8 CONCLUSIONS

The aim of this thesis is to ascertain the effects and estimates of the ICDS program. An evaluation of this nature is important to guide changes in policies and keep a track of development objectives. This chapter presents the conclusions and implications of the results obtained in this analysis. It also suggests way for future research in the area and policy recommendations.

In this study we analyze effects of the ICDS program. We estimate health effects for children whom this program targets as beneficiaries, using the latest round of National Family Health Survey-3 (NFHS-3) data. In this chapter, we discuss the main findings of earlier chapters of this thesis. These are presented in section 8.2. On the basis of these implications, we suggest some policy recommendations and also lay out agenda for future research in this area. These are presented in section 8.3

8.1 MAIN FINDINGS

Poor nutritional status, which is associated with elevated risks of mortality, poor cognitive development and lower levels of productivity in the later years of life, remains common among children in the developing world. However, preventive measures and interventions can improve the health and nutritional status of children. In most of the developing countries, governments play a crucial role in making immunizations, micronutrient supplements and other services available to people. Governments also provide information to mothers and care providers about preventive care. These interventions become even more necessary if the general levels of health and nutritional status are low among the population, especially among the children. Evaluations at micro-level find a positive impact of provision of health services on health outcomes. Chapter 1 of this thesis presented the background and motivation of our analysis while chapter 2 presented a review of child health and program evaluation studies.

Given the extremely high rates of child undernutrition that prevail in India and the beneficial role interventions play, the Integrated Child Development Services (ICDS) program was launched in 1975. The program is almost universal in its geographical spread. Hundreds of small sample and micro studies provide useful insights into the

working and effects of the program. Most of the studies point to the beneficial effects on the health and nutritional status of children who are in the program areas as compared to those in the non-program areas. However, not many of these studies use statistically rigorous methodologies that would enable them to draw more reliable conclusions about the impact of the program. We tried to bridge some of these gaps in our study.

Using household level data from NFHS-3, we construct variables to fit our analysis. Even though ICDS is universal in its spread, the slow scale up gives an opportunity to compare those who are in the program area with those in the non-program areas. In the program literature parlance, we treat the former as treatment area and the latter as control. For analysing the health effects of the program, we use Becker's model of utility maximising behaviour of a household. We compare the nutritional status of children in the ICDS areas with those in the non-ICDS areas. In the light of program evaluation literature, former are the treated group while the latter are control. The results presented in chapter six bring out the positive role of the program in child nutritional status. Estimations using different specifications indicate that young children below the age of six years living in the ICDS area are healthier compared to their counterparts living in the non-ICDS areas. These results hold for both the measures of child health, height-for-age and weight-for-age. Among the socio-economic factors that affect child health, we find that maternal education is a significant and important determinant. However, the lower levels of education do not affect as much as higher education does. Also, higher levels of mother's education were found to be a substitute to the program. Higher levels of wealth also have a substitutive relation with the program. Children belonging to scheduled castes and scheduled tribes seem to less healthier than general category. The same also holds true for children belonging to Muslim families. The results indicate differential gains by age groups and gender. Boys in the ICDS area tend to have better nutritional status than the boys in areas where ICDS was not present while girls in program areas were no healthier than their counterparts in non-ICDS areas. Inter-state disparities are wide and the program seemed to be not working as effectively in most of the major states. This result could be due to the small sample size in villages and many important variables getting dropped due to missing data. Since the focus of this study is not to decipher the inter-state differentials, we do not explore this further. However, this

could be an interesting area for future research. Use of more robust technique of estimation, the propensity score matching, the positive impact of program get validated.

We also make an attempt, probably first of its kinds to estimate quality of ICDS program and use it in a multivariate analysis to understand its impact on registration with ICDS and utilization of ICDS services. We use a unique data set collected by World Bank as a part of its regular evaluations for this purpose in chapter seven. The data provides information on child, mother and household characteristics just as the NFHS data. However, the unique feature is the detailed AWW schedule that provides in depth information regarding the facilities at the AWC as well as the characteristics of the AWW. This enables us to formulate indexes of quality. Common understanding makes us hypothesise an important and significant role of quality in decision to use these services. However, much to our surprise, we find that quality does not come as a significant determinant. On further analysis of data, we find reasons for this, namely, low levels of understanding about health needs among the mothers, low levels of awareness and also large gaps between the knowledge of the mothers and the AWW about the same set of general health information.

8.2 LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

Our study uses a large dataset to arrive at estimates of ICDS program. Use of more robust econometric techniques, we find that results from least square regressions get validated. This study can be extended further in the following ways:

First, the use of cross section data shows positive effects of the program. However, we are not able to comment on long term effects of the program. To arrive at effects of such large scale, nutrition based programs, a study of same children over a period of time would show stronger and more reliable long-term effects. For lack of longitudinal data we could not do any simulations. Time series data also enables use of more robust techniques like difference-in-difference and simulations. A similar impact assessment exercise on panel data would give more reliable results. Using cross-sectional data can lead to various biases in the estimations. Though we did try to arrive at robust results using propensity matching score, some questions were left unanswered by this research.

Second, it follows from the above that there is a strong case for improvement in data collection techniques. Experience shows that data collection of this scale is expensive, both in time and resources. It would be more suitable for the government to collect data from the same individuals as a part of its routine data collection. A way forward for the government would be to collect data as a part of routine monitoring and evaluation.

Third, NFHS-3 data does not provide village level data due to reasons of secrecy. This limited our scope to dwell deeper into multi-level modelling techniques of estimations. These models are an improvement over regression models due to their consideration of cluster-level variables.

Fourth, this study is a contribution in the area of quality impact assessment. Programmatic factors are expected to play an important role in the initiation and continued use of services of development programs and interventions. Physical and human resources are important ingredients. Results of quality assessment show that quality does not seem to be an important factor in determining either registration or attendance at AWCs. However, it must be borne in mind that our data pertains to only one state and it may not be correct to generalise them to all India. A similar study with national data can be more meaningful for policy changes. Yet, the results have important implications at state-level.

Fifth, perception of clients or mothers using ICDS, is an important aspect of quality that we mentioned about but could not use as a part of multivariate analysis due to lack of adequate data. Though we did arrive at meaning conclusions using simple cross-tabulations, an index capturing perception could be an important dimension in explaining inter-personal relations.

8.3 POLICY RECOMMENDATIONS

Despite the above mentioned drawbacks of our study, it has been successful in providing insights into the effects as well as working of the program. On the basis of these, we suggest some policy recommendations:

- ICDS program has been successful in achieving its objectives of improving nutritional status of children. This strengthens the case for continuation and scaling up of the program. Also as our results point out that the mere exposure

to the ICDS program is beneficial for health, so the emphasis on universalization of the program is well placed.

- Mothers are a crucial link in any attempt to enhance the well being of children. More educated mothers take better care of children, so there is a need to focus on raising educational levels of mothers and girls. Also certain sections of society need to be provided with greater incentive to bring their children to AWC as these children have lower levels of nutritional status.
- An important implication of our analysis is the role of father's education. This turned out to be an important and significant determinant of use of ICDS service. The role of father is equally important in child health especially in a country like India where mothers have lower status and bargaining power within the family and also have lower levels of education than her spouse. Given that most of the household are headed by males. An important policy recommendation is to sensitize fathers about the services of ICDS.
- Quality of ICDS program in terms of inputs was found to be satisfactory in our dataset. Most of AWC had almost all the facilities and services. Yet this did not seem to affect the choice of utilization of ICDS. A deeper analysis of data showed that this was due to lack of awareness among mothers about basic health, nutrition and caring practices. There is need to strengthen this aspect of ICDS. Nutritional counselling of mothers of children in 0-2 years should be actively incorporated and emphasized in the ICDS program. This is the most crucial age and it is not being adequately targeted.
- From our analysis of quality, we can say that mere presence of physical and even human infrastructure is not sufficient. There needs to be a change in focus away from this to the way the actual program gets implemented. Greater emphasis on monitoring and supervision is required.
- The anganwadi worker is the most crucial link of the ICDS network. She is the interface of the program and comes in direct and regular contact with the targeted beneficiaries. The AWW is intended to play a crucial role in provision of efficient services at the AWC. However, like many other studies in this area, we also find that the AWW seems to be lacking in motivation to perform her duties. Measures are required to make her perform more

effectively. Higher and timely remuneration could act as an incentive to motivate her. At the same time, there is need for some accountability to the local community. For this, greater community participation in the program is desired.

- The gamut of services laid out in the charter of ICDS, though well conceptualised, but are open ended and require a combined effort at various levels. Besides the short term goal of better health, the program is also geared to bring about changes in perceptions, beliefs and behaviour. This calls for a coordinated approach.