- *Accessibility* in terms of availability of a service with reference to time, location etc
- Relevance to need, also known as *appropriateness*, and
- *Acceptability* to individuals, groups, communities and society at large.

Programmatic and Organisational Indicators

In order to have a wider perspective, there is also a need to look at programmatic and organisational indicators at different levels. Change in organisational structure over a period of time has implications for future activities. Aspects like decentralisation resulting from the new policy of devolution of power from higher levels of Government to local authorities will have a significant part to play in programme delivery and therefore, any evaluation should have a close look at the following:

- Mission statement of ECD programmes (eg. ICDS)
- Role of the stakeholders
- New strategies as instruments of change

The following illustrates the kind of input indicators required related to planning, monitoring processes and evaluation aspects.

Indicators in Programme Planning and Monitoring

Initial Stages of Planning

- Social assessment
- Activity planning
- Project Evaluation and Review Technique (PERT) which includes time and cost variance
- Critical Path Method (CPM)

Location

- Arbitrary choice
- Need based

Training

- Materials (Adaptability and suitability to local conditions)
- Process
 - In-service training
 - Capacity building of trainers
 - Role of local, regional and national training institutions
 - Innovations and flexibility

Staffing

- Anganwadi workers
 - Qualification, training and competence (attitudes, role consciousness and sustaining motivation)
- Supervisory staff
 - Qualification, training and competence
- Consultants
 - Define role, sustain motivation-professional status
 - Financial incentives and self-fulfillment

Monitoring -Status of scheduled activities

- Supervision
 - Adequacy of supervision at all levels
- Child-AWWs interaction
 - Relationship building
 - Reception of child in the anganwadi
 - Enthusiasm of child to go to the anganwadi
 - Daily attendance
 - Nurturing ambience in anganwadi
 - Actual time spent with children
 - Support of parents
 - Support of neighbours
- Information collection process
 - Capability of AWWs crisis management and routine activities
 - Availability of tools
 - Coverage
- Utilisation of data
 - Capability of system

Contd...

Availability of information
Information processing tools

- Feedback mechanism
 - Existence of two way feedback system
 - Mid-course correction done or not

M.K.C. Nair

Child-related Indicators

The major objective of ECD programmes is to assure the well-being of the young child. The critical litmus test to judge any ECD intervention will therefore be: what does it do for children? "Whether children fare well or poorly in the context of various changes taking place, is an empirical and not a normative question" (Corbett, 1997). This question can only be answered if there is adequate data on the critical issues. Therefore, identifying and developing child - related indicators is a challenging and worthy effort.

Seen from a historical perspective, one can observe a movement among social scientists in the West, particularly in the United States, to develop measures to assess the well-being of children. Indicators of child well being are needed not only for programme evaluation, but also for raising public awareness, for tracking the well-being of children, representing specific political/geographical/religious constituencies and for academic and policy research to test explanatory models of influence. In order to select indicators, a consensus on the crucial dimensions of well - being of children must emerge. An attempt has been made by Moore (1997) to identify criteria for child indicators.

Criteria for Social Indicators of Child Well-being

- Comprehensible coverage - well-being across a broad array of outcomes, behaviour and processes
- Children of all ages - appropriateness for every age from birth through adolescence
- Clear and comprehensible - easily and readily understood by the public
- Positive outcomes - able to handle positive as well as negative aspects of well-being
- Depth, breadth and duration. - dispersion across given measures of well-being
- Consistency over time - have the same meaning across time
- Forward-looking - anticipate the future and provide baseline data for subsequent trends
- Rigorous methods - coverage of the population or event being monitored should be complete or very high, with rigorous data collection procedures
- Geographically detailed - not only at the national level, but also at the state and local level
- Reflective of social goals - allow tracking of progress in meeting national, state and local goals for child well-being

Kristin A. Moore

So far there has been a tendency to rely on *what has been available* rather than on developing *what is needed*. The renewed interest in child indicators is an encouraging sign and requires concerted efforts to enrich the existing indicators available in several reporting systems. These may be refined further and modified to suit contemporary needs. Several sets of illustrative child-related indicators are listed below, which can be further developed, even integrated.

Input indicators are the easiest to define and measure. They may include the following:

Input Indicators

- The building and surroundings (space per child, heating/lighting, toilet/washing facilities, etc.)
- Materials and equipment (furniture, play equipment, teaching/learning materials, audio-visual equipment, etc.)
- Staffing (qualifications, basic training, pay and conditions, child-adult ratios etc.)

Adarsh Sharma

Process indicators are more difficult to pin down and standardise, although some systematic procedures have been developed.

Process Indicators

- Style of care (adults' availability to the children, responsiveness, consistency etc.)
- Experience of children (variety, how experience is organised, choices available to children, patterns of activity, eating, resting, play, etc.)
- Approach to teaching and learning (control/support of children's activities, task demands, sensitivity to individual differences, etc.)
- Approach to control and discipline (boundary setting, rules, group management, discipline strategies, etc.)
- Relationships among adults (day to day communication, co-operation etc.)
- Relationships between parents, care givers and others (handover/greeting arrangements, opportunities for communication about the child, mutual respect, co-operation, acknowledgement of differences, etc.)

Adarsh Sharma

Output indicators can be developed in the context of ICDS objectives, which are community related.

Output Indicators

Improvement in health and nutrition status of children and mothers including morbidity and mortality (objectives 1 and 2 of ICDS)

- IMR
- MMR
- Morbidity rate
- Nutritional status (from one grade to other)
- School enrollment (percentage - separately for boys and girls)
- Coverage of immunisation for mothers and children - overall and for each type of immunisation
- Safe delivery (in percentage)
- Number of ANC and PNC checkups
- Taking of iron and folic acid tablets
- Coverage of children for Vitamin A doses
- Percentage of children covered under health check-ups
- Percentage of children covered under SNP
- Percentage of children having access to ORS

Reduction in school dropouts (objective 3 of ICDS)

- Percentage of children in the age group of 6 years enrolled in school
- Percentage of children attaining minimum level of learning (time span to be fixed for this)

KAP of mothers to enhance their capability to look after health and nutrition needs of children (objective 4 of ICDS)

- ANC/PNC checkups
- Immunization
- Exclusive breastfeeding for at least three months
- Complementary feeding after that
- Common illnesses of children and their management
- Nutritional needs of children
- Personal hygiene and sanitation
- Family planning

Coordination of policy for survival and development of children and mothers (objective 5 of ICDS)

- Number of meetings by various departments for programme planning
- Number and types of resources converged
- Number and types of programme converged
- Number of NGOs involved as partners
- Number and types of community influentials involved
- Perceived benefits of stakeholders

Kamini Kapadia

Yet another framework is suggested below, related specifically to the measurable aspects of nutrition, health and hygiene, which could be meaningfully collected at the level of the ECD centre.

Evaluation Matrix for Nutrition, Health and Hygiene in Children (0-6 yrs) in ICDS

Input Indicators	Process Indicators			Impact Indicators	Measurement of Impact
	Delivery	Coverage	Participation		
A. Nutrition					
1. Supplementary food 2. Nutrition-Health Education 3. Iron supplement 4. Vitamin A supplement 5. Use of iodized salt 6. Growth monitoring 7. Safe water availability	% efficiency in timely procurement and delivery on time, in adequate amounts to the AWCs	% percentage efficiency in coverage : ● 0-1yrs ● 1-2 yrs ● 2-3 yrs ● 3-4 yrs ● 4-5 yrs ● 5-6 yrs children	% participation by child - mother dyads ● 0-1yrs ● 1-2 yrs ● 2-3 yrs ● 3-4 yrs ● 4-5 yrs ● 5-6 yrs children	● Anthropometry for age ● Dietary ● Clinical ● Biochemical ● Knowledge ● Attitudes ● Practice	● Weight and height for age ● Consumption of ration ● For PEM I, FE & Vit A ● For Hb ● By participatory research assessment

Evaluation Matrix for Nutrition, Health and Hygiene in Children (0-6 yrs) in ICDS

Input Indicators	Process Indicators			Impact Indicators	Measurement of Impact
	Delivery	Coverage	Participation		
B. Health					
1. Immunization 2. Health checkups 3. Referral 4. Management of common illness 5. Deworming	% efficiency in delivery: 1. Of all vaccines 2. As needed 3. As needed 4. Drugs for ARI, URI & GIT 5. Deworming tablets 6. Materials	% efficiency in coverage: ● 0-1yrs ● 1-2 yrs ● 2-3 yrs ● 3-4 yrs ● 4-5 yrs ● 5-6 yrs children	% participation by child - mother dyads - Immunization (all) - Health checkups annually (all) - Deworming (all) - Health and FP ED for all parents and Panchayat - Referral (as required)	- % Decrease in Polio T, measles, whooping cough - % Increase in healthy children - % Decrease in prevalence - % Increase in KAP - % Decrease in referral	- Surveys / AWC reports - Surveys AWC reports - Medical exam - Parasitology - PRA - Surveys / Referral

Evaluation Matrix for Nutrition, Health and Hygiene in Children (0-6 yrs) in ICDS

Input Indicators	Process Indicators			Impact Indicators	Measurement of impact
	Delivery	Coverage	Participation		
C. Hygiene					
1. Safe water	% availability	Everyone covered	Everyone has to participate	- Safe / not safe	- Microbiological Test
2. Toilet	% availability			- Toilet	- Observation
3. Personal hygiene	Not relevant			- Personal hygiene	- Observation
4. Environmental hygiene	% AWCs having good environment			- Good environment	- Observation
5. Kucha/puccka flooring	% having puccka flooring			- Flooring	- Intestinal Helminths in a sub-sample

Tara Gopaldas

Outcome indicators at the child level are complex and long-term and could be studied by some of the following

Impact Indicators (Child-related)

- Percentage of *infants* in each developmental category with characteristics like absence of head holding at the completion of four months, restricted adductor angle, grossly exaggerated adductor angle and delay in Trivandrum Developmental Screening Chart Items
- Aspects like comprehension, memory, concentration etc from Nursery Evaluation Scale Trivandrum (NEST) and other items on global, gross motor, fine motor, cognitive, receptive language and expressive language delays at the *pre-school age*
- Detection of *childhood disability* according to WHO criteria for movement, speech and hearing, visual disorders, learning and behavioural problems, fits related abnormal movement etc.
- *Child's adjustment* to school in relation to pre-school and primary school enrolment with gender differentials, transition difficulties, progress through grades, school achievement and drop-out rates.
- Availability of toys, puzzles, creative activities, musical instruments, arts and crafts, children's books and outdoor activities in an anganwadi for a healthy safe *child-stimulating and nurturing environment*
- Assessment of *nutritional status* related characteristics like weight and height for age, weight for height, body mass index, moderate malnutrition and stunting rates
- *Health* aspects like coverage and type (completely, partially, unprotected) of immunisation, iron folic acid and Vitamin A supplementation, access to ORS and other health check ups
- Practices for promotion of *personal and environmental hygiene* like provision of safe water and use of toilet

(Contd ...)

- Knowledge, Attitudes and Practices (KAP) of *mothers* in aspects like exclusive breastfeeding at four months, complementary feeding practices, immunisation status and ANC/PNC checkups
- *Family attitudes* in relation to support provided for children's learning, parental competencies and awareness of their children's needs
- Varied *perceptions* of stakeholders like anganwadi workers, women, family, local panchayats and the community towards the programme and its benefits
- *Macro-indicators* pertaining to perinatal, neonatal, infant, under-five and maternal mortality rates and morbidity patterns

M.K.C. Nair

To get the most out of the studies, some longitudinal studies would be needed, which would track cohorts, study the linkages between ECD and school drop-out rates, and evolve measures to study the impact on children. The perceptions of stakeholders also would be addressed by such studies, as many parents demand formal education even at the child's early age, while specialists may stress their possibly damaging consequences.

Various tools like the misery index, well-being index and social mapping exercises for organisational planning could be used. Qualitative aspects like the happiness, emotions, anger and frustrations of children should be included in the exercise. Studies on crime and communal violence in the U.S. suggest ways of studying of how children resolve conflict, anger and frustration but these are aspects that are mostly avoided because of the difficulty of measuring them.

Women and Family-related Indicators

It is now widely accepted that ECD programmes are a crucial input not only for supporting the process of women's development and empowerment, but also for supporting families to overcome the vicious cycle of poverty, underdevelopment and related problems. ECD programmes have evolved from a variety of philosophical orientations and vantage points. The significance of its impact on the spheres of family and community life is now recognised to the extent that programmes focus consciously on this element in their design, making them community and woman friendly.

Empowerment (Batliwala 1993) is a process aimed at altering systemic forces which marginalise women in a given context. Dandekar (1986) clusters these into four major categories:

- Women's economic base
- Public/political arena allowed to women by society
- Strengths and limitations imposed by family, its structure and demands
- The woman's perception of herself in the psychological/ideological sense.

The process of self-development and empowerment is both individual and collective. Supportive child care services are seen as a practical need of poor working women, but the process of setting up and sustaining the service also has great potential for meeting some strategic gender needs, which can bring positive changes in the lives of women. To study the inputs, process, and outcomes the factors listed below can be considered.

Child Care Services and Working Mothers

I. Inputs

Accessibility and Availability

- Is the centre accessible to all mothers who need? such as the poorest/lowest caste women?
- Which group of employed women cannot access it? and why?
- How many families / working mothers regularly avail the facility?
- Are the timings and location of services appropriate?
- What are the reasons for non-utilization by each group?
- How many mothers need childcare service? How many covered (the ratio)?
 - Agricultural labour
 - Small farmers
 - Industrial workers
 - Home based workers
 - Casual labour
 - Low caste
 - Poorest of the poor
 - Childcare worker / teacher
 - Shift workers / night labour

II. Process

Implementation of Service

- Who implements the service? and how was the decision arrived at? with or without consultation with women?
 - NGO only
 - Government only
 - Others (specify)
 - NGO and Government
- Nature of consultation and participation
 - In design
 - In decisions
 - In execution
 - General support
 - In utilization of service

(Contd ...)

Details on all the above aspects with reference to

- Nature of suggestions given
- Nature of suggestions considered
- Whether authority rests with women for decision, control over resources, ownership and responsibility

Prevalent governing structure and the position of the women within it. Roles of mothers, childcare workers, community women, and other functionaries can be plotted schematically.

III. Outcomes / Impact on Women

Impact on women can be studied at various levels, as support for

- Motherhood
- Employment
- Household tasks
- Social and community activities
- Self-development

Rajalakshmi Sriram

Improved parenting skills, leadership and decision-making abilities, reduced stress/drudgery, increased earning capacity, generation of new employment opportunities and greater permanency in work are some of the indirect outcomes of support services (Annexure A). One of the benefits could also be the release of girl children from household chores and child care responsibilities that would lead to better education.

However, to define parameters in developing indicators it is necessary to pin down both qualitative and quantitative aspects. For example, the Mahila Samakhya Programme in Karnataka provides a clear conceptual framework for evaluation of the input, process and outcomes involved in the process of empowerment of women's groups known popularly as a *sangha* (Annexure B), as well as detailed guidelines for different aspects of evaluation (Annexure C)

But such parameters work only in the context of specific programme objectives. In areas where there are no ECD programmes, only the family or the community takes on the responsibility of caregiving to children, and there is a paradigm shift when programmes are brought in. Often families and communities perceive ECD programmes as part of the formal system of education. In the present dismal state of performance of primary education, community aspirations for education become focussed on the ECD programme and the anganwadi worker is forced to cater to such family and community needs.

What value should be placed on traditional cultural practices is another question that arises in this context. If space for the

family has been given, then ECD interventions must recognise the family and negotiate on possible conflicts of values. For example, if those who study/evaluate and those who are being studied / evaluated / have different worldviews, where is the balance between the two to be struck? Questions like whose perceptions take precedence and whose perceptions are being evaluated arise in the context of project evaluation. The following case illustrates the dilemma.

Visit to a "prize-winning" ICDS Centre

A mixed team of foreign funders and the ubiquitous local consultants "experts" are visting an ICDS anganwadi which has won a prize for being one of the best in meeting two criteria - having a large room and space outside to play. Children are sitting on brightly coloured plastic chairs placed around plastic tables and there is barely any space to move around them. The CDPO, the supervisors, the AWW, the helper and assorted government officials mandated to accompany the team, all beam with pride at the splash of plastic colour around.

The team is a bit aghast at how all this plastic diverts from the "real" purpose of turning out self-confident, articulate, creative, curious-about-this-and-that children. Parents, community, the AWWs, all plump for an obedient, hardworking, truth-telling child as the ideal, somewhat at variance with the academic/expert/individualistic/appreciation of a chattering, fearless, active and imaginative child. The parents say "The child doesn't listen to us" or "She answers back like a boy". The AWW says "She disturbs everyone in class", but we say "She is discovering the world, realising her potential". These are the different world views and the varied "expected outcomes".

Lakshmi Krishnamurthy

The role of the stakeholders also needs to become more clear on issues like which functions should be with whom. Whether nutrition should be part of a centre-based programme should also be raised as an issue, because providing food can be seen as an indirect attack on parents' self esteem. Each component and its specific functions have to be complementary to each other, and not contradictory, for success in evaluation.

Community-related Indicators

The extent of emphasis placed on various stakeholders' perceptions would differ according to the organisational setting - in a Government programme, the content is more emphasised, but an NGO programme, people's perceptions and participation are given greater importance. In a community setting, many factors influence changes in knowledge, attitudes and practices. To avoid bias in reporting, the presence of factors like the following should be taken into consideration in evolving appropriate indicators.

Interacting Factors in a Community Setting

- other schemes offered by the Government and the relative costs of these schemes.
- schemes of NGOs, especially with women's groups
- preparedness of the community for services
- educational level of mothers
- exposure to mass media communication channels
- political will and support
- drought situations/disasters
- differing characteristics of rural, urban and tribal communities
- occupations in the community
- type of leadership provided by the programme personnel
- access to basic services-health care, education, safe drinking water, sanitation

Kamini Kapadia

Reporting and evaluation on activities related to policy for survival and development of children and mothers should include quantitative details about the meetings of various departments for programme planning, types of programmes, the resources used for convergence, partnership with NGOs, community influentials involved and the perceived benefits of stakeholders.

The process of community participation in relation to administrative and management costs could be observed in terms of the following aspects:

Key Aspects of Community Participation

- Who takes decisions about acquiring space/equipment?
- Who actually acquires the equipment?
- Who, according to the project team, are the stakeholders?
- Are any efforts made at converging schemes? By whom?
- Does the community have any role in maintenance of the centre/equipment?
- Is the expenditure on equipment/space justifiable, according to the project team and the stakeholders?
- What could have been other ways of meeting the same costs?
- Could any of the costs have been reduced?

Kamini Kapadia

In this context, the term stakeholders refer to women's groups, elected representatives, community influentials, other NGOS, child care workers, local doctors, municipal authorities, donors,

Government officials and other related departments. The outputs would however be varied and community and other stakeholder meetings will help to record perceived benefits.

Indirect benefits such as meeting the perceived needs of the parents, changes in attitudes of child care workers, local panchayat, women and community as a whole towards the programme, improved accessibility to other services related to ECD programmes, increased opportunity for women to engage in economic activity outside the home, community ownership and increased demand for ECD services could be measured by qualitative indicators in a participatory manner. As an example, if one could measure the performance of immunisation programmes with and without the contribution of anganwadi workers, indirect benefits to the community could be captured. The ongoing devolution of power to local authorities has set in a process of democratization of social programmes in which the communities are expected to participate actively in implementing and monitoring of social services. The development of indicators could assist them immensely in this process.

Urban-Rural Differences

Urban-rural differences are another dimension where community-related indicators could prove useful. There is little uniformity in the spread of ECD programmes and very low density of ECD programmes in urban slums. It would be worthwhile studying the causes of the uniformly low priority attributed by all stakeholders to such programmes. To study such perception differences, participatory methodologies would help both in developing good baseline data as well as in identifying post facto indicators. The scope of such an exercise should be wide enough to bring in the intangibles that need not necessarily be quantified. Questions like whose intentions, whose benefits and whose costs need to be addressed in a multiple stakeholder perception gathering exercise, with the help of a reporting system that includes community tools as monitoring tools. However, participatory tools like PRA sometimes have the danger of becoming mere rituals, and a balanced usage is needed. Some of the following could be used.

Participatory Measurement Tools

- Resource Mapping
 - City Maps
 - Community Resource Maps
 - Community Household Maps
 - Children's Maps
- Daily Routine Diagrams
- 24 Seeds
- Matrix Ranking/Paired Wise Ranking
- Wealth Ranking
- Trend Analysis
- Time Line
- *Chapati* Diagrams
- Seeds

Renu Khosla

Using Qualitative Indicators

Individual and social change through education or empowerment is not a short-term process. Results, expected or often otherwise, come piece-meal and spread over a period of time. Any process that promotes sustainability is important. Often the long-term implications are different, with unexpected and unplanned outcomes not related to the predicted outcomes. Distilling data, understanding and interpreting it is not easy. Measuring may be desirable, but quantifying may not.

Apart from the difficulties of evaluating process and the qualitative aspects, there is also the question of the different styles in which concepts are handled. At the community level, many people may deal in "cases" and communicate in "stories", while researchers tend to bind the number of cases and stories into formal categories. It is not therefore necessary for everyone in the programme to do so. The spirit behind the 'case' is what matters and if that is internalised, the rest can be resolved.

In the kaleidoscope of shifting relationships implicit in the process of change, it is difficult to assign value to different understandings of empowerment, to attitudes often related to urban or rural settings. For example, studies have found that rural women are not as individualistic as urban middle - class women, and for them 'self' often includes family. Does empowerment then mean becoming more individualistic rather than group-minded? Predictability is not easy as many indicators surface post facto. Here lies the challenge and the excitement of observing, understanding and interpreting the qualitative aspects of social change and education. The cognitive (mostly measurable) is as important as the non-cognitive - more recently called "life skills" eg. self-knowledge, confidence and self - esteem, empathy and the ability to get on with others, social skills. These have to be dealt with in different ways.

Values and Attitudes

Clarification and negotiation are needed on differences in "values" of the researchers, the programme personnel and the other stakeholders. If the real aim in ECD is to socialise the child, whose values should one consider - the funder, the researcher, the parent or the child care worker? Values like co-operation, conformity and other issues are hidden, so they will have to be taken into account with the help of qualitative indicators which cannot quantify, but offer more legitimacy and respectability. For example, if parents want obedient children and programme implementers require curious, alive and alert children, is there not a clash/conflict of values? If so, ways and means of resolving it ethically need to be consciously undertaken.

Though interventions are "subversion" of values at some level or the other, some values like self-confidence and gender equality are undoubted, so there is no need to feel embarrassed while talking of them. In an example drawn from a study on the family, many women said they felt 'strong' by wearing the same sort of the clothes and eating the same food as the upper-caste women. Yet the researchers would call this "sanskritisation" (an imitation of upper caste habits) and therefore not of intrinsic value in raising self-esteem. They would expect the women to be proud of their own 'culture' and not rise through imitation (Annexure D).

Some Methodological Considerations

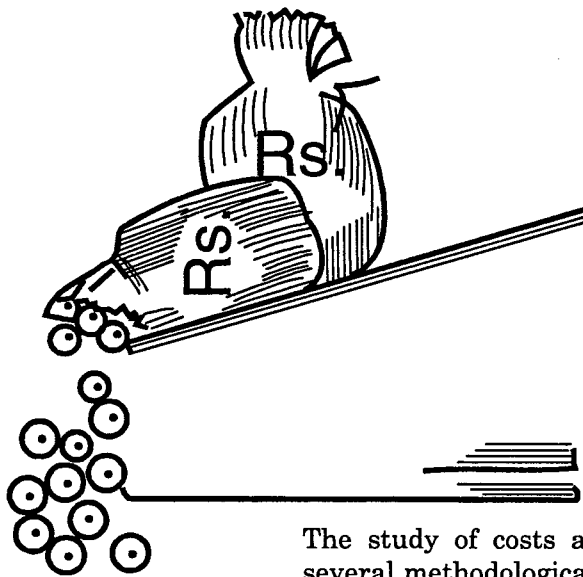
Research, especially feminist research, has added emphasis and respectability to process-oriented and qualitative data. It is necessary to support these efforts, for much that matters in life and much that motivates change and development, is qualitative – too complex a matter to capture in the more simplistic terms of quantitative measurement.

If a multi-stakeholder level analysis is envisaged, it may be difficult to obtain the kind of data needed from Indian ECD programmes. It would therefore be necessary to utilise secondary data and review already existing literature and tools. Methodological problems also need to be solved in the context of comparison between project and non-project areas, early and late started projects, siblings in same family and asking gender-related questions.

Assessment of the benefits is not easy, as ECD interventions influence and are influenced by developments over an entire life cycle. The outcome of programmatic interventions (like in ICDS and TINP) will depend, *inter alia*, upon many other events in the life cycle, e.g. the type of care received during the prenatal phase, the nature of support during childbirth, and the investments made during infancy. The cycle could be linked as adolescence-marriage-fertility decisions-prenatal phase-pregnancy-childbirth-infancy-early childhood- through to adolescence. Moreover, what happens in the other stages of the life-cycle may in turn be influenced by developments in a number of areas not directly involving ECD, such as women's empowerment, improved education, expansion of immunization coverage, improved access to safe delivery etc. The effectiveness of ECD interventions is also a function of technological possibility, institutional arrangements, political compulsions and socio-cultural practices. So, it is important to understand the inter-connections in any careful assessment.

From the point of view of feasibility, an important question to consider is whether to measure only the child's experience and not enter into the performance of the ECD service delivery system as a whole. At the micro level, macro-dimensions may not be needed, but they could significantly alter the yardstick for measuring smaller and larger programmes.

A cautionary note of Prosser and Stagner (1997) needs to be considered in relation to the use of indicators in evaluation - "It is hard to fault efforts to hold government officials accountable for their performance. Yet, only in special circumstances can indicators be used to evaluate the impact of public policies. In addition, the more transparent an indicator is, the less likely it is to be directly connected to government action or inaction". It may be worthwhile to list both the positive and negative aspects over a time period using related and complementary indicators. A combination of quantitative and qualitative data could enrich the exercise substantially.



II

MEASURING COSTS

The study of costs and benefits of ECD interventions involves several methodological issues. While much work has been done on the economics of education, very little has been done in India on the area of ECD. Fears about the desirability of estimating the costs and benefits of ECD, the feasibility of such studies and their acceptability echo the debates of about forty years ago when economic analysis of education was in its infancy. The procedure and methodologies required for ECD may perhaps be more complicated as a number of aspects are included that are difficult to measure and monetise in terms of costs as well as social benefits. But as consensus has gradually evolved on a variety of methodological, theoretical and empirical issues related to the economics of education, the present initiatives will lead in the long run to refined and acceptable procedures and methodologies in the economics of ECD.

Why cost analysis?

While ECD needs no justification, a detailed estimate and analysis of costs can be used for

- Planning and mobilisation of resources
- Analytical and evaluative purposes and budgeting
- Estimating resource requirements from the public or private sector and
- Advocacy

Therefore it is necessary to understand the various concepts and select from the different approaches to suit the requirements of the task in hand. "One of the more confusing aspects of incorporating cost analysis into evaluation and decision making in ECD is that a number of different, but related, concepts and terms are often used interchangeably in referring to such approaches. Among these are cost-effectiveness, cost-benefit and cost-utility. Although each is related to and can be considered to be a member in good standing of the cost-analysis family, each is characterized by important distinguishing elements". (Levin, 1988).

Very often the terms costs and expenditures are synonymously used, though there is a clear distinction between the two. Expenditure can be defined as the money expenditure incurred on any item relating to the ECD process, irrespective of the source of expenditure. On the other hand, costs can be defined as the value of all the inputs that go into the ECD process, i.e. it includes the value of not only those inputs for which expenditure is incurred, but also for which no expenditure was incurred. In other words, while expenditure is expressed only in monetary terms, costs can be expressed in monetary as well as in real or physical terms.

Cost Utility Analysis (CUA)

Cost-utility (CU) analysis refers to the "evaluation of alternatives based on comparison of their costs and the estimated utility or value of their outcomes. When subjective assessments must be made about the nature and probability of educational outcomes as well as their relative values, cost utility analysis may be an appropriate tool, permitting the use of a wide range of qualitative and quantitative data". (Levin, 1988). Mostly such analysis is done for health programmes to obtain ratings which do not require monetisation, for example, using the perceptions of patients to rate the utility of health programmes. From the people's perspective, it is the cost utility that is appreciated and seen as relevant. However the highly subjective nature of the assessments of effectiveness and the values placed upon them prevent the kind of replicability from analysis to analysis that might be obtained with other stringent models / tools.

"The advantages of this approach are that the data requirements are less stringent, a large number of potential outcomes can be included in the evaluation, and imperfect information and uncertainty can be addressed systematically. The major disadvantage is the fact that the results cannot be reproduced on the basis of a standard methodology among different evaluators, since most of the assessments are highly subjective ones, based on different sets of probabilities, values and utilities.

Further, there are numerous difficulties in aggregating the utility assessments of individuals to obtain a "social utility" approach, and combining individual utility responses into a collective representation. Finally, utility scales are often viewed as having only ordinal rather than cardinal or fixed-interval properties that may be subject to criticism". (Levin, 1988)

Cost Benefit Analysis (CBA)

This term refers to the "evaluation of alternatives according to a comparison of costs and benefits when each is measured in monetary terms. A cost benefit study attempts to measure the values of both the costs and benefits of each alternative in monetary units. Hence, each alternative can be examined on its own merits to see if it is worthwhile. In order to be considered for selection, any alternative must show benefits in excess of costs, and to be selected from among alternatives, should have the lowest cost-benefit (or the highest benefit-cost) ratio". (Levin, 1988)

The advantages of such an analysis are :

- All benefits of a programme can be identified and monetised
- Lifetime benefits and their discounting can be included
- An estimation of a cost benefit ratio or the internal rate of return is possible
- Labour markets can be looked into on a long term basis from the point of view of women's employment.
- Benefits arising out of the increased earning capacity of parents to children and society can be included.

The disadvantage is that benefits and costs have to be assessed in pecuniary terms and it is not often possible to do this in a systematic and rigorous manner. For example, while the gains in earnings and certain self-provided services attributed to higher levels of literacy might be assessed according to their pecuniary worth, how does one assess benefits such as improvement in self-esteem of the newly literate adults or their enhanced appreciation of reading materials? This shortcoming suggests that only under certain circumstances would one wish to use CBA. Those situations would obtain when all of the benefits could be readily converted into pecuniary values or when those that cannot be converted tend to be unimportant or can be shown to be similar among the alternatives that are being considered.

Cost Effectiveness Analysis (CEA)

This refers to the "evaluation of alternatives according to their costs and their effects with regard to producing a set of outcomes. For example, in the field of education, if the objective of an intervention is to increase test scores in basic skills or reduce dropouts, then the results of alternative interventions can be assessed according to their effects on improving test scores or on the number of dropouts. When costs are combined with measures of effectiveness and all alternatives can be evaluated according to their costs and their contribution to meeting the same effectiveness criterion, the ingredients for a CE analysis exist". (Levin, 1988). In the context of ECD, the definition of the immediate output of the system and its performance is crucial. Concentration may be directed towards identification of important outputs, regarding, for example, immunisation, number of children fed, the effective mode of food delivery etc. and then considered as a problem of how to optimise the costs related to the set of outputs.

CEA has several strengths. To begin with, only programs with similar or identical goals can be compared, and a common measure of effectiveness has been used to assess them.

Effectiveness data can be combined with costs in order to provide a cost-effectiveness evaluation that will enable the selection of alternatives which provide the maximum effectiveness per level of cost or which require the least cost per level of effectiveness. It merely requires combining cost data with the effectiveness data

that are ordinarily available from an evaluation to create a cost-effectiveness comparison, and it lends itself well to an evaluation of alternatives that are being considered for accomplishing a particular goal.

The weaknesses of this approach are that:

- Comparing the CE ratios among alternatives is possible only if they have the same goals and alternatives with different goals cannot be compared
- It cannot be determined whether a programme is worthwhile in the sense that its benefits exceed its costs, i.e, even the most preferable alternative might be a poor investment if one were to ask whether the programme is worthwhile.

In the context of selecting the appropriate approach, the question arises of how to measure and monetise benefits accruing to different stakeholders from an ECD programme and what indicators could be used for this purpose. A decision on this would lead to the choice of approach.

Estimating Costs

Meanwhile, it is necessary to proceed with estimation of costs. A sample framework for measuring costs of an ECD programme at the macro level is found below.

A Sample Framework for Costs of ECD Programme

Institutional Costs

Recurring

- Personnel (salaries, honoraria, and benefits)
- Materials and supplies
- Administration
- Training
- Management (supervision, monitoring and maintenance)

Non-recurring

- Land
- Building
- Furniture
- Equipment
- Vehicles and others

Individual/Family/Community Costs

Payments/Expenditure

- Fees, if any
- Transportation
- Materials - clothes, toys, stationery, water bottle etc.

Contributions

- Donations (cash/kind)

Jandhyala B. G. Tilak

Influences on Costs

Institutional costs can further be classified in any one of the following ways.

- Variable and fixed costs
- Recurring and non-recurring costs
- Current and capital costs

Both *individual* and *institutional* costs are of significance, though magnitudes may not be comparable, because of the nature and characteristics of each. While institutional investments can provide the facilities, only individual effort and investment makes it possible to take advantage of them. The two are so inter-related and inter-dependent that, in the absence of either, there is likely to be under-allocation of resources for ECD. Unless the two kinds of investments match, there can be only empty or over-crowded centres. The time horizon aspect of the two should also be taken into consideration in understanding the relationship between the two. From the individual point of view, the decision to incur costs of ECD would be based on a relatively short term perspective - the immediate or life-time, and very rarely, inter-generational time-period perspective. On the other hand from the institutional point of view, the decision to incur costs on ECD would be based upon a much longer time perspective. Even the simple example of costs of buildings on the one hand, and costs of stationery on the other, illuminates the differences in the time dimension.

Specific *qualitative* and *quantitative* aspects need to be addressed in the context of preparing a framework of costs. With regard to personnel costs, which cover wages, other perquisites, benefits and training, some relevant questions would be:

- The adequacy/inadequacy of the personnel for the programme
- Workers perception of their workload in terms of job description
- Analysis of time spent on various duties
- Time management with specific reference to community participation and resource mobilisation
- Value attached to community participation

With regard to other programme costs, aspects which need consideration are:

- Type of material used for SNP, from where and how it is obtained
- Opinions of the various stakeholders regarding participation of ECD personnel in SNP, health, pre-school education, time management and capacity building of mothers
- Team work in programme implementation
- Leadership

- Community involvement in programme implementation
- Flexibility/alterations in programmes as per the needs of the community
- Co-ordination among various teams especially between the health team and the anganwadi workers team
- Guidance and direction provided to anganwadi workers
- Interactions/follow-up with special needs of children ie. mal-nourished, specially abled, chronically ill
- Regularity of implementation of the various components of the programme

For *refinement in estimation* of costs, the following questions also need to be considered:

- Should salaries/wages be taken as they are, or real wages, using shadow prices, be taken?
- How can institutional capital investments like buildings used for the ECD programme be valued?
- How can opportunity costs be calculated for the above two aspects?
- How can hidden subsidies in terms of the prices of land, electricity, transport or other physical capital material be costed?
- Since land costs appreciate over time, while other capital items depreciate, how can methodological difficulties related to annualisation be overcome?

Hidden factors

Hidden factors also need attention while formulating a framework for the study of costs. Some examples of these are:

- Some centres may be used more regularly than others because of the acceptability caste, popularity or efficiency of the child care worker
- In placing families below or above the poverty line, the drain in the real income of the family due to alcoholism may be overlooked
- Convergence of schemes to reduce cost should be considered
- Contributions from different agencies such as government, community, the users (beneficiaries) and other NGOs at Central, State, District and Centre levels, may be overlooked
- Urban - rural differences may affect pre-school participation in several ways
- Costing of land in illegal settlements where land is not owned by the residents, and dislocation costs of the families, need to be included

The following matrix highlights some of these factors.

Hidden Cost Factors for ECD in Urban Slums

- | | |
|-------------------------------|--|
| ● Infrastructure | ● Family and Women |
| Rent for centre/space | Incidence of abuse, drugs, sexual
crime, violence |
| Equipment costs | Lack of opportunities/choices |
| Food costs | |
| Space for play | |
| ● Community | ● Older Children |
| Unclean environment | Child labour and abuse |
| Poor access to services | Lack of opportunities/stimulation |
| Illegal status and insecurity | Inadequate space |

Renu Khosla

Variations in Cost

Factors like *variability* also lead to problems that need to be addressed in methodological terms. Variations in cost within the programme could be process-related. For example in two ICDS blocks with the same inputs, one block with the same expenditure may cover a larger number of children, deliver more food and offer a higher percentage of immunisation compared to the other. The questions arising from such a situation would be:

- Why is there so much variation?
- How do these institutions function?
- How do their delivery mechanisms work?
- Are there any other interventions from NGOs, panchayats and user communities that contribute to efficiency?
- Is a comparative study needed to study causal relationships and separate out exclusive benefits arising only from a particular ECD programme?

These questions are not a simple matter of technical input-output relationships, but point towards process indicators which may reflect hidden factors like geographical location, efficiency and contribution of personnel. Such intricate relationships need to be identified before any cost analysis is done. If there are faulty interpretations, policy prescriptions may go against the vital and often invisible programme benefits.

The impact of differences in location is illustrated by the following set of qualitative indicators for measurement, which could be useful in an urban setting.

Indicators for Urban Slums

Infrastructure

- Actual costs for rent
- Adequacy of space for play

Community

- Days lost to illness (at school/work)
- Irregular attendance (at school/work)
- Episodes of ill health
- Costs of health care/transport
- Disabilities
- Credit and interest rates
- Low enrolment and high dropouts
- Low skills/employability
- Defecation/water collection time
- Sexual harrassment/abuse
- Under nutrition and lowered mental abilities
- Cost of relocation / loss of employment/ transport costs

Family/Women

- Loss of daily wage due to visits to police stations
- Emotional scarring (due to above)
- Low employability/wage/informal employment
- Low nutritional status of family
- Number of children
- Delayed marriage

Older Children

- Reduced potential for adult work, due to lack of education/skills
- Poor health/illness
- Emotional scarring
- Skill of parents - family in stimulation
- Opportunities for play

Renu Khosla

Calculating Unit Costs of ECD

The following unit costs needs to be worked out at different levels to be used for different purposes.

- Per child
- Per centre
- Per child per day
- Per child per year

Without unit costs, costs of ECD have no meaning. For example in education, the term *unit* in unit costs often refers to pupils enrolled, while it is also sometimes argued that the number of pupils actually attending the schools should be taken as the units. Differences between enrollment and attendance, particularly in primary education, lends support to this argument. Is it with unit costs, the following questions can be considered. the cost in terms of rupees spent in ICDS per child in Tamil Nadu which is being considered, or the cost per child effectively covered in an ECD programme, or the cost for any one particular output like per child immunisation?

Imputing Monetary Values

Problems of monetisation relate to both costs and benefits. Benefits accruing from ECD programmes are often more qualitative in nature, but both short and long-term benefits need to be monetised in order to ascertain the level of impact on the user communities. Benefits can be classified as

- Direct Benefits
- Indirect Benefits
- Externalities

Direct benefits go to the child directly and are also closely linked to the programme objectives. Examples are improvements in the health and nutritional status of the child and the enrolment of children in schools. *Indirect* benefits accrue to others in the family. For instance, day care centres benefit parents and older children by relieving them of child care, and benefit the older child who can continue in school as well as mothers who can now participate in labour market activities. *Externalities* relate to many of the social benefits that accrue to the family and society and are not necessarily quantified. Improvements to mothers' health, knowledge of the parents, women's empowerment are some examples of these.

Some benefits may be impossible to measure. For instance, imputing monetary value to a child's cognitive development arising out of a particular ECD programme may be a difficult task, as there are no markets for imputing such values. Equally, how much does it cost to educate a child up to the age of five years to a certain standard of proficiency? Difficulties in monetising long term benefits may also arise. For example, suppose in 1950 one rupee was invested on a child and after 20 years the child, as an adult, contributes to society, but how can the benefits be calculated? Nevertheless, these should be recorded.

More and better analysis

Yet another issue arises from inadequate information about input-output relationships. It is assumed that if children are fed better, their weight and height will improve, morbidity will decline and they will attend school regularly. It is also expected to improve their cognitive ability and consequently their ability to benefit from education. But more intensive, imaginative and rigorous analysis is needed to see which of these hypotheses are really well grounded, and find out which intervention does what. Without that knowledge, the analysis of the benefits accruing from these interventions, remains in a truly scientific sense somewhat speculative and subjective. Therefore, the challenge for both the design and analysis of surveys is very much greater in the field of ECD.

At different levels *immediate*, *intermediate* and *final* outcome indicators also need to be listed, if not measured and monetised. The final outcome indicators are more difficult and vague, but immediate outcome indicators are easy to measure so long as no unrealistic assumptions are made. If one is looking for hard outcomes and soft outcomes like intelligence or sense of well

being, then cost utility may be the best method. In the health sector, cost utility surveys are increasingly finding a place both at the clinical and community levels and have more potential than cost - benefit analysis because of the difficulty of monetisation. It is hard to separate immediate, intermediate and final outcomes. For instance increase in height can be considered as immediate or final, though final in a very restricted sense. Multiple outcomes lead to more difficult analytical problems to be confronted. Ultimately it must be recognised that there is no point in trying to monetise everything, since many inherently desirable things are non-monetisable.

Caution is needed in undertaking new and huge surveys. There is an enormous amount of information collected in the system, and much duplication. A more systematic and intensive analysis of existing data will yield rich results, and should be the area of focus.

However, it must be admitted that though a vast deal of secondary literature is available with the Government, it is very difficult to access such information and use it. The recent trend, however, is for Government agencies themselves making available primary data on diskettes or CD ROMs, though such data may not sometimes suit the kind of analysis needed. Data should not be rejected before its utility is determined. Very few cost effectiveness studies are available and there is need to network and design such studies so that answers to such questions can emerge.

Accounting for gaps

On the issue of corruption and leakages, the question is how to account for them in a cost analysis/effectiveness/benefit study. It is common knowledge that in all Government programmes, and especially those centered on feeding, there is an enormous amount of leakage. While people make all sorts of wild and speculative estimates about its extent, there is no proof on the amounts involved. Is there a possibility of discounting for leakage so that costs are not distorted?

If leakages are not accounted for, then a very high cost will be projected for getting a certain level of benefits. A recent study by Sakuntala Narasimhan in 1999 found that of every rupee spent only seven paise reached the beneficiaries. But the actual benefit for a rupee spent may vary from area to area and one has to find out what leads to these variations. Often the influencing factor may be the functioning of institutions and not the inputs or varied programme designs.

As there are inherent biases in administrative reporting, the only way to test out if well-defined objectives are being met is do a survey on a sufficiently representative sample, in addition to some direct observation. If leakages are not estimated at the time of costing, they should be seen as loss of benefits, as it has to be reflected somewhere in the equation.

Arbitrary reductions cannot be the answer. The issue becomes more complicated if quantitative targets have been reached, but the leakage still affects the value or quality of benefits, or for

example, results in a reduction in home feeding. In such instances, an intensive anthropological kind of investigation may provide some answers, though to a limited extent.

While one should estimate the extent of leakages per se, it is not necessary to account for them in a costing study. For example, personnel who are paid from a particular programme but who are not functioning at the optimal level, conceptually represent a leakage in the system. Yet in costing, only the salary needs to be taken into account. Similarly, it is not always necessary to capture all leakages to know the costs.

Leakages mean that we are paying the price for our inefficiencies and the system's inefficiency. Measuring and accounting for leakages will depend on the purpose of the study. If leakages are considered unavoidable, then when looking into total costs of the programme, they should be taken into account. But if the study is expected to provide a plan of action on the assumption that the programme would be doing quite efficiently if all leakages are removed, then there is need to remove it.

Another issue is that of artificially depressed wages. If the market does not reflect the true wage level, a percentage discount may help, or some kind of sensitivity analysis could be attempted.

Finally, a balance has to be struck. The State in modern times has the obligation to ensure that everybody's basic needs are met and to ensure freedom from disease, freedom from hunger and the right to elementary education. While there is no need to be defensive about cost - benefit analysis, it does not mean that everything can be underwritten on the ground of leakages. An understanding of what a particular intervention or package of interventions does in terms of ultimate outcomes is needed. But the bottom line must be that we need to reach education, health and basic services to all. The question is only how effectively it is being done.

Feasibility of cost studies

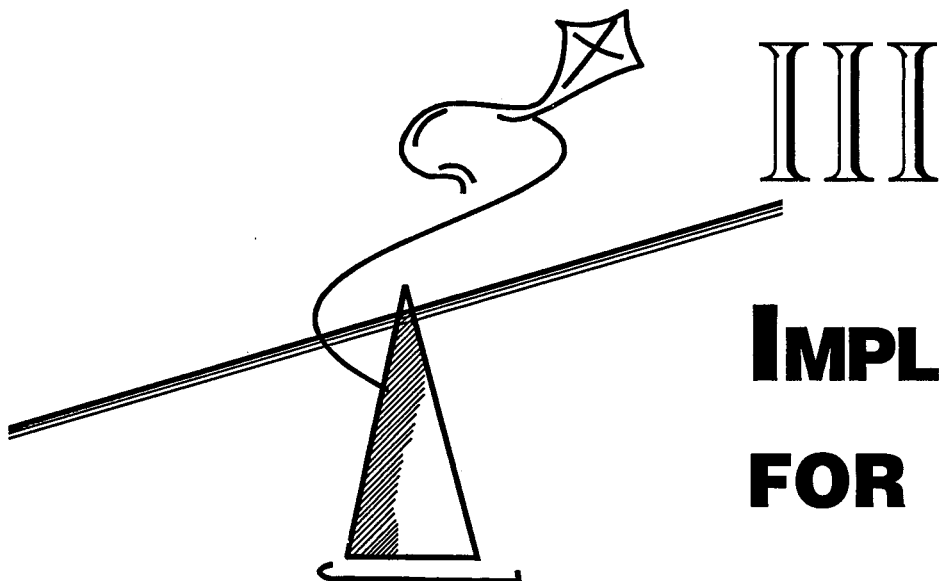
In the last analysis, it has to be accepted that only some of the benefits of ECD programmes are measurable and many are non-measurable. Many important outcomes, though inherently desirable, are non-monetisable. The problem must be defined in much more manageable terms keeping in mind the ability to collect data at a reasonable cost.

A cost - effectiveness analysis of particular programmes may not be feasible because what we observe in the community is a result of many activities like health programmes, other interventions, general levels of development, educational levels and so forth. Cost - effectiveness analysis is best done in the context of a specific programme, in terms of the outputs it is supposed to deliver to the beneficiaries.

However, a cost-effectiveness analysis is not an alternative to cost - benefit analysis', Cost - benefit analysis would shed light on

whether or not a given programme is worthwhile when compared to other programmes, while cost-effectiveness analysis implicitly assumes that the programme objectives are worth meeting and tries to evaluate which of the available alternative is most cost-effective. On the contrary, if it is decided to carry out a cost-effectiveness analysis, then a cost-benefit analysis becomes redundant, as the cost effectiveness study is done only on the assumption that the programme is worthwhile.

If there is a focus on the primary objectives of the programme, and on those benefits which are not contaminated seriously by other programme inputs, the exercise of measuring costs and benefits may be doable. At the next stage, focus could be on more complicated benefits and on cost utility levels. Even where one cannot measure the benefits, an attempt must be made to list them down. Only then can one know the cost of *not* providing a particular service. If we did not spend on ECD at all, the loss may be much higher than all the costs of ECD programmes. A beginning could be made by just compiling cost data on ECD programmes.



IMPLICATIONS FOR POLICY

Ms. E.V. Shantha

Several questions have been raised on the objective of a possible study of costs and benefits of ECD in Tamil Nadu.

- Are we trying to look into or compare the different models of ECD currently being run?
- Are we trying to examine programme designs with a view to changing them so as to deliver benefits at a particular cost?
- Is it to be used for advocacy purposes? or is it to seek guidance on the best possible use of funds?
- If we start with cost analysis and then move onto cost effectiveness or cost benefit what are the issues to be addressed, if the study is to be useful to the Government, the policy makers, or the implementers?

**Ms. Girija
Vaidyanathan
I.A.S.**

At the last UNICEF seminar on childcare held in August 1998, I was inspired to start work on this subject. I had put together some basic material on trends in expenditure as I am in the Finance Department, which gives me an unique opportunity to look into many kinds of numbers. So I looked into trends in nutrition expenditure, as well the break-up in terms of what these can tell us. It is not a complex economic analysis, but only a very simple basic one stating what the costs are, and how these have been distributed over what kinds of components. A basic observation was that staff costs have slowly overtaken almost all other costs. At first, the feeding costs had been predominant; but over time, though the feeding costs had also gone up, staff costs had gone up much more. It was pointed out that this is probably a good trend, because after all, these programmes are meant to be administered by child care workers, who like teachers, are the key to the success of the programmes. And this is what started me thinking about the subject.

Many of our programmes are dictated not so much by the hard facts before us and their analysis as by many other considerations. So if research institutions can work on such issues, then

when we come to do our decision-making, these facts can guide policy makers, even if decisions are not based on facts alone.

In State policy, with the objectives already accepted, the next step is to see whether we are going in the right direction, and then perhaps plan on how to go further from here. You are all aware that the two main programmes in our State - ICDS and TINP, which are now in the process of merging, started from totally different starting points. Initially there were three programmes:

1. Tamil Nadu Integrated Nutrition Project (TINP), with its strong scientific base, is a typical hard core World Bank Project, based on research findings, down to the minutest details, like the size of the laddus and the choice of the districts. We have often been told that TINP was the most seriously researched project in the world, with an in-built monitoring system as well.
2. Integrated Child Development Services (ICDS) was an in-between sort of programme initiated by the Government of India, with some kind of broad - based research behind it.
3. The Noon Meal Programme (NMP) Meal came straight from the heart, and not from the brain at all, but still merged beautifully with all these solid hard core "brain" type of programmes.

Cost-benefit studies undoubtedly need to be done. Earlier, there have been a few small and somewhat controversial studies, which have been neither published nor used, so the time is ripe for a full-fledged exercise. Costs are probably easier to assess, though they will have their own problems. Direct costs can be very easily assessed and the indirect costs also worked out. The meso-level or community level involvement is a bit more difficult, but for all these three, there have been several studies, which have laid down guidelines.

The Challenges of Evaluation

But benefits form a much harder area to look at, especially since the State has been moving forward on all platforms at the same time. Even with the TINP final evaluation, it has been a struggle, because we are not able really to differentiate which portion of it is only due to TINP, and the same problems will come up again and again. We can say that so much benefit has accrued, but whether these benefits can be allocated to specific components is something which the researchers will have to find out. There are ways now of doing differential analysis, and trying to see across time and over space, but still controls are lacking.

Our State had faced the challenge of spreading geographically almost throughout the State, around seven or eight years ago. And we have also had real improvements in health, and in economic levels of attainment over the same period. So it is going to be quite difficult to take up. It is not really necessary at this stage to validate the programmes. We are all pretty convinced that these programmes are here to stay.

On policy, it is no longer TINP or ICDS - it is now an ECD programme. The time has come to really start looking, once costs have been separated, at a particular cost and the outcome of that particular cost. Can one say that a particular component, with x-costs, is probably leading to so much portion of the benefit? And that the programme should be designed so as to provide flexibility to try out variations to see where costs can be minimized and benefits maximised.

In the initial stages, much time was wasted in TINP vs. ICDS arguments, because categorical figures were not available as to which components of the programme worked, and where, and how. If aspects like feeding methods, the staff pattern, the supervisory strength, could be looked into, it may be useful to the policy maker. This programme will undergo continuous change, since no programme is static in time. Further, the implications of what happens in a State like ours will be felt throughout the country, as we have generally been a trendsetter in these matters. On whatever is needed in terms of data, I assure you that the Government will be willing to come forward and provide it.

Dr. Patrice Engle

Today I would like to speak about the approach UNICEF is using to talk about ECD - Early Childhood Care for Survival, Growth and Development. Why not merely ECD - what is the rationale behind it? We must recognise that there is a very important biological basis for development and brain growth; energy for learning, and emotional readiness to learn are all affected by the biological characteristics of the child. It is necessary to turn the emphasis on the linkages between these. The care offered to children by mothers, anganwadi workers and others, involves physical, nutritional and psycho-social care. The interaction between the mother or caregiver while feeding the child provides an emotional message and an opportunity for enhancing the child's development as well as the child's nutrition. So it is necessary to see these together. The time spent in childcare along with other activities like feeding, bathing and preparing food by poor rural and urban women may often not be visible, even to the women themselves, but all these are linked to each other. This is the logic of ECCSGD.

In a longitudinal study of malnutrition and mental development in Guatemala which cost 5 million dollars, high-protein supplemented children vs calorie-only supplemented children fresh in school were studied. During the time this study was done, I sometimes felt that it might be better to give each family ten thousand dollars rather than do the study! It might have been a better benefit to them. But it is no longer a hypothesis that early supplementation has a significant effect on cognitive development. There is no need to test this again and again. Undoubtedly, it has an effect on birth weight of children, on growth and on cognitive development during adolescence.

Another important issue is that of the effects of women's work on children. Earlier, one of the arguments was: *is it good or bad for children for women to work?* But this is really a non-question -

since many or most women are working because they have no option. Is this a question that can be asked in the context of survival?

In looking for indicators, one must remember the limits. A useful quote to remember is: *you don't get what you expect; you get what you inspect*. One of the very exciting things happening in terms of indicators is the recognition that exclusively breastfed children have a different growth pattern in the first year of life. They grow more slowly but they eventually end up at about the same level, so using the same norms with an exclusively breastfed population as with others may not be appropriate. A massive study by WHO and UNICEF is being undertaken to reconstruct international reference norms based on exclusively breastfed populations around the world, which will lead to a better way of looking at figures. While the nutritional norms are set and efforts are continuing to improve them, it will perhaps give us a more appropriate measure, if a similar kind of analysis on children's development is done and we are able to have a chart that says, for example, what percentage of children are below where they should be developmentally and cognitively. This would enable us to assess the developmental delay caused by an environment not supportive of children.

The child must also be looked at from the parent's point of view. Children develop in a holistic way. A parent may describe a well-developing child as healthy and happy, with bright eyes. Parents do not divide children into little boxes, as experts may do! If one needs to develop a parent perspective or a child perspective, one should try doing the same thing.

Childcare is the Key

It is generally known that childcare is a process leading to child survival, growth and development. It is the first key for every course - greater readiness for school, greater success in school and in later life, greater school efficiency, a more healthy and productive life and improved life chances. All these benefits are difficult to talk about. Good childhood care also involves good nutrition and health for children and mothers, a healthy and safe environment, apart from caregivers' responsiveness. The idea of 'responsiveness' is better than 'stimulation'. The word 'stimulation' sounds as if it is going one-way, from the caregiver to the child, whereas 'responsiveness' signifies the interaction between the caregiver and the child. If the caregiver can follow the child's lead, it is much more effective for learning than simply stimulation.

There is one other rationale for talking about survival, growth and development. There is an important difference between growth and development. Physical growth refers to change in size and is a trajectory. Development refers to increased complexity and is a much fuller concept than growth. Cognitive development, psychosocial development, emotional security, linguistic development, motor development - a variety of things can be included under the term development. This then is the basis of ECC-SGD, as the principle behind programmes.

Programme Effectiveness

There is no programme that focuses on the child without also focussing on the environment of the child. The environment must be child-friendly, warm, affectionate, loving and stimulating, leading to the development of the child's full potential, responsive and adapted to the child's abilities. Families and communities are partners in care and men are not left out in family-focussed care. Communities help families with needed information and resources, as these are critical, and families are strengthened to be better caregivers. Care is also community based, built on the communities' own culture, planned and owned by the community, involving its members in the network of care and support for young children. The age group 0-8 years involves the period of transition to school, promotes co-operation between home and community - based institutions, day care facilities and schools. The basic notion behind it is convergence of resources as a possible framework for operation, involving, at the level of the family, interaction with the caregiver, safe water, nutrition, health concerns, facilities and supplies, legislation etc. From UNICEF's side it also involves mission and principles, advocacy and communication.

The last aspect I would like to touch on is the notion of cost-effectiveness analysis. It is to go through an assessment of interventions for growth to study effectiveness. In one study I was involved in, there was an intention to do a cost-effectiveness analysis, but no cost data were available, so it had to be dropped! It was very difficult even to cost, leave alone think of cost effectiveness. One could however look at the effectiveness of programmes alone, not necessarily the costs. And I would like to quote some examples.

- Early interventions are more effective than those that begin later. If interventions are not carried through, then it may not have any effect. This can be related to the familiar concept known as the 'cumulative deficit' hypothesis. If learning of language is looked at over age, and one finds a child aged three who did not get stimulation or responsiveness earlier attending an ICDS centre, then the centre has a lot more work to do than would be necessary if the child development levels were normal. Thus the 'cumulative deficit' model really emphasises the need for early intervention.
- Child-focussed interventions and programmes tend to have more impact than parent - focussed programmes. However, there is need to invest more time in such child-focussed programmes than on one based on home visiting or parent support groups. The first could be more costly in terms of personnel.
- In studying programmes offering nutritional and early childhood development inputs, it was found that if these two inputs were put together, there was much more effect than just having the nutrition component alone as in the Guatemala project, or ECE without nutrition. Of course, this is what has given rise to ICDS, because of the need for both these inputs.

- Another finding was that the effects are varied by the family's characteristics. Greater effect was found with the more disadvantaged families, though there is a bottom level where the family is so desperately poor, or when there are no resources in the family, that it is difficult to show any impact. That is why the issue of directing the programme appropriately is critical.

The conclusion is in support of the term ECC-SGD. It is necessary to include survival, health, nutrition, and child development programmes, when we study the effectiveness of intervention programmes.

**Ms. Isabelle
Austin**

In speaking of a study of costs and benefits, there is a need to examine the purpose, the style and the content of any such study. But first, one must address the fundamental questions from the Government point of view; that is, what is it we need and why do we need it? What we already know is based on research studies and information from around the world. What we need to know now is what are the most crucial interventions for which Government, NGOs and others should prioritise in investment to get maximum results.

First, there is a need to revisit the national policy framework defined in 1974. There has been considerable change over time in definitions of Early Childhood Development. In an earlier stage, focus was on the need for childcare, with later a shift to the importance of Early Childhood Education, and still later to ECD. Now there is a re-emphasis on a holistic approach to ECD, with considerable decentralisation of the subject from the Government of India to the State Governments.

Most important is flexibility and the need for a clear inter-sectoral approach in order to articulate for different settings and partners, as well as to respond to the needs and demands of varied environmental settings, such as urban poor and non-poor, working women and a whole range of other considerations.

The implications of decentralisation in terms of the role of panchayats also have to be analysed. Kerala has already transferred the entire budget for Early Childhood to village panchayats. Now policy analysis in Kerala will have to take this dimension into consideration. The necessity to keep in mind the governance and management dimension of the entire service now arises. For example, if ICDS Block A has a different performance than ICDS Block B, and there are similar variations from block to block and from village to village, variation analysis needs to be done at different levels. The panchayats have already demonstrated a great capacity to mobilise additional resources within the communities they represent, while in some cases on the contrary, they may have been responsible for added leakages. So there is a whole range of operational and programmatic implications to be addressed. The responsibility to facilitate and support panchayats in their new role also emerges in this context.

**Dr. Adarsh
Sharma**

A vital input at this stage would be to promote the development of very simple indicators that will help the people at the village level to monitor whether good things are happening for their children. Instead of "defining" indicators for villagers, I speak deliberately of supporting or promoting the development, through interaction, or facilitation of such indicators. Here the purpose of the monitoring is for the people themselves to follow what is happening for their children and not for us to gather material for additional registers. There are examples from other countries, and from India as well, on simple things that people can look at. It does not require many hours or registers or elaborate data collection but observing simple things that will tell them what is going on.

UNICEF is proposing, together with the State Governments of Tamil Nadu, Kerala, Andhra Pradesh and Karnataka, to take these points and work on how to revisit policies, programmes, innovations, and strategies to build upon the very positive experiences of States and take it one step further. And similarly at the national level also, there is recognition of the need to redefine the vision for ECD in the new millenium. The best place to begin is with ourselves.

I would like to reflect for a moment on what has been the fate of empirical data in the hands of policy makers. It was earlier pointed out that policies are based on certain kinds of empirical data. But my personal experience, as an academician and as a researcher, has been that unless the research has been commissioned by the Government or any other authority, most research virtually goes unattended and unheard. Even if a report is sent with a little note attached, saying that recommendations and implications for policy are at such and such pages, an acknowledgement is rarely received, and the recommendations given by us are rarely seen to have brought about a change.

There is plenty of data and information available today about ECD programmes. A chapter could be compiled from existing data to point out implications for designing, implementing and fine tuning programmes, as well as taking some of the administrative policy decisions to improve their implementation. Certainly allocation of resources would become much more rational, if these kinds of evidence are used to establish whether at any point in time, money is needed for a particular component, like training. Component-wise costs will give more flexibility for the use of such findings for policy.

We know that there are good and bad anganwadis, good, bad and moderately good projects, but as ICDS implementors and policy makers, it would be great if we could get some empirical information on what makes an ECD centre work. What are those variables and how can we strengthen those inputs? Here I am sure that MSSRF's ongoing study of alternate models of ECE and their impact would throw some light. But how will we go about getting these inputs into the policy? There is a need to have a dialogue with the nodal Department of ICDS in order to do that.

The location of the ICDS projects is also an important aspect. Though certain indicators like level of female literacy, infant mortality rate etc have been identified by the Planning Commission, new criteria must be listed to decide where new projects should be located, as universalisation proceeds in phases. In this context, it is important to analyse whether anganwadis are being opened in remote projects or in areas where they are needed.

A fine source of data already in existence with ICDS is the Monthly Progress Reports. This information could be used even to select samples when needed. But in reality, it would be interesting to find out what has happened to all the MPRs of the last year. Alas, they are lying at Shastri Bhavan unanalysed for petty reasons like not being able to decide who should do it. When the MPR is judiciously planned and carefully filled by the supervisors and AWWs, can it not be put to use by evolving a method or a system to use it at the district level and at the state level even before it is centralised? It would be worthwhile to use the existing data, both qualitative as well as quantitative, for such purposes.

A study of costs and benefits would be a pioneering and timely effort in the area of ECD in our country, which has not been done so far. It should be done in three stages - Cost Analysis, Cost Effectiveness and Cost Benefit Analysis. The third stage could be a longitudinal study for which we should plan right now.

Dr. S. Murugan

The question of costs has been thought of for a very long time, even as early as 1974, when the draft policy on nutrition seriously considered the costs of child deaths. If a child dies, what is the cost of the death? The costs incurred for pregnancy, medicines, delivery, care giving to the child for the - first 12 months or first five years, the costs of cremation and other aspects must all be included. This kind of thinking provided a stimulus to make us consider our programmes seriously.

As early as 1972, large surveys were done to find out the status of macro-indicators like the extent of malnutrition, severe kwashiorkar and marasmus, weight loss etc. What is the status today?

- In these twenty three years, severe malnutrition and weight loss has been reduced only to one per cent.
- The costs that have been reduced are the deaths of the children, and the cost of hospitalization in pediatric wards.
- Infant Mortality Rate has been brought down from 70 to 54.
- Maternal Mortality Rate has also been brought down.
- Food supplementation has brought down severe malnutrition. The normal has increased to more than 53 percent, while mild malnutrition is around 35 percent. If interventions continue, 85 to 90 percent of children will be normal.

TINP I in 1980-89 concentrated on crisis management, to prevent children dying of severe malnutrition and becoming more mal-

nourished. TINP II was more of a curative, rehabilitative and preventive project. The present project, ICDS III, aims at curative, rehabilitative, preventive and promotive measures, entering into the family itself. The specific objectives of TINP are reduction of malnutrition, reduction in the number of Grade III and IV malnourished children, IMR and low birth weight.

The achievement of the whole TINP II period at the end of March 1998-99, is that malnutrition has been reduced very considerably. However, IMR at 54 and low birth weight rates are stagnant and more involvement is needed in the area of antenatal care. Regular growth monitoring is going on well. TINP as a programme started with pre-school at a much later stage and pre-school education attendance has improved considerably. That is something important for us to remember.

Earlier, in ICDS, it was felt necessary to revise, improve and modify objectives. But now, the objectives of the new ICDS III are more comprehensive. Areas like nutrition, health and psychosocial development with particular reference to childcare, mother care and empowerment of women have been brought in. Like any other organisation, the project aims at total quality management, and similar to other financial and management institutions, it is trying to critically review performance at every stage at the block level. However, convergence is the most difficult area and only Health and Social Welfare have attempted it.

Learning from Experience

Concurrent social assessment also needs to be done with the people themselves. Women's empowerment and village level monitoring committees have also been planned. People have to monitor their own needs, their own growth and development and decide for themselves what they want to do. Adolescent girls' services are also planned along with other programmes. UNICEF has agreed to give once - a - week iron tablets to adolescent girls in the entire North Arcot District and study its effects. It is necessary to improve the information management system. Feedback can be used to learn where we have to improve the system.

Projects have got their own limitations and we are talking of a six-year externally-aided project. Child rearing is in itself a very difficult project and doesn't go that smoothly. Many factors influence projects, which have to be constantly reviewed. Conflict-resolution and team building exercises need to continue. Some indicators, like demand creation and self-esteem are difficult to assess, yet these are some of the areas into which we will have to look much deeper. With deeper studies of existing and available data we can learn a great deal.

Impact of Child Care Services on Women

1. Support for Motherhood

- Less isolation
- More control over decisions on childcare and rearing
- More information
- Improved skills in parenting
- Less anxiety / tension
- Safety of child ensured
- Built in child care role
- Improved behavior toward child
- Greater harmony in parents / family
- Reduction in stress due to drudgery
- Reduction in specific demands

2. Support for employment

- More time and opportunity to work
- Greater efficiency in work
- More persons (women) released for work within family
- Release for taking up employment
- Increase in amount of earnings
- Better skills for work
- New avenues of employment opened up / generated
- Less abuse while on work (due to nature of work from employer)
- Greater permanency in work (more sustainable employment)
- Travel made more easy / less time consuming
- Less fatigue

3. Support for Domestic Roles

- More freedom and time
- Less drudgery / greater efficiency
- Outdoor household tasks made easy
- Indoor household tasks made easy
- Release of girls from household chores
- Release of girls from childcaring
- Greater conservation of time / energy / money
- Changes in care of cattle (if any)
- Changes in home-based work (if any)

4. Support for Social and Community Activities

- Skill development
- Education
- Attitudinal change
- Social participation
- Leadership
- Overall self-confidence

5. Support for Self-development

- Leisure
- Rest
- Improvement in health status-physical / mental
- Improvement of status within family
- Recognition to women's work
- Improved self-esteem

Rajalakshmi Sriram

Qualitative and Quantitative Indicators to Evaluate Women's Groups

In terms of outputs, a *sangha* should be able to specify in numbers the details of women actively and continuously involved as participants in the process, as well as those only involved in activity - specific participation like attending meetings and training. The number of outside visits as referred to by women, both individually and as a group, apart from the frequency, place and time of *sangha* meetings is also necessary.

Any *sangha* should have heterogeneity and openness to accommodate all its members. In order to do so, aspects like the nature of issues discussed, the range of issues faced by a *sangha*, prioritisation of issues, *sakhi* selection processes, leadership and degree of democratisation of such roles, facilitation of meetings, conflict resolution and decision making have to be considered.

A strong *sangha* is one which has the following characteristics (frequently used in evaluations):

- Takes initiative in identifying a common cause
- Responds with sensitivity to issues of exploitation/violence on women
- Integrates community concerns in its agenda
- Takes a decision without guidance from women organisers (*sahayoginis*)
- Builds an image of "a power to reckon with" at the community level
- Pressurizes the existing system for greater accountability to people
- Attracts and sustains participation from different sets of women and men over varied issues
- Holds regular meetings in which women take active interest and indulge in creative and open-minded problem solving
- Encourages alternative forms of learning
- Provides leadership opportunities to greater number of women

Lakshmi Krishnamurthy

Parameters for Evaluation of Mahila Samakhya

1. Theoretical and Operational Understanding of the Concept of *Sangha* and Women Leadership Role
2. Content of the Programme
3. Access to Resources
4. Interaction with Power Structures and Institutions
5. Visibility
6. Resource Creation
7. Training
8. Documentation
9. Expansion and growth
10. Programme Structures
11. Democratization and Decentralization
12. Financial Management
13. Environment
14. Risks / Opportunities
15. Demands / Pressures
16. Areas of weakness / Neglect
17. Areas of Anxiety

Lakshmi Krishnamurthy

Illustrations of Differences in Perceptions/Values

- *A Workshop for the Mahila Samakhya Sangha in Bidar District, Karnataka:* The aim was to find out how much and how women had changed in their own homes those same women who, outside the home, look authority in the eye, while demanding minimum wages, pensions, or government programmes meant for them. They said “We use coconut oil now, we bathe everyday, we have good sarees to wear to meetings, we pin the saree exactly as the organiser (sahayogini) does”. Is this *Change? Sanskritization? Imitation?* Yet these women no longer cast their eyes down when passing women of higher caste. And the higher caste women in turn said “What do you lack? It is we who don’t have anything”. Researchers may feel – “What about their own ‘culture?’ This is not assertion, it is imitation”. But actually their self-esteem has gone up.
- *Mahila Samakhya women in Uttar Pradesh:* They did not want to learn their own language but mainstream Hindi – the way to progress. Middle-class romantic urban souls wanted to preserve their language -six different words for bangles against one in Hindi! So what is progress, and what imitation? At what point in the process have people like us clicked our cameras, frozen our observation?
- *Private child care centres in Chingleput, Tamil Nadu:* Many have sprung up. They provide, for a fee, uniforms and a bus service – both indicators of prestige. There is no denial that pre-schools have gained popularity and demonstrated it in a way nowhere seen in any other part of the country. Yet “experts” condemn the kind of preschool education they offer.
- *Wives and mother-in-laws in Bidar, Karnataka:* They do not any longer wait for their husbands or sons to come home, but eat when hungry. In many a family there was more togetherness – after meals all family members would sit and chat - husbands, children and elders who were interested in what was happening in the outside world.

Lakshmi Krishnamurthy

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Analysing costs and benefits of ECD programmes in Tamil Nadu : developing some indicators

Discussion Paper

E. V. Shanta and J. Jayanthi Rani Christiana

Introduction

Early Childhood Care and Development (ECCD) is a relatively new field of international focus. This combines elements from the fields of early childhood education, infant stimulation, health and nutrition, community development, parent education, sociology, anthropology, child development and economics. Good nutrition, good health, appropriate stimulation and loving care for young children are the best investment the family, the community and the country can make for the future of its young generation. There is ever increasing evidence from recent research on the long lasting influence of early environment on physical, emotional/psychological, social and intellectual development justifying resource allocations to benefit young children.

ECCD - the Current Scenario

While policy makers in many countries still need to be convinced about the need and benefits of investing in children, public investment in children in India has been growing since the 70's. The major ECCD programme funded by the Central and the State Governments is the Integrated Child Development Services Scheme (ICDS) implemented by the Department of Women and Child Development (DWCD) at the Centre and by the State Ministries and departments concerned. With the decision of the Central Government to universalise ICDS, the programme is poised for an expansion through the length and breadth of the country.

ECCD services in Tamil Nadu are unique as in no other state in the country all rural blocks and urban dwellings have been covered by ICDS. All rural areas covered by the Tamil Nadu Integrated Nutrition Programme II (TINP II) have come under the ICDS scheme after project funding from IDA has come to a close in '96. Tamil Nadu is also one of the five states that will receive support for improving access and quality of ICDS under the new WCD project.

Rationale

Public investments need to be assessed as ECCD is currently looked at from the point of view of what it costs the exchequer and there are only a few scientific studies available on the short term and long term benefits of such programmes to society as well as to individuals. Therefore, it would be worthwhile to make an attempt to construct some indicators and field test them for developing a larger future proposal to measure costs and benefits. This effort could help to quantify and monetise the benefits (in economic terms) that accrue to children who enroll in

these programmes, working mothers and families and to the community and society as a whole. An effort would be made to raise and address questions like "Where to spend by prioritising activities" and "How to spend".

This note would form the base for an effort to list down indicators through a brainstorming exercise and finetune the multi-dimensional concepts for a theoretical and conceptual framework for a Cost Benefit Analysis of ICDS and TINP in Tamil Nadu. It will concern itself primarily with stakeholders such as young children, women and family as well as community, panchayat and others at the micro and meso levels who have already invested in ECCD. It will attempt to list the range of costs, as well as the perceived benefits of service, from the standpoint of service providers, project designers, users, Government and other stakeholders like the researchers, activists and NGOs in the context of programme goals, size of the programmes, inbuilt components, staffing patterns and staff-child ratios.

Earlier Studies

In India

1. Many Indian studies have looked into specific dimensions of the ECCD programmes. But most such studies are of a cross-sectional and small scale nature. NIPCCD has already listed down 200 and more such studies in their bibliographical data base. However, none of these studies have attempted a comprehensive look at the inputs and the outputs of ECCD programmes.
2. Evaluations of the various aspects of the ECCD programmes including ICDS and TINP in India include area-specific qualitative and quantitative studies. The objectives, the sample size, the methodology and tools of these studies vary though most of these studies have looked at some indicators of impact like reduction in malnutrition levels, morbidity and changes in caring practices. There are special studies that have looked into the cognitive and psychosocial aspects apart from indicators for health and nutrition status. Process indicators like coverage for services, staff training and stakeholder participation have also been studied. However, such studies have mostly been undertaken as part of baseline/bench mark and final evaluation of donor supported project implementation (e.g. SIDA supported ICDS, TINP etc.). A few among them are case studies documenting qualitative and quantitative aspects of ECCD programmes (e.g. the SURAKSHA series and SEWA programmes which describe more on benefits and the methodology).

Other country-based studies

3. The *High/Scope Perry Pre-school Programme* longitudinal study in the U.S. comparing children who participated in a quality preschool programme with children who had not and assessed the cohort for almost three decades. IQ-scores, school performance, employment and earnings, home ownership,

criminal behaviour, dependency on welfare programmes and other aspects of well being and social behaviour were studied. The authors developed ingenious ways of assigning market values to child care benefits, both direct and indirect benefits. The study concluded that "over the lifetime of the participants, the pre-school program returns to the public an estimated \$7.16 for every dollar invested".

(This sort of a longitudinal study is not contemplated here in the existing circumstances)

4. *Cost, Quality and Child Outcomes in Child Care Centres* - This study was carried out in 1995 at the University of Colorado, Denver. According to this study, only one in 7 U.S. centres provide child care of a quality that promotes healthy development and learning, and almost half of the infants and toddlers in the 401 child care facilities observed spent their days in rooms of less than minimal quality. The study found that better-quality services cost, on average, just 10 % more than mediocre care. It also suggested that modest investments, combined with reasonable regulation could significantly improve the efficacy of early child care interventions. The study further confirmed that centres paying higher wages attract better quality staff. Quality varied most in the areas of wages and teachers' level of education and specialised training. It was also found that quality child care is associated strongly with high staff-to-child ratios, high staff wages, well-trained staff and experienced administrators.

Objectives

- To develop some indicators to measure the benefits and costs of ECCD to the child, the family and the community
- To define concepts, formulate and refine the methodology
- To field test the tools in a carefully selected small sample in Tamil Nadu
- To identify ways to measure the direct and indirect costs of various inputs.
- To identify outcome indicators in ECCD programmes that best describe the social and economic benefits for children, families and the community. Both short term and long term indicators will be listed.
- To identify implications for policy, if any.

It is proposed to confine the process of developing indicators and field testing it to a few centres of ICDS and TINP programmes in Tamil Nadu. If direct and indirect costs of TINP centres (now converted to ICDS) continue to differ from the regular ICDS, TINP centres will be treated as a separate entity to be studied.

Benefits to be Measured

- **Economic benefits of education/development of child's potential:** One of the objectives of ECCD interventions is to prepare young children for enrollment into primary school

and better schooling achievements. These primarily result from improved psycho-social and cognitive development before entry into primary school, as well as better health and socialisation to attend school. The study will measure enrolment at appropriate age and progression in grades, drop out rates and repetition (and cost of repetition). As regards cognitive and psycho-social development of young children the investigators will draw on the tools developed for another on-going research study at MSSRF on the impact of ECE on children's learning in four different programmes, and on other such studies elsewhere.

- **Social benefits for the child and the family** : Benefits for children include improved health and nutrition status, reduced mortality. Collateral benefits include improved coverage for the immunisation and MCH programmes. Benefits for parents/families of young children included in the field testing exercise will include day care services, training in parenting skills, nutrition and health education, increased earning ability and/or increased earnings of women, improvements in quality of family life.
- **Social benefits for the community** : The community may be benefiting through greater participation, a healthier population and in the long run by a more productive labour force and reduced wastage. Just as in the case of indirect benefits to the family, these will be difficult to quantify in monetary terms, but attempt will be made to construct indicators.

(The term "social benefit" is relatively hard to measure since it could become subjective due to varied perceptions at different levels. Hence only an attempt will be made to list them in this exercise)

The matrix in the appendix provides more details on the benefits, the indicators and how these will be measured in the field testing exercise.

Costs to be Measured

The exercise will try to list down the qualitative and quantitative indicators and an attempt would be made formulate tools to measure direct programme costs - both investment and operating costs, indirect programme costs and social costs. Ways to annualise investment costs and discount costs incurred worked out over varying periods of time will be in consultation with technical advisors. Community contributions wherever it is present will also be listed and value calculated. The exercise will also try to quantify wastage/loss on account of leakages, inefficient and corrupt practises. The following components in the matrix will be studied to measure costs of care at the State, District, Block and Centre levels.

Direct programme costs

<ul style="list-style-type: none"> ● Capital Costs Equipments Buildings Vehicles Furniture ● Personnel Costs Salaries Travel Maternity Entitlements Insurance/Social Security Pension Other Allowances ● Programme Costs (recurring) Supplementary Nutrition Health Inputs Pre-school Materials 	<ul style="list-style-type: none"> ● Administrative Costs Stationery Building Operation and Maintenance Transportation Electricity Fuel ● Training Costs CDPOs, Supervisors, Anganwadi Workers, Parents and Other Stakeholders ● Management Costs Supervision Guidance Monitoring and Evaluation
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Methodology and Tool Preparation

The brainstorming session would serve as a platform to clarify and finetune concepts, list down input, process and outcome indicators related to child, women and family as well as community and other stakeholders. A session on monetising costs and benefits would discuss methodological issues relating to quantification of qualitative and quantitative data, intended and unintended outcomes apart from identifying and listing appropriate indicators at different levels - micro and meso. The meso level refers to local community and therefore, defining or delimiting the community would be discussed in depth during the workshop. Some tools for such an exercise will also be listed down during the process. It is also intended to define a few sampling areas for the field testing of indicators and tools.

Before carrying out the field testing exercise at the meso level, participation of different stakeholders such as anganwadi workers and government officials will be sought at different levels in order to compile their perceptions. Individual and group interviews, focus group discussion, structured/semi-structured questionnaires apart from direct data collection from Government sources on costs will be the methods adopted. Tools for the field testing exercise will include guidelines for focus group discussions, interview schedules, questionnaires and check-lists for data collection. If necessary for purpose of analysis, the Interactive Assessment Tool with an ECD calculator that has been developed by the Human Development Network at the World Bank to calculate the Net Present Value of the ECD Programme among others will be modified and used for the field testing exercise. Expertise of a multi-disciplinary team of practitioners and academicians will be utilised to guide the whole exercise.

Benefits : Direct and Indirect

Target Groups	Benefits	Indicators	Source	Methodology
Children (0-3) and (3-6)	<i>Psycho-Social and Cognitive Development of Pre-school Children</i>			
	<ul style="list-style-type: none"> ● Improved cognitive development (thinking, reasoning) 	<ul style="list-style-type: none"> ● School enrolment at appropriate age ● Drop out rates ● School performance ● Repetition 	<ul style="list-style-type: none"> ● Impact of ECE on Children's Learning study ● AWWs, Primary Teachers, Centre and School Registers 	<ul style="list-style-type: none"> ● Refer to the on-going study at MSSRF ● Interview and Data Collection
	<ul style="list-style-type: none"> ● Improved social development (relationship to others) 	<ul style="list-style-type: none"> ● Parent/AWW training ● Programme support to child stimulation (under 3's and 3-6) 	<ul style="list-style-type: none"> ● Parents ● AWWs ● Primary Teachers 	<ul style="list-style-type: none"> ● Focus Group Discussion
	<ul style="list-style-type: none"> ● Improved emotional development (self-image, security) 			
	<ul style="list-style-type: none"> ● Improved language skills 	<ul style="list-style-type: none"> ● Improved reasoning/understanding 		
	<i>Health and Nutrition</i>			
	<ul style="list-style-type: none"> ● Reduced mortality 	<ul style="list-style-type: none"> ● IMR/CMR 	<ul style="list-style-type: none"> ● Public health data ● Monitoring and Evaluation studies 	<ul style="list-style-type: none"> ● Secondary Data Collection
	<ul style="list-style-type: none"> ● Improved hygiene 	<ul style="list-style-type: none"> ● Personal hygiene (home/classroom) 	<ul style="list-style-type: none"> ● Parents ● AWWs 	<ul style="list-style-type: none"> ● Focus Group Discussion
	<ul style="list-style-type: none"> ● Improved nutritional status 	<ul style="list-style-type: none"> ● Weight for age ● Height at entry into school 	<ul style="list-style-type: none"> ● Centre level data (or measurement?) 	<ul style="list-style-type: none"> ● Secondary Data Collection/ Primary Data Collection
		<ul style="list-style-type: none"> ● Immunisation coverage 	<ul style="list-style-type: none"> ● Centre level data ● School data 	<ul style="list-style-type: none"> ● Secondary Data Collection
<ul style="list-style-type: none"> ● Reduced morbidity 	<ul style="list-style-type: none"> ● Reduction in disease incidence (Diarrhoea, ARI?) 			
	<ul style="list-style-type: none"> ● Workers' and parents' perception of improved health and nutritional status of children 	<ul style="list-style-type: none"> ● Secondary data ● Workers, Parents 	<ul style="list-style-type: none"> ● Secondary Data Collection ● Focus Group Discussion 	

Target Groups	Benefits	Indicators	Source	Methodology
Adults	<i>General Knowledge</i>			
	● Health and hygiene	● Parents' perception on better health and reduced medical costs	● Parents	● Focus Group Discussion ● PRA
	● Nutrition (related to own status)	● Better nutrient intake	● Parents	● Focus Group Discussion ● PRA
	<i>Attitudes and Practices</i>			
	● Leadership skills	● Parent's perception	● Parents	● Focus Group Discussion ● PRA
	● Health and hygiene			
	● Preventive medical practices			
	● Improved diet			
	* Better parenting skills			
	<i>Relationships</i>			
● Improved self-esteem	● Parents' perception	● Communities ● Parents	● Focus Group Discussion ● PRA	
● Better husband-wife, parent-child, child-child relationships	"	"	"	
<i>Employment</i>				
● Caregivers freed to seek or improve employment	● Increase in employment and earning of mothers	● Women	● Focus Group Discussion ● PRA	
	● Increase in participation of women in community activities			
● New employment opportunities created	"			
● Increased earning capacity for women				
Communities	<i>Physical Environment</i>			
	● Reduced demand for tertiary care	● Cost of alternate child care facilities	● Community	● Interviews ● Observations ● Focus Group Discussion ● PRA

Target Groups	Benefits	Indicators	Source	Methodology	
Communities	● Sanitation	● Improvement in sanitation	"	"	
	● Spaces for play	● New facilities that came up due to the ECD program and value of these facilities	"	"	
	● New multi-purpose facilities	"	"	"	
	<i>Social Participation</i>				
	● Improved solidarity	● Increased decentralisation	● Parents ● Communities ● Women's groups ● Panchayats ● ULB's ● AWW's	● Focus Group Discussion ● Interviews ● Case studies	
	● Increased participation of women	● Improved social interaction	● Women ● AWW's	"	
	● Community projects benefiting all				
	● Increased empowerment				
	<i>Institutional Development and Strengthening</i>				
	● Better health attention through grouping or changed user practices	● Increase in number of organised groups/associations for development at community and apex levels	● Communities ● Groups ● AWWs ● Government and NGO Functionaries		
● Greater coverage	● Self-sufficiency of groups/organisations started				
● Greater ability/confidence and/or changes in organisation					
Society (macro framework)	<i>Quality of Life</i>				
	● Healthier population	● IMR, U5 mortality	● Earlier studies ● Surveys ● Census	● Secondary Data Collection	

Target Groups	Benefits	Indicators	Source	Methodology
Society (macro framework)	<i>Quality of Life</i>			
	● Reduced days lost to sickness			"
	● Greater social participation			"
	● More literate/educated population	● Female literacy		"
	● Improved labour force	● Female workforce participation		"
	● Reduced fertility and early births	● Fertility rates		"
	● Reduced social inequalities			"
Institutional	● To be listed			
Political	● To be listed			
The State	● To be listed			

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List of Delegates

S. No.	Name and Address	S. No.	Name and Address
1.	Dr. Adarsh Sharma <i>Additional Director (TC)</i> National Institute of Public Co-operation and Child Development 5, Siri Institutional Area Hauz Khas New Delhi 110 016	9.	Ms. Isabelle Austin <i>Chief</i> UNICEF 20, Chittaranjan Dass Road, Teynampet Madras 600 018
2.	Dr. S. Anandalakshmy <i>Consultant Child Development Education</i> "Saradindu" 12, Third Seaward Road Valmiki Nagar, Thiruvanmiyur Chennai 600 041	10.	Prof. Jandhyala B G Tilak <i>Senior Fellow and Head</i> Educational Finance Unit National Institute of Educational Planning and Administration 17-B Sri Aurobindo Marg New Delhi 110 016
3.	Dr. Anjana Mangalagiri <i>Programme Officer (ECD)</i> UNICEF 20, Chittaranjan Dass Road Teynampet, Madras - 600 018	11.	Dr. Kamini Kapadia <i>Director, CCDT & Co-convenor</i> <i>FORCES-Maharashtra</i> Committed Communities Development Trust 8, Pali - Chimbai Municipal School Ground Floor, St. Joseph Road Chimbai, Bandra, Mumbai 400 050
4.	Ms. Anuradha Rajivan I.A.S. <i>Chairperson and Managing Director</i> TN Corporation for Women Development Ltd. 100, Anna Salai, Guindy Chennai 600 032	12.	Ms. Lakshmi Krishnamurthy <i>'Alarippu'</i> C/o S. Prabhala, 37, Handin Road Bangalore 560 042
5.	Dr. Barbara J. Isely Community Health Department Christian Medical College Thorapadi P.O. Vellore 632 002	13.	Mr. M. Muniyandi TB Research Centre Epidemiology Unit Indian Council for Medical Research Poondi Road, Tolgate Tiruvallur 602 001
6.	Ms. Deepika Shrivastava <i>Programme Officer</i> UNICEF 73 Lodi Estate New Delhi 110 003	14.	Dr. V.R. Muraleedharan <i>Associate Professor of Economics</i> Department of Humanities and Social Sciences Indian Institute of Technology Chennai 600 036
7.	Ms. Divya Lata <i>Programme Officer (Education)</i> Aga Khan Foundation Sarojini House, 2nd floor 6. Bhagwan Dass Road New Delhi 110 001	15.	Dr. S. Murugan <i>Joint Director (Nutrition)</i> Tamil Nadu Integrated Nutrition Project 48 Dr. Muthulakshmi Reddy Salai TNHB Complex, Adyar, Chennai 600 020
8.	Ms. Girija Vaidyanathan I.A.S. <i>Special Secretary</i> Department of Finance Secretariat Buildings, Fort St. George Chennai 600 009		

S.No. Name and Address

16. **Dr. M.K.C. Nair**
Head, Deptt. of Paediatrics
Child Development Centre
Medical College
SAT Hospital
Trivandrum 695 001
17. **Ms. Patrice Engle**
Chief
Child Development & Nutrition
UNICEF
73 Lodi Estate
New Delhi 110.003
18. **Dr. S. Rajagopalan**
Distinguished Fellow
M.S. Swaminathan Research Foundation
Third Cross Street
Taramani Institutional Area
Chennai 600 113
19. **Ms. Rajalakshmi Sriram**
Lecturer
Department of Human Development
And Family Studies
M.S. University of Baroda
Vadodara 390 002
20. **Mr. Raja Samuel**
Lecturer
Madras School of Social Work
Casa Major Road, Egmore
Chennai 600 008

S.No. Name and Address

21. **Ms. Renu Khosla**
Research & Training Coordinator
National Institute of Urban Affairs
I & IInd Floor, Core 4-B
India Habitat Centre, Lodhi Road
New Delhi 110 003
22. **Dr. K. Shanmugavelayutham**
Convenor
TN-FORCES
Deptt. of Social Work
Loyola College, Nungambakkam
Chennai 600 034
23. **Mr. Simon Joseph**
Child Relief and You
57/2, P.S. Sivaswamy Salai
(Sullivan Garden Road)
Mylapore, Chennai 600 004
24. **Prof. Tara Gopaldas**
Director
Tara Consultancy Services
"Saraswati"
124/B, Varthur Road, Nagavarapalya
Bangalore 560 093
25. **Dr. A. Vaidyanathan**
Professor
Madras Institute for Development
Studies
29, II Main Road
Gandhi Nagar, Adyar
Chennai 600 020

List of Other Contributors

- | S.No. | Name and Address | S.No. | Name and Address |
|-------|---|-------|---|
| 1. | Dr. V.B. Athreya
<i>Prof & Head</i>
Department of Economics
Bharathidasan University
Palkalaiperur Campus
Tiruchirappalli - 620 024 | 10. | Dr. Martin Woodhead
The Ash Tree
35, Wood Ride, Haywards Heath
West Sussex RH16 4NL
United Kingdom. |
| 2. | Ms. Carrie Auer
<i>O-I-C, Education</i>
UNICEF
UNICEF House, 73, Lodi Estate
New Delhi 110 003 | 11. | Ms. Mary Eming Young
Human Development Network
World Bank, 1818 H Street N.W.,
Washington D.C. 20433, U.S.A. |
| 3. | Ms. Frances Sinha
<i>EDA Rural Systems</i>
107, Qutab Plaza,
DLF Qutab Enclave - 1
Gurgaon 112 002 | 12. | Ms. Mirai Chatterjee
<i>General Secretary</i>
Self Employed Women's
Association (SEWA)
Sewa Reception Centre,
Opp. Victoria Garden
Bhadra, Ahmedabad 380 001 |
| 4. | Prof. Frederick Ebeck
<i>Visiting Scholar</i>
School of Education
The Flinders University of South
Australia
Sturt Road, Bedford Park
GPO Box 2100, Adelaide 5001
Australia | 13. | Dr. R. Padmini
<i>Social Development Advisor</i>
Abhivridhi Trust
10, Sudha Sadan, 41,
6th Main Road, Malleswaram
Bangalore 560 003 |
| 5. | Dr. C. Gopalan
<i>President</i>
Nutrition Foundation of India
B 37, Gulmohar Park
New Delhi 110 049 | 14. | Dr. Robert G. Myers
Insuragentes Sur 4411
Ed. 25, Dept. 304, Tlalcoligia
D.F. 14430, MEXICO |
| 6. | Dr. Jean Dreze
Institute of Economic Growth
Delhi University, Delhi 110 006 | 15. | Ms. Rukmini Banerjee
Pratham
Pratham Mumbai Education
Initiative, 4th Floor, YB Chavan Centre
Gen. Bhosale Marg, Nariman Point
Mumbai - 400 021 |
| 7. | Dr. Kathy Sylva
<i>Reader in Educational Studies</i>
University of Oxford
15, Norham Gardens, Oxford OX2 6PY | 16. | Dr. Sarah Bhattacharjee
<i>Head, Dept. of Low Cost
Effective Care Unit</i>
Christian Medical College and
Hospital, Vellore 632 002. |
| 8. | Ms. Liana Gertsch
<i>Programme Specialist</i>
Department of Programmes
Bernard van Leer Foundation
P.O. Box 82334, 2508 EH The Hague
The Netherlands | 17. | Dr. A.K. Shivakumar
<i>Consultant</i>
UNICEF
73, Lodi Estate, New Delhi 110 003 |
| 9. | Dr. Madhura Swaminathan
Indira Gandhi Institute of
Development Research
General Vaidyal Marg
Goregoan East, Bombay 400 065 | 18. | Dr. K. Shanthi
<i>Professor</i>
Dept. of Economics
University of Madras, Chennai 600 005 |
| | | 19. | Ms. Uma Ramesh
<i>Project Consultant</i>
3, Cedar Wood, No.7, Fourth Main Road,
Raja Annamalaipuram, Chennai 600 028 |

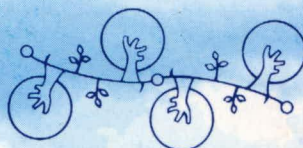
*If ECD is costly, try the alternative of not providing ECD.
You will find that the alternative would be costlier for society.*

Jandhyala B.G. Tilak

*There is no point in trying to monetise everything,
since many inherently desirable things are non-monetisable.*

A. Vaidyanathan

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M. S. Swaminathan Research Foundation

3rd Cross Street, Taramani Institutional Area

Chennai - 600 113 INDIA.

E-mail : MDSAAA51@giasmd01.vsnl.net.in

homepage : www.mssrf.org