

**PUBLIC FINANCES FOR DEVELOPMENT
OF CHILDREN IN KARNATAKA:
POLICY ISSUES AND CHALLENGES**

Editors:

M R Narayana

M R Anantha Ramu



**Government of Karnataka
FISCAL POLICY INSTITUTE**

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FISCAL POLICY INSTITUTE

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FOREWORD

Beginning from the first Child Budget 2020-21, three child budgets have been presented by Government of Karnataka including Child Budget 2022-23. Each Child Budget has identified and classified all child-centric programmes and non-programmes and corresponding allocations to those child-centric programmes and non-programmes in the State Budget are consolidated to highlight the nature and magnitude of public expenditure for child development in our State.

In partnership with UNICEF (Field Office, Hyderabad, India) from FY 2019-20, Fiscal Policy Institute has been conducting policy research on public finances for children and capacity-building activities for preparation of Child Budget of Government of Karnataka. For FY 2020-21, this partnership has resulted in research output of 8 research papers written by eminent scholars representing premier academic institutions in India. These research papers focus on multi-dimensional and micro and macro issues and challenges for child development in Karnataka State as they are related to public finances and need-based budgeting for children, health of children, education development and financing for children, child development in socio-demographic contexts and legal frameworks for child protection. The policy implications and recommendations in these papers are contributory for policy making for child budgeting for purposes of holistic development of children in Karnataka State.

I congratulate the initiative and efforts of Fiscal Policy Institute to consolidate the above 8 research papers and publish them in this edited book titled *Public Finances for Development of Children in Karnataka: Policy Issues and Challenges*. This publication shall serve as a source of permanent reference for ideas and knowledge for policymakers in child-centric line departments in Government of Karnataka as well as in other states in India. In addition, this book has a high reference value for policy researchers and professionals in public finances for children.

I thank Fiscal Policy Institute and all the contributors for this publication and do hope that this book shall be well received by all stakeholders.

I S N Prasad, IAS
Additional Chief Secretary
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PREFACE

Fiscal Policy Institute (FPI) has successfully completed a project, *Capacity Building and Research on Public Finances for Children in Karnataka State* during the period 2019-2022 under financial assistance received from UNICEF (Field Office, Hyderabad, India). The project encompassed policy support, training and policy research on public finances for children in Karnataka State. For the FY 2020-21, the scope of this project covered 8 research studies on public finances for children with focus on impact of Covid-19 pandemic on child development in Karnataka and support for capacity-building for child budgeting in general and for Child Budget 2021-22 in particular. These 8 child budget and child development research studies were: (i) Public expenditure analysis of Karnataka State by Dr M.R. Anantha Ramu (Fiscal Policy Institute at Bengaluru), (ii) Micro and macroeconomics of child health and nutrition for child development and budget in Karnataka by Professor Arnab Mukherji (Indian Institute of Management at Bengaluru), (iii) Mental health issues and challenges of children in Karnataka by Professor Shekhar Seshadri, co-authored with Sheila Ramaswamy and Saurabh Ashok, (National Institute of Mental Health and Neurosciences at Bengaluru), (iv) Micro and macroeconomics of child education for child development in Karnataka by Dr Jyotsna Jha (Centre for Budget and Policy Studies at Bengaluru), (v) National Education Policy 2020 and its budgetary implications for child development programmes in Karnataka by Professor Mona Khare (National Institute of Educational Planning and Administration at New Delhi), (vi) Social issues and challenges of child development in Karnataka by Professor Lekha Subaiya (Institute for Social and Economic Change at Bengaluru), (vii) Legal aspects of Child Rights and Protection in Karnataka by Professor Sarasu Esther Thomas (National Law School of India University at Bengaluru, and (viii) Need-based child budgeting in Karnataka by Professor M.R. Narayana (Fiscal Policy Institute at Bengaluru).

This edited book titled *Public Finances for Development of Children in Karnataka: Policy Issues and Challenges* contains the above 8 research papers. These papers include analytical approaches and evidence-based policy implications for multi-dimensional issues and challenges for public financing for child development in Karnataka State by using Child Budget as a policy and fiscal tool. This knowledge is an opportunity to learning from the best practices in GoK. This book is also a useful reference to national and state level policymakers, child development practitioners, academicians and professionals in research and teaching of public finance with special reference to children in India.

I am thankful to all the contributors for their excellent contributions and cooperation to bring out this edited book as a publication of Fiscal Policy Institute and to my colleagues, Professor M.R. Narayana and Dr M.R. Anantha Ramu, for their efforts as editors of this book. In addition, I am grateful to Miss Reeni Kurian, Social Policy Specialist, UNICEF (Field Office, Hyderabad, India) for support and cooperation for funding, planning and execution of research and capacity-building activities under the partnership programme between FPI and UNICEF from FY 2019-20 to 2021-22.

I am grateful to Shri I.S.N. Prasad, Additional Chief Secretary, Finance Department, Government of Karnataka, and Chairperson, Governing Council of FPI, for support, guidance and encouragement for publication of this book as well as for all academic and research activities at FPI.

Sujit Kumar Chowdhury

Director

Fiscal Policy Institute

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Abbreviations

100CCA :	100% Child Centric Allocation	CICL :	Children in Conflict with the Law
ANM :	Auxiliary Nurse Midwife	CMIE :	Centre for Monitoring Indian Economy
ASAR :	Age Specific Attendance Ratio	CMPOs :	Child Marriage Protection Officers
ASER :	Annual Status of Education Report	CMRA :	Child Marriage Restraint Act
ASHA :	Accredited Social Health Activist	CNCP :	Children in Need of Care and Protection
BCG :	Bacillus Calmette-Guérin Vaccine	COV/CV :	Coefficient of Variation
BE :	Budget Estimates	CPHS :	Consumer Pyramids Household Survey
C19 :	Covid 19	CPI :	Consumer Price Index
CB :	Child Budget	C-SAS :	Census-based State Achievement Survey
CBO :	Community-Based Organisations	CWC :	Child Welfare Committee
CBSE :	Central Board of Secondary Education	CWI :	Child Wellbeing Index
CCI :	Child Care Institution	CWSN :	Children with Special Needs
CDI :	Child Development Index	DMHP :	District Mental Health Programme
CEDAW :	Convention on Elimination of all forms of Discrimination Against Women	DPT :	Diphtheria, Tetanus, Pertussis Vaccine
CGC :	Child Guidance Clinic	DSERT :	Department of State Educational Research and Training
CHC :	Community Health Care/Community Health Centre	DWCD :	Department of Women and Child Development
CICD :	Composite Index of Child Development	E&E Index :	Education and Empowerment Index

ECB :	Child Budget for Education Sector	ICT :	Information and Communications Technology
ECCD :	Early Childhood Care and Development	IEC :	Information Education Communication
ECCE :	Early Childhood Care and Education	IFA :	Iron Folic Tablets
ECE :	Early Childhood Education	IIPS :	International Institute for Population Sciences
FC :	Finance Commission	IMR :	Infant Mortality Rate
FFC :	Fifteenth Finance Commission	INR :	Indian Rupee
FRBM :	Fiscal Responsibility and Budget Management	IPC :	Indian Penal Code
GDDP :	Gross District Domestic Product	IT :	Information Technology
GDP :	Gross Domestic Product	ITeS :	Information Technology Enabled Services
GER :	Gross Enrolment Ratio	JJ Rules :	Juvenile Justice (Care and Protection of Children) Model Rules, 2016
GIA :	Grant in Aid	JJ :	Juvenile Justice
GII :	Gender Inequality Index	JJA :	Juvenile Justice Act
GoI :	Government of India	JNV :	Jawahar Navodaya Vidyalaya
GoK :	Government of Karnataka	KDP :	Karnataka Development Programmes
GP :	General Practitioner / Gram Panchayat	KFRA :	Karnataka Fiscal Responsibility Act
GPDP :	Gram Panchayat Development Plan	KGBVs :	Kasturba Gandhi Balika Vidyalayas
GSDP :	Gross State Domestic Product	KPS :	Karnataka Public Schools
GST :	Goods and Services Tax	KSQAAC :	Karnataka School Quality Assessment and Accreditation Council
GSTCC :	GST Compensation Cess	L100CCA :	Less than 100% Child Centric Allocation
GVA :	Gross value Added	MDM :	Mid-Day Meal
HDI :	Human Development Index	MGNREGA :	Mahatma Gandhi National Rural Employment Guarantee Act
HFW :	Health and Family Welfare	MHRD :	Ministry of Human Resource and Development
HoA :	Heads of Account	MoHFW :	Ministry of Health and Family Welfare
HRs :	Homogenous Regions	MO :	Medical Officers
ICDS :	Integrated Child Development Services		
ICMR :	Indian Council of Medical Research		
ICP :	Individual Care Plan		
ICPS :	Integrated Child Protection Scheme		

MoSPI :	Ministry of Statistics and Programme Implementation	PCPNDT Act :	Pre-Conception and Pre-Natal Diagnostic Techniques Act
MoWCD :	Ministry of Women and Child Development	PE :	Primary Education
NAS :	National Achievement Survey	PGI :	Performance Grade Indicators
NCERT :	National Council of Educational Research and Training	PHC :	Primary Health Care/Primary Health Centre
NCPCR :	National Commission for Child Protection and Child Rights	PIL :	Public Interest Litigation
NEP :	National Education Policy	PLFS :	Periodic Labour Force Survey
NER :	Net Enrolment Ratio	POCSO :	Protection of Children from Sexual Offences
NFHS :	National Family Health Survey	PSE :	Primary and Secondary Education
NGOs :	Non-Government Organisations	PSED :	Primary and Secondary Education Department
NHM :	National Health Mission	PSU :	Primary Sampling Units
NIF :	National Indicator Framework	PTR :	Pupil Teacher Ratio
NIMHANS :	National Institute of Mental Health and Neurosciences	PTSD :	Post-Traumatic Stress Disorder
NLSIU :	National Law School of India University	PUC :	Pre-University College
NMHP :	National Mental Health Programme	RBI :	Reserve Bank of India
NMHS :	National Mental Health Survey	RBSK :	Rashtriya Bal Swasthya Karyakram
NNM :	National Nutrition Mission	RCH :	Reproductive and Child Health
NQAS :	National Quality Assurance Standards	RDPR :	Department of Rural Development and Panchayati Raj
NRHM :	National Rural Health Mission	RE :	Revised Estimates
NSQF :	National Skills Qualifications Framework	RKSK :	Rashtriya Kishor Swasthya Karyakram
NSSO :	National Sample Survey Office	RMSA :	Rashtriya Madhyamik Siksha Abhiyan
NUHM :	National Urban Health Mission	RTE :	Right to Education
NVS :	Navodaya Vidyalaya Samiti	SAMVAD :	Support, Advocacy & Mental health interventions for children in vulnerable circumstances And Distress
OOSC :	Out of School Children	SAS :	State Assessment Survey
ORS :	Oral Rehydration Solutions		
PCE :	Per Child Expenditure		
PCMA :	Prohibition of Child Marriage Act		

SC :	Scheduled Castes	TRS :	Total Rank Scores
SCR :	Student Classroom Ratio	UDISE :	Unified District Information System for Education
SDG :	Sustainable Development Goals	ULBs :	Urban Local Bodies
SDPP :	Survival, Development, Protection, and Participation	UN :	United Nations
SE :	Secondary Education	UNCRC :	United Nations Convention on the Rights of the Child
SEDG :	Socio Economically Disadvantageous Groups	UNDP :	United Nations Development Programme
SES :	Socio-Economic Strata	UNESCO :	United Nations Educational, Scientific and Cultural Organization
SEZs :	Special Education Zones	UNICEF :	United Nations International Children's Emergency Fund
SRS :	Sample Registration System	UNODC :	United Nations Office on Drugs and Crime
SS :	Samagra Shiksha	USD :	US Dollar
SSA :	Sarva Shiksha Abhiyan	UTs :	Union Territories
SSSA :	State School Standard Authorities	WHO :	World Health Organisation
ST :	Scheduled Tribes		
SWPBIS :	School-Wide Positive Behavioural Interventions and Supports		

Chapter-1

Introduction

*M.R. Narayana*¹

This book on *Public Finances for Development of Children in Karnataka: Policy Issues and Challenges* contains eight research papers on child budgeting and development within the framework of public finances for children in Karnataka State. These papers focus on the multi-dimensional micro and macro issues and challenges of child development from the multi-disciplinary perspectives of child health and survival, education development, legal frameworks for child protection, social aspects and participation of children, frameworks for public financing, and budgeting for child development in Karnataka State. In general, the analysis of Covid-19 implications for child development in these studies is limited to the First Wave period during financial year (FY) 2020-21.

This book is organized into nine chapters including this introductory chapter. Chapter 2 through Chapter 9 contains the eight research articles. Given the general background to public finances for children in Karnataka in Chapter 2, sector-specific issues and challenges are focussed on health in Chapter 3 (general health) and Chapter 4 (mental health) and on education in Chapter 5 (child education development) and Chapter 6 (funding issues with special reference to National Education Policy 2020). Socio-demographic aspects of child development are analyzed in Chapter 7 and legal aspects of child protection issues and challenges in Chapter 8. Need-based child budgeting in Karnataka is explained in Chapter 9. The highlights in and links between these chapters are briefly introduced below.

In Chapter 2, Dr Anantha Ramu provides a general economic background and framework for macro-economic analysis and fiscal impacts of Covid-19 on public finances for children through the instrument of child budgeting. The impact of Covid-19 on Karnataka State finances is described in terms of changes in revenue mobilisation and appropriation of budget allocation to health emergency and livelihood management and the consequent effect on budget allocation to programmes and schemes for child development in GoK's first Child Budget 2020-21. Using the registered patients' level data then available in the public domain, total positive cases of Covid-19 for children as on 18th August 2021 were calculated at 10.7 per cent in Karnataka. The description indicates that the pandemic affected child education, health including immunisation schedule, implementation of nutritional programmes and schemes, and activities related to child participation in and outside schools. Most importantly, though the pandemic did affect the overall State Budget in terms of reduction in the size of total disbursements as per the Revised Estimate 2020-21, a reduction in the size of the child budget allocation was less than the reduction in the size of the overall state budget. Thus, public finances for children through Child Budget 2020-21 showed no remarkable pandemic effects in Karnataka in FY 2020-21.

On general child health issues and challenges in Chapter 3, Professor Arnab Mukherji begins with a review of the impact of Covid-19 on the growth, employment and public expenditure on Karnataka's economy and a discussion on the macro-economic implications on the household sector using data from the Consumer Pyramids Household Survey (CPHS), organized by the Centre for Monitoring Indian Economy (CMIE). This interesting micro-economic analysis of macro-economic implications focuses on the household income receipt and consumption expenditure as the economy weakened due to Covid-19. Analytically, this

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chapter brings out a comparative perspective of changes in the child health and nutrition status between years 2015-16 and 2020-21, using the data from National Family Health Survey (NFHS), and identifies a set of demand allocations that relate to 11 of the 19 UN-SDG indicators that are under the purview of the UNICEF. Further, analysis of the trends in health and nutrition to establish the dimensions of health and nutrition in which Karnataka has done poorly in the last five years and identification of districts which performed poorly in multiple dimensions are contributory to policy knowledge on general child health in Karnataka. This approach is useful to identify priority domains and priority hotspots that need to be kept in mind as the GoK's fiscal contraction sets in and affects the programmatic expenditure on child development and challenges improvements in child indicators in the health (non-mental) and nutrition domains.

Beginning with a brief overview of the treatment gaps in child and adolescent psychiatric disorders in India, Chapter 4 by Professor Shekhar Seshadri et.al. moves on to explain the heightened vulnerability of children in adversity, and the (unmet) developmental and mental health needs in preschool, school and child care institutions, which necessitate investment in mental health support and services in these spaces inhabited by children in adversity. Further, mental health services set up by the state (at district-level), in terms of their gaps and functionality, necessitating further investment in state health services by way of human resource development and skill enhancement in child mental health are highlighted. The authors clearly recognise India's low prioritization of child development and mental health services in policy and practice, and consequently, low prioritization of financial and human resource investments to meet the critical mental health needs in children and adolescents, both from the short and long term perspectives. The reasons for this lack of prioritization range from the need to meet the basic needs of child survival (nutrition and health) to perceptions that meeting children's physical and material needs (in terms of food, clothing, shelter, health care) are of the utmost importance and doing so is sufficient, or that mental and psychological well-being automatically follow from children's material needs being met. Thus, the authors advocate the need for the country at large and Karnataka in particular to invest more intensively in facilities, infrastructure, human resources and services that would enhance child and adolescent development and mental health. As a policy guidance, (a) the investment needs for physical infrastructure and facilities, and services enabling child development and mental health including for staff are distinguished by state-supported pre-schools or Anganwadis, Government (aided) schools and State Child Care institutions and (b) integration of child health services at primary and secondary level are emphasised for providing access.

In Chapter 5, Dr Jyotsna Jha focuses on analysis of child education development including a brief review of current approaches to child development policies and programmes and makes recommendations for innovative and future investment policies and programmes for child development and Child Budget, with special reference to the education sector. In addition, the chapter highlights the status and challenges of school education in Karnataka amidst the Covid-19 pandemic period in terms of both the strengths and weaknesses of the school education system and outlines certain challenges that need attention and comprehensive policy responses in Karnataka. First, teachers in government schools are facing multiple challenges due to the pandemic. This includes a high number of dropouts while also dealing with a high influx of new students coming from other locations and from private schools. Children are faced with mental health issues in addition to widely reported learning loss. Teachers may be expected to continue hybrid or distance teaching-learning for a long time to come. They indeed need enhanced support and training to deal with these challenges. Second, the introduction of English as a subject using the Nali-Kali approach needs to be strengthened through continuous reflection and improvement. However, adopting English as a medium of instruction without enough safeguards can lead to challenges of dualities in the classes that may have far-reaching adverse impacts on learning. Karnataka also needs to rethink its skill education in view

of its institutional arrangements where classes 11th and 12th are not part of school education. Third, the convergence between departments and pooling of resources. For instance, MGNREGA and other resources from the Department of Rural Development and Panchayathi Raj for the effective development of school infrastructure and convergence with departments under Social Welfare demand can enable hostels and residential schools into spaces for cooperative and collective learning space and can also have potential for therapeutic use to address mental health issues. Fourth, Karnataka has a unique opportunity of having premier science institutions present in the state for strengthening science and mathematics education. It is also important to recalibrate the existing NGOs and private sector relationships to be able to use their vantage points for making education delivery more rigorous and comprehensive. Fifth, public spending on children, especially taking the post-Covid economic downturn into account, needs to be augmented because Karnataka has a capacity to augment its expenditure on children in terms of GSDP.

In Chapter 6, Professor Mona Khare focuses on the financial implications of government commitments in the National Education Policy (NEP 2020) by Government of India (GoI) and assesses the budgetary implications for the same in the Child Budget of Karnataka. The chapter begins with identification of child-related elements and recommendations in NEP 2020 and moves on to describe child education development indicators at the state and district levels for Karnataka. GoK's Child Budget 2020-21 is analysed with special reference to budget allocation to education. These analyses lead to the identification of priority areas for budgetary support in the Child Budget by total allocation for children in the public budgeting, sector specific budgeting for children within the Child Budget, scheme specific analysis in terms of allocation, utilization and impacts. Thus, the analysis and implications of public spending areas and priorities as per NEP 2020 may have a medium and long term relevance for allocation to programmes and schemes for child education within the framework of the Child Budget in Karnataka.

Social issues and challenges of child development in Karnataka are analysed in Chapter 7 by Professor Lekha Subaiya. She argues that social aspects have a significant bearing on the development and lives of children through social institutions such as family and kinship systems, gender and social norms, and inter-generational transfer of resources, and social issues related to Third Gender and Devadasi system. Data from the national censuses and sample surveys (especially, National Family Health Survey up to its 5th Round in 2019-20) indicate that poverty, illiteracy, and social group disadvantage are the main factors associated with lower health and nutrition outcomes for children. For instance, the mother's level of schooling plays an important role in ensuring that children receive appropriate health and nutritional care. Knowledge and awareness of healthy habits and good practices are supportive for improving health and nutrition for proper physical and mental development of children. In this regard, the National Quality Assurance Standards programme which requires that patients as well as their attendants at public health facilities to be fully informed of the course of treatment is likely to have a positive impact on the healthcare and health outcomes of children. These analyses imply the need for policy interventions to correct for imbalanced ratio of girls to boys across the districts of the state for reasons including continued preference for sons and increased trafficking and violence toward women in regions which have practiced son preference for longer. Professor Lekha argues that timely policy interventions are needed for health and well-being during childhood for long term socio-economic development and social norms that discriminate against girls to be challenged, such as cultural expectations which limit girls' involvement in games and sports and resulting in poorer health outcomes across the lifespan. Overall, the chapter looks at the family as a social institution which plays a dominant role in developing the human capital of children through the acts of nurturing, rearing, protecting, socialising and educating.

Child protection is one of the major components of child development. Karnataka's approach to legal

child protection is discussed in Chapter 8 by Professor Sarasu Esther Thomas with a review of current legal approaches to child rights and protection, recommending innovative legal frameworks of child rights and protection in response to identifiable gaps, and suggesting institutional arrangements for effective implementation of recommended legal frameworks by Government of Karnataka. Professor Sarasu Esther Thomas recognizes that child marriage is an important policy concern for India in general and for the State of Karnataka in particular because, despite multiple legislations through law reforms and implementing mechanisms budgeted for, it continues to affect a significant percentage of children in general and girl children in particular. In this context, innovative legal frameworks of child rights and protection are commended in response to identifiable gaps in the Prohibition of Child Marriage Act, 2006. They include (a) redefining the age at marriage to avoid conflicting definitions of child, minor and child marriage; (b) reinstating voidability in all child marriages at national and state levels and (c) considering recent law reform proposals by the Law Commission recommendations in 2008 and Draft Bill proposed by the National Commission for Child Protection and Child Rights. One of the policy suggestions emanating from these analyses is related to improving budgetary allocation for child protection. For instance, child protection takes up about 1 per cent of the Child Budget 2020-21 of GoK. This includes allocation to programmes and schemes to tackle the issue of child marriage. Other suggestions include (a) budget allocation for payment of services rendered by support persons and fees to be fixed, (b) information regarding compensation schemes, materials on sex education to be prepared and disseminated in educational institutions, and (c) regular inspections of child protection institutions to be conducted by inspection committees under the Juvenile Justice Act, 2015 and CWCs.

Need-based child budgeting in Karnataka is elaborated in Chapter 9 by Professor Narayana. This research is analytical by developing a set of 24 multi-dimensional indicators for the construction of components' indices and a composite index of child development. Child development indicators are related to health, nutrition, education, protection and participation. The framework for choice of child development indicators is UN-SDGs, using the monitoring indicators developed by UNICEF, National Indicators Framework by the Union Ministry of Statistics and Programme Implementation (MOSPI), and NITI Aayog. This approach is also consistent with the United Nations Convention on the Rights of the Child, the most widely ratified human rights treaty for children in the world, which groups the rights or entitlements guaranteed to all children under Survival, Health and Nutrition, Education and Development, Protection, and Participation. As a background for this analytical approach, details of policy descriptions, growth of the child population, scope of public expenditure for children and current approach to need-based budgeting are described. Empirical results show that among the five southern states, Karnataka's level of child development in 2019-20 was relatively high, attaining the first position in three indicators [percentage of students in grade 3, 5, 8 and 10 achieving at least a minimum proficiency level in terms of nationally defined learning outcomes to be attained by pupils at the end of each of above grades, proportion of trained teachers by education levels (Elementary and Secondary), and proportion of sexual crime against girl children to total crime against children during the calendar year] and 2nd position in 4 indicators [percentage of disabled children attending educational institutions (5-19), sex ratio at birth, percentage age of births registered, and ever-married women aged 15-49 who have ever experienced spousal violence (%)]. For the remaining 17 indicators, Karnataka lags behind the other states in South India. This implies that policy priority may be given to improve the competitive performance of those indicators in which Karnataka lags behind now. Further, there is a need for corrective policy intervention to strengthen the child development programmes and schemes in future because Karnataka's overall performance in achieving the goals and targets is at 30 percent. This attainment also shows considerable variations across components. That is, Child Health (25 percent), Child Nutrition Component (27 percent), Child Education (32 percent), and Child Protection and Participation

(39 percent). These results are policy useful to link the quantum of progress targeted in the short and long term to the additional budget needed in terms of the demand for grants. This signifies the need-based child budgeting to attain the desired targets by child development indicators within the framework of goals and target of SDGs.

This book is a scientific beginning of research on public finances for children in Karnataka State. It has the potential to be expanded and extended in future as a policy reference and guide. The way forward below summarizes the potential areas of future research based on this book.

Way forward

The results and evidence from Chapter 2 through Chapter 9 are of utmost relevance and importance for the design and implementation of current and future programmes and schemes for child development by GoK. However, a holistic perspective of child development and its financing through Child Budget in Karnataka State is essential for the attainment of child development related goals and targets in SDGs. This calls for mapping of the child development indicators to child budget lines across demand numbers and departments for assessing the outcomes of public expenditure in relation to the goals and targets of child development at State level. This is a departure from the existing assessments of outputs which are based on programme or scheme specific indicators in the Line or Administrative Departments.

Need-based budgeting for child development calls for integrating the budgetary needs with child development outcomes through the demand for grants by the Administrative Departments who design, implement, monitor and evaluate the child development programmes and schemes in GoK. The empirical framework for need-based child budgeting in Karnataka is a useful guide for the Line Department to reorient their programmatic child budgeting from the perspective of SDGs and integrate them into a need-based departmental budget. The relevant indicators are also useful as monitoring indicators for the child development programmes and schemes through their implementation process. Further, the framework for need-based child budgeting in Karnataka is also useful to accommodate the additional child development indicators from different chapters in this book as they are related to general child health, mental health of children, child education development and financing, child protection, and social participation and development of children through the institution of family.

It is important to recognise that financing of child development is contributed in the State by the public and private sectors. Private financing includes household spending and institutional funding for child development activities. For instance, household spending (or out-of-pocket expenditure) is mainly in the form of consumption expenditure for accessing and utilization of child services. Institutional funding may take different forms, such as Public-Private Partnerships for production and delivery of child development services, private investment and capital formation for production and provisioning of child services, and funding under Corporate Social Responsibility. Private expenditure does not enter into the budget of GoK, and hence is not included in the Child Budget. However, in view of the growing presence of private sector in child development activities, public financing for children may evolve toward a cost-sharing model of Public-Private Partnership for financing child development. A sound database on private sector financing for child development programmes and schemes is the essential foundation for the development of a cost-sharing model in production, provisioning, delivery, and consumption of goods and services for child development.

The introduction of private sector into child development analysis signifies the study of public finances for children in terms of the relationship between government and economy/economics. This relationship is

considered as a new and emerging field of study in economics in general and public economics in particular (Li and Maskin, 2021). In addition, the chapters in this book have a special focus of Covid-19 pandemic's effects on child development and public finances for children through the Child Budget. These analyses are extendable in future in many new directions with the focus on post Covid-19 recovery issues and challenges for children in the frameworks of the redefined role of governments in restoring post Covid-19 economic growth (Stiglitz, 2021), new global approaches to fiscal policy amid Covid-19 (IMF, 2022), fiscal policies after Covid-19 crisis (OECD, 2021), and fiscal situation and response to Covid-19 (Government of India, 2021 and 2022).

In general, the analysis of Covid-19 implications for child development in this book is limited to the First Wave period during 2020-21. Subsequently, remarkable waves of Covid-19 pandemic and policy changes have been experienced at the national and state levels having effects, among others, on public finances in general and public finances for children in particular. Given this dynamism of public finances for child development, there is a policy need for continuous updating of data and analyses in the chapters of this book.

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Chapter-2

Public Expenditure Analysis of Karnataka State

M R Anantha Ramu¹

2.1. Introduction

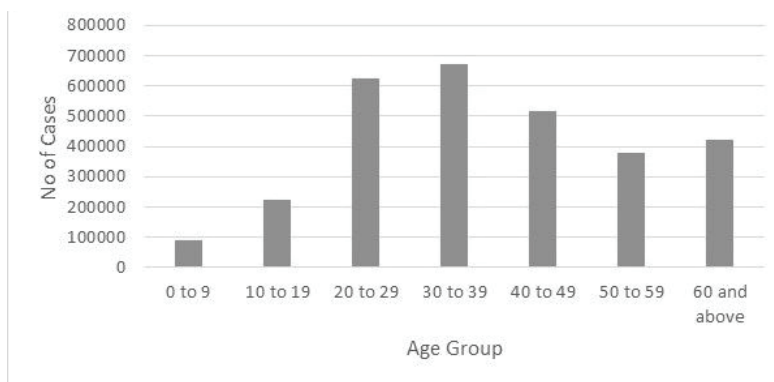
This chapter describes the status of public finances and fiscal policy in Karnataka and makes a macroeconomic and fiscal impact assessment of the Covid-19 pandemic on public finances for children through the instrument of child budgeting. This analysis aims at assessing the impact on the state finances and budgets in terms of reductions in revenue resources and appropriations of state budget allocations to health emergency/crisis and livelihood management.

The analysis in this chapter is mainly based on secondary data sources from the official publications of the Government of Karnataka. Rest of this chapter is structured as follows. The second section explains the number of infections and fatality of children to Covid-19 in Karnataka. The third section describes the economic implications of the Covid-19 pandemic in India as a whole vis-a-vis Karnataka in particular. The fourth section assesses the impact of the Covid-19 pandemic on the general public finance of Karnataka and public finances for children through the child budget.

2.2. Covid-19 Pandemic and Children in Karnataka

The first Covid-19 case was detected on 8th March 2020 in Karnataka. As on 18th August 2021, the total number of Covid-19 positive cases in Karnataka were 29,33,192. Of the total positive cases, 28,74,839 persons have recovered and 3,7061 succumbed. The recovery rate stood at 98 percent. Gender wise analysis shows that of the total positive cases, 41 percent were female. Among the districts, the highest number of positive cases were recorded in Bangalore Urban with 12,33,839 cases followed by Mysore with 1,74,890 cases and the lowest was recorded in Haveri with 21,892 cases. Bangalore Urban constituted 42 percent of the total Covid-19 cases in Karnataka. The Covid-19 cases by age group are given in Figure 2.1.

Figure 2.1: Covid-19 Positive Cases by Age Group as on 18th August 2021



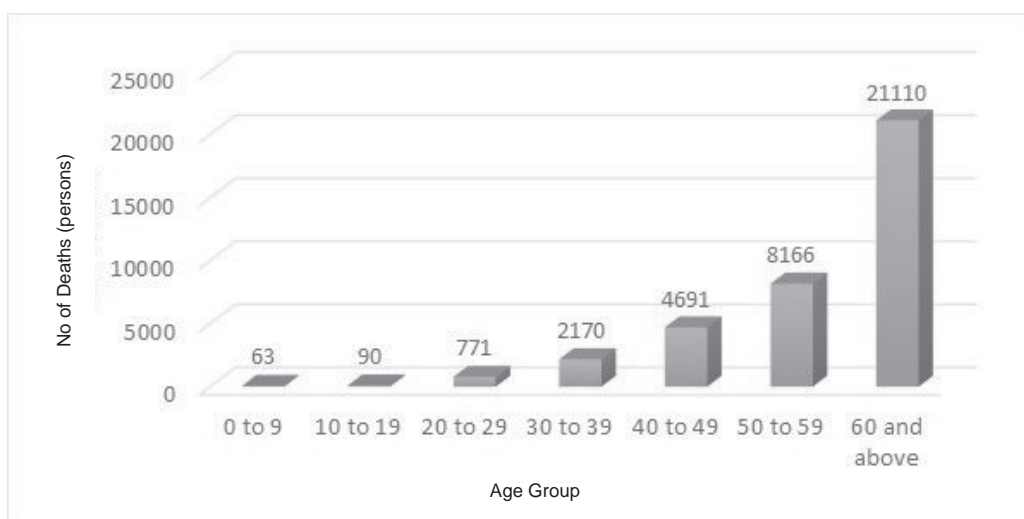
Source: <https://www.covidwar.karnataka.gov.in/> (as on 18th August 2021)

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Figure 2.1 shows that highest positive cases were recorded in the age group 30 to 39 followed by 20 to 29. This indicates that more cases were reported in the adults age group followed by the old age population. Total number of cases recorded for the age group 0 to 9 was 91,478 and for the age group 10-19 is 2,26,005 constituting 3.11 percent and 7.7 percent in the total cases. Of the total Covid-19 cases reported, around 10.7 percent of the cases were in the age group 0 to 19².

Covid-19 cumulative deaths per million population in Karnataka stood at 529 as on 18th August 2021. Among the districts, the highest deaths per million population was recorded in Bangalore Urban with 1,658 deaths per million population followed by 872 deaths in Bangalore Rural district and the lowest was recorded in Chitradurga with 122 deaths per million population. Figure 2.2 shows the age group wise Covid-19 deaths in Karnataka. Out of the total Covid-19 deaths, nearly 57 percent of deaths were reported in the age group 60 and above followed by the age group 50 to 59 with 22 percent. The number of Covid-19 deaths between the age group 0 to 19 at 153 constituted less than 0.5 percent of the total Covid-19 deaths in Karnataka.

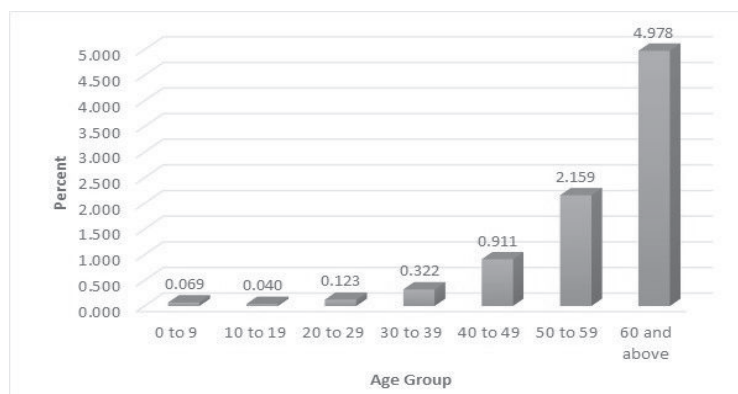
Figure 2.2: Age Group wise Covid-19 Deaths in Karnataka as on 18th August 2021



Source: Same as Figure 2.1

Even the Covid-19 case fatality rate was the lowest for the children in Karnataka. The cumulative Covid-19 case fatality rate of Karnataka was 1.26% as on 18th August 2021. Among the districts of Karnataka, the highest case fatality rate was observed in Haveri with 2.88 percent followed by Dharwad (2.13 percent) and the lowest in Chitradurga with 0.56 percent. The Covid-19 case fatality rate by age group is shown in Figure 2.3. The Covid-19 case fatality rate was the highest for the age group 60 and above (4.978 percent) followed by the age group 50 to 59 (2.15 percent). The lowest case fatality was observed for the age group 10 to 19 (0.04 percent) followed 0 to 9 (0.067 percent).

²Officially the age group 0 to 18 is considered as children. However, due to data limitations and availability, age group 0-19 is considered for the analysis.

Figure 2.3: Age Group wise Covid-19 Case Fatality Rate as on 18th August 2021

Source: Same as Figure 2.1

The data for the above analysis was sourced from the information published by the Covid War Room, GoK. There were limitations on the data availability. Patient level data for a deeper and more fruitful analysis was not available in the public domain. However, since the outbreak of the pandemic in March 2020 till 19th July 2020, the Department of Health & Family Welfare, GoK publicised the patient level information on its official website <https://covid19.karnataka.gov.in/>. This data included details on Covid-19 infections, fatalities, recoveries and active cases by age and gender. An analysis based on the sample of 63,489 persons is presented in Annexure 2.1.

Though the number of cases reported and deaths were less in the child age group, they were more vulnerable to the Covid-19 pandemic as they were unvaccinated due to non-availability of vaccine then. More importantly, the pandemic adversely affected their education, health & nutrition, immunisation schedule, participation and in fact overall development. There were many problems in switching over to the online mode of education due to lack of accessibility to internet facilities, gadgets required etc. With the lockdowns and restriction on the movement of people, much needed programmes on immunisation and nutrition were affected. These factors indicate how vulnerable were the children to the pandemic and also put forth the need for more public spending on the children.

More public spending depends on the availability of resources with the government. The pandemic had adversely affected the economy by posing the challenge of more spending with the drop in the resources available. The next section discusses the economic impact of the Covid-19 pandemic in India as a whole and Karnataka in particular.

2.3. Economic Implications of the Covid-19 Pandemic

The unprecedented health crisis due to the Covid-19 pandemic has negatively impacted the Indian economy. The impact of Covid-19 on the economy is analysed under the Macro Economic Framework and Medium Term Fiscal Policy cum Fiscal Policy Strategy Statement adopted by the Ministry of Finance, Government of India. Similarly, the framework of Medium Term Fiscal Plan of Government of Karnataka is used to assess the impact of the Covid-19 on Karnataka's economy.

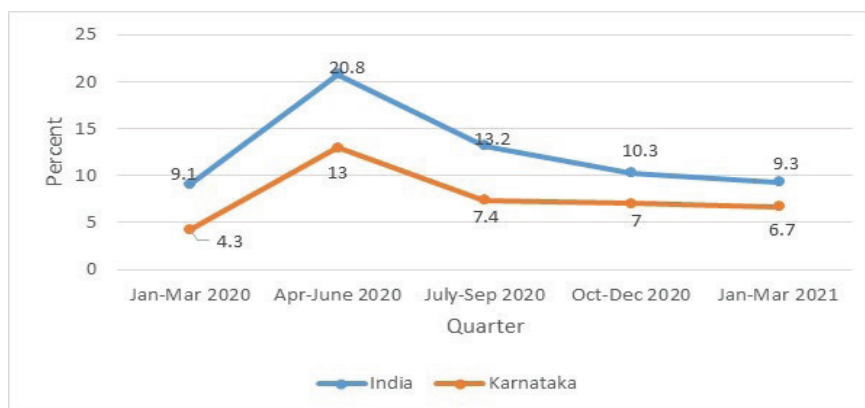
The Provisional Estimates of National Income released by the National Statistical Office showed that the real GDP growth of India had contracted by 7.25 percent in 2020-21 when compared to a growth of

4.04 percent in 2019-20. The real growth of Gross Value Added (GVA) had contracted by 6.16 percent in 2020-21 whereas it had increased by 4.13 percent in 2019-20. In the sectoral output, the positive growth of 3.63 percent was observed in agriculture and allied activities. The GVA in the industrial sector contracted by 6.37 percent and the service sector by 8.39 percent. In the service sector, the highest hit areas were Trade, Hotels, Transport, Communication and Services related to Broadcasting followed by construction activities. The adverse impact of Covid-19 was also observed on the private final consumption which had declined by 9.5 percent in 2020-21. The real per capita income declined from Rs. 1,08,645 in 2019-20 to Rs. 99,694 in 2020-21.

Similar to the trends of economic growth of the Indian economy, the real growth of Gross State Domestic Product (GSDP) of Karnataka had contracted by 2.62 percent in 2020-21. In the previous year, the Karnataka economy had realised a positive growth of 5 percent. In the sectoral output, the agriculture and allied activities grew at 3.09 percent, Industries growth declined by 5.14 percent and service sector growth also contracted by 3.05 percent. Though the impact of Covid-19 on economic growth was similar to the path of the India economy, the impact was relatively less for Karnataka. The real per capita income (Per Capita Net State Domestic Product) declined from Rs.1,54,861 in 2019-20 to Rs. 1,49,825 in 2020-21.

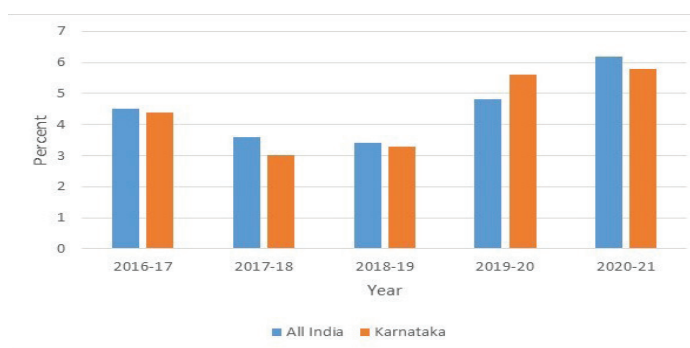
With the lockdowns and minimal economic activities, the employment level was severely affected. A comparative picture of the unemployment rate as per the current weekly status for age groups 15 years and above at the all-India level and for Karnataka is given in Figure 2.4. The figure clearly shows that during the first lockdown at the country level (April to June 2020) the unemployment rate was 20.8 percent. This started improving with the gradual opening up of the economy. A similar trend is observed for Karnataka but at a comparatively lesser level.

Figure 2.4: Unemployment Rate as Per Current Weekly Status for age group 15 years and above



Source: Quarterly Bulletin, PLFS Jan-Mar 2021, NSO, GoI (2021)

Due to both supply side and demand side problems with the restriction on economic activities, inflation increased in 2020-21 when compared to previous years both at the national level and at the sub-national level. The inflation based on the consumer price index at all India level was 6.2 percent and for Karnataka it was 5.8 percent (Figure 2.5). These figures were higher than the preceding four years for both India and Karnataka. RBI (2021a) notes that during the first nationwide lockdown period (March-May 2020) and even during the subsequent unlocking period, there was a persistent increase in the price level as the food markets and supply chain are adversely affected.

Figure 2.5: Average Inflation (CPI)-General

Source: Handbook of Statistics on Indian States, RBI (2021)

These adverse effects of the pandemic on macroeconomic variables namely economic growth, employment, inflation etc led to a decline in the government revenue mobilisation on the one hand and more spending on the other hand. Given this macroeconomic situation, the next section analyses the status of public finances of Karnataka in general and public finances for children in Karnataka in particular.

2.4. Covid-19 and public finances for children in Karnataka

2.4.1. Covid-19 pandemic and general public finances of Karnataka

This chapter adopts GoK's Medium Term Fiscal Plan framework to assess the impact of Covid-19 on State Finances of Karnataka during 2020-21. GoK presented a revenue surplus budget for the FY 2020-21. However, the lockdown measures taken to control the spread of Covid-19 pandemic halted the economic activities, investor sentiment was muted, and it led to supply-demand fluctuations and a drastic fall in the revenue collection from the budgetary targets in Karnataka (GoK, 2021a).

The state's revenue sources consist of three major items. First, the state's own revenue resources; second, the state's own non-tax revenues and third, transfers from the Centre. The state's own tax revenue increased by 0.8% from 2019-20 to 2020-21. The figure for the previous corresponding period was 8.6 percent. It indicates that even though the growth in own revenue mobilization was positive, it was less than 1 percent. The revenue realization was the lowest in almost two decades. There was a huge drop in the own revenue collection during first quarter of FY 2020-21 compared to the budgetary targets. However, improvements in own revenue collection were observed from the second quarter. Quarterly growth in major own revenue sources is provided in Table 2.1. The growth rate for all the major own tax sources in Q1 & Q2 was negative with the exception of state excise collection in Q2. Negative growth continued for Motor Vehicle Taxes even in the Q3, whereas for all other own tax sources, the growth rate was positive, indicating a recovery in the economic activities. The overall tax effort of the state declined from 7.64 percent in 2018-19 to 6.88 percent in 2019-20 and 6.53 percent in 2020-21 (GoK, 2021a). The buoyancy of state's own taxes also declined drastically to 0.1 in 2020-21. The buoyancy of own taxes was as follows: commercial taxes (0.6), state excise duty (0.8), motor vehicle taxes (-3) and stamps & registration duties (-2). Negative buoyancy indicates the level of shortfall in the revenue collection.

Table 2.1: Quarterly Growth of Own Tax Revenue of GoK**(in per cent)**

Major Own Taxes	Q1	Q2	Q3	Q4	Growth over previous year
Commercial Taxes	-17	-24.8	44	13.49	3
State Excise	-33.5	15.9	31.5	10.19	5
Stamps & Registration	-56	-10	8	5.5	-12
Motor Vehicle Taxes	-59	-19	-9	5.5	-18

Source: GoK, (2021a)

The contribution from non-tax revenue sources was very low. The non-tax revenue collection improved from Rs. 7681 crore in 2019-20 to Rs.7730 crore in 2020-21 with a meagre growth of 0.63%.

The Central/Union Government transfers consist of the tax shares of the states in the divisible pool and grants as recommended by the Finance Commission. We are under the Fifteenth Finance Commission (FFC) period. The FFC has submitted its initial report only for the year 2020-21 and the final report has been submitted recently, covering the period from 2021-22 to 2025-26 (GoI, 2019 & GoI, 2020). The Finance Commission recommends vertical devolution and horizontal devolution based on an adopted criterion. While the former is the tax sharing between the Centre and states, the latter is on the distribution of the devolution among the states. The FFC has reduced the states' share in the divisible pool from 42 percent as laid down by Fourteenth Finance Commission to 41 percent. As per the criteria adopted by the FFC for horizontal devolution, Karnataka's share has declined to 3.646 percent under the FFC period as against the Fourteenth Finance Commission's recommendation of 4.713 percent. This accounts for a decline in tax devolution to Karnataka approximately by Rs. 11,215 crore for the FY 2020-21. The Government of Karnataka has submitted its memorandum to FFC to consider an increase in the share of Karnataka in the divisible pool given its fiscal discipline and expenditure requirement. However, the share of Karnataka in the divisible pool is recommended to be at 3.646 percent in the final report for the remaining FFC period. Hence the revenue position of the state is adversely affected on this front.

Generally, the Finance Commission also recommends several grants consisting of revenue deficit grants, local bodies grants, sector specific grants, performance grants etc. Karnataka does not receive any revenue deficit grants from the Centre as its revenue account shows post tax devolution revenue surplus. The revenue deficit grants are given to states which show a deficit in the revenue account even after-tax devolution from the Centre. Fortunately, FFC has noticed that the sum of devolution and revenue deficit grants are going to decline between 2019-20 and 2020-21 for three states, Karnataka, Mizoram and Telangana. FFC has recommended Rs. 5495 crore as special grants to Karnataka. However, this was not released to the state until 2020-21. Surprisingly, FFC has not recommended any performance-based grants and sector-specific grants to states for the FY 2020-21 except for grants towards the improvement of nutrition. This has further reduced transfers from the Centre to states and accordingly for Karnataka.

The tax devolution from the Centre to Karnataka declined from Rs. 30,919 crore in 2019-20 to Rs. 20,053 crore in 2020-21. Similarly, the grants from Centre to Karnataka declined from Rs. 19,983 crore to Rs. 14,145 crore between 2019-20 and 2020-21. This implies a decline in tax devolution and grants by -35 percent and -29.2 percent respectively.

In addition to this, there exists a debate on the compensation to be provided to states by the Centre over revenue loss due to implementation of Goods and Services Tax (GST). The states had expressed concern that there would be revenue loss with the implementation of GST. As this is a destination-based tax, many of the manufacturing-based states like Maharashtra and Karnataka are expected to face more revenue losses. In order to compensate the revenue losses, GoI enacted the Goods and Services Tax (Compensation to States) Act, 2017 to levy compensation cess for providing compensation to states for GST losses. This Act has assured protection for revenue loss incurred by the states during the transition period (initial five years) of the GST implementation. The GST Compensation Cess (GSTCC) is introduced along with GST on some specific items to mobilize revenue for the GST Compensation Fund. However, the issue of GST compensation had triggered a heated discussion between the Union and state governments in 2020. The Union government was finding difficulty in paying compensation to the state governments due to the shortfall in the revenue collected from GSTCC. Unfortunately, the GST compensation Act has not provided any guidelines on a possible mechanism (to compensate states' revenue) in the case the GSTCC collection falls short of GST compensation requirement (Mukherjee, 2020). Hence, the Union government, following the GST Council's meet, had formally proposed two borrowing options to the states to meet the revenue shortfall in GST compensation for the FY 2020-21. The states were entitled to choose any of the options based on their fiscal position.

The first option limits the state borrowings to Rs. 97,000 crore (this is the total revenue shortfall in GST compensation as calculated by the Ministry of Finance) and borrowing would be provided through a special window, facilitated by Reserve Bank of India (RBI). The cost of borrowing was fixed at close to G-Sec yield and this borrowing amount will not be imputed to total borrowings of the states and hence, the principal and interest of loan would be financed through GST compensation cess (obviously by extending GSTCC beyond the transition period). In addition, the states would be provided an addition of 0.5 per cent FRBM borrowing limit. As per the second option, the states can be allowed to borrow the full amount of revenue shortfall i.e. Rs. 2.35 lakh crore, caused by GST implementation and economic slowdown induced by the ongoing crisis of the Covid-19 pandemic. Loans under the second option will be provided through market borrowings. The interest amount for these loans would be paid by the state government while the principal amount would be financed through GST Cess (Aulakh, 2020).

Karnataka was eligible for the sum of Rs. 18,289 crore under first option and a sum of Rs. 25,508 crore under the second option as GST compensation. The Government of Karnataka had opted the first option to fill the revenue shortfall of GST compensation on 2nd September, 2020. As per the statement released by the state government, out of the Rs. 18,289 crore, Rs. 6,965 crore was estimated to be generated through GST cess and the remaining Rs. 11,324 crore can be borrowed through the special window facilitated by the RBI (Mohammed, 2020).

With this reduction in own revenue mobilisation and devolution from the Centre, the revenue receipts of the state declined from Rs. 1,75,443 crore in 2019-20 to Rs.1,59,709 crore in 2020-21. The revenue receipts declined from 10.33 percent of GSDP to 8.85 percent of GSDP between 2019-20 and 2020-21. This trend clearly indicates the impact of Covid-19 on revenue mobilisation.

Analysis of public expenditure by services, namely General Service, Social Service & Economic Service indicate that expenditure between 2019-20 and 2020-21 RE grown by 22.7 percent, -2.2 percent and -5.7 percent respectively. This shows that a slight cut in the social service and economic service expenditure.

A major chunk of the general service expenditure consists of the committed expenditure of the state. The committed expenditure which constituted 87 percent of revenue receipts in 2019-20 increased to 102 percent of revenue receipts in 2020-21 owing to a huge shortfall in revenue collection.

The Fiscal Management Review Committee observed that the drop in revenue collections was mainly due to the nationwide lockdown imposed to combat the Covid-19 pandemic. It was also been observed that despite recovery, reaching pre-lockdown levels would take time (GoK, 2021). Reduction in expenditure was not up to the level of shortfall in revenue receipts and hence the government had to resort to borrowings. Fiscal deficit was estimated to be Rs. 46,071 crore in 2020-21. However, it increased to Rs. 58,320 crore as per 2020-21 RE. Surplus in the revenue account as per 2020-21 BE turned out to be deficit by 19485 crore as per 2020-21 RE. The government of Karnataka witnessed a deficit in its revenue account for the first time since the inception of the Karnataka Fiscal Responsibility Act in 2002. The Government of India had given permission for states to avail additional borrowings of 2 percent of the states GSDP in 2020-21 to overcome revenue slowdown due to the Covid-19 impact (GoK, 2021a). Accordingly, Government of Karnataka amended the Karnataka Fiscal Responsibility Act by rising the fiscal deficit cap to 5 percent of GSDP for the FY 2020-21. Total liabilities increased by Rs 29,527 crore between 2020-21 BE and 2020-21 RE (refer Table 2.2). Total liabilities of Karnataka stand at Rs. 3,98,219 crore in 2020-21 RE. For the FY 2021-22, fiscal deficit and total liabilities are estimated to be at 3.48 percent of GSDP and 26.9 percent of GSDP respectively. And revenue deficit was estimated to prevail in 2021-22 also.

Table 2.2: Fiscal Position of Karnataka (as per 2021-22 Budget)

Particulars	2020-21BE	2020-21RE	2021-22BE	Difference between 2020-21 BE & RE
	(Rs. Crore)	(Rs. Crore)	(Rs. Crore)	(Rs. Crore)
Total Expenditure	222835.58	216341.18	228762.89	6494.4
Revenue Expenditure	179776.44	179194.88	187404.77	581.56
Capital Expenditure	43059.14	37146.29	41358.12	5912.85
Revenue Receipts	179919	159709.05	172271.17	20209.95
Own Revenue Receipts	135873.24	125511.32	132460.35	10361.92
Liabilities	368692	398219	457899	-29527
	20.44%	22.08%	26.90%	
Fiscal Deficit	46071	58320.88	59240.14	-12249.9
	2.55%	3.23%	3.48%	
Revenue Deficit	-143	19485.84	15133.6	-19628.8
		1.08%	0.89%	
Primary Deficit	23855.27	35702.07	32079.28	-11846.8
	1.32%	1.98%	1.88%	

Source: Annual Financial Statement 2021-22, GoK (2021)

The size of the consolidated fund of Karnataka for the FY 2020-21 and 2021-22 is shown in Table 2.3. The size of the consolidated fund declined by 3.47 percent from Rs. 2,37,893.33 crore in 2020-21 BE to Rs. 2,29,924.73 crore as per 2020-21 RE. Despite the economic slowdown and the prevailing Covid-19 pandemic, the Government of Karnataka kept the size of the Consolidated Fund of Karnataka at Rs. 2,46,206.92 crore for the FY 2021-22. This was almost an increase by 7.08 percent in comparison to 2020-21 RE.

Table 2.3: Size of Consolidated Fund of Karnataka**(in Rs. Crore)**

2020-21 BE	2020-21 RE	2021-22 BE
237893.33	229924.73	246206.92

Source: Annual Financial Statement 2021-22, GoK (2021)

The prospects of public finance in the medium term are shown in Table 2.4. GoK is cautious in forecasting the fiscal indicators in the medium term, given the economic situation owing to Covid-19 and its expected adverse impact on revenue mobilisation. GoK has assumed a moderate growth in revenue receipts in the background of GST cess compensation issue, reduction in the devolution from the Centre etc. Recovery is expected in stamps and registration duties, motor vehicle taxes and non-tax revenues. The revenue expenditure is expected to grow faster than the receipts due to increasing interest payments, expected pay revisions etc. The revenue deficit situation is forecasted to continue giving less space for capital expenditure. The liabilities to GSDP ratio continue above 25%. This shows a big constraint on public finance of the state in the medium term. However, speedy economic recovery and faster economic growth may bring back the fiscal variables on a healthy track.

Table 2.4: Medium Term Fiscal Plan Projections 2021-2015**(Rs. Crore)**

Particulars	2021-22 BE	2022-23 Proj	2023-24 Proj	2024-25 Proj
Revenue Receipts	172271 (10.12)	179916 (9.54)	192343 (9.11)	203728 (8.59)
State Own Tax Revenue	124207 (7.3)	130535 (6.92)	139108 (6.59)	145749 (6.14)
Non Tax Revenue	8258 (0.49)	8589 (0.46)	8932 (0.42)	9290 (0.39)
Devolution from Centre	24273 (1.43)	26719 (1.42)	30065 (1.42)	34157 (1.44)
Grants from Centre	15538 (0.91)	14073 (0.75)	14238 (0.67)	14533 (0.61)
Revenue Expenditure	187405 (11.01)	208004 (11.03)	239405 (11.34)	261721 (11.03)
Capital Expenditure	44237 (2.60)	26735 (1.42)	14284 (0.68)	10942 (0.46)
Fiscal Deficit	59240 (3.48)	54687 (2.90)	61204 (2.90)	68788 (2.90)
Revenue Deficit	15134 (0.89)	28088 (1.49)	47062 (2.23)	57993 (2.44)
Total Liabilities	457899 (26.90)	512585 (27.18)	573790 (27.19)	642578 (27.09)

Source: GoK (2021a)**Note:** Figures in parenthesis indicate percentage of GSDP

2.4.2. Covid-19 pandemic and public finances for children in Karnataka

The child centric programmes and non-programmes are identified and classified in the Child Budget as per the criteria mentioned in Table 2.5. Further analysis in this report is based on these classifications.

Table 2.5: Criteria for identification and classification of Child Centric Programmes/Schemes

Identification	Classification	Criteria
Child Centric Programmes/Schemes	100% Child Centric Programmes/Schemes	Programmes/schemes that are exclusively designed, targeted or intended for benefiting children.
	Less than 100% Child Centric Programmes/ Schemes	Programmes/schemes that include children and other beneficiaries by design, targeting or intention.
Child Centric Non-Programmes/ Schemes	100% Child Centric Programmes/Schemes	Non-programmes/schemes that are exclusively designed, targeted or intended for child beneficiaries.
	Less than 100% Child Centric Programmes/ Schemes	Non-programmes/schemes that include children and other beneficiaries by design, targeting or intention

Source: Child Budget 2021-22, Finance Department, GoK (2021b)

Notes: (1) In general, budgetary allocation and expenditure for Child Centric Non-Programmes comprise institutional set-ups, establishments, infrastructure facilities and administrative support that benefit children. (2) Beneficiaries of 100% Child Centric Programmes include pregnant or expectant mothers and lactating mothers.

A summary of child centric allocations from 2019-20 to 2021-22 is provided in Table 2.6. As per the identification and classification of child centric programmes and non-programmes in 2021-22, the child centric allocations in 2020-21 BE was Rs. 37,492.62 crore and it was revised downward to Rs. 36,660.30 crore in 2020-21 RE. The difference between child centric allocations in 2020-21 BE and RE implies the effect of Covid-19 on the child budget. The reduction was by Rs. 832 crore. Even though there was a reduction in child centric allocations in absolute number, there was an increase when the percentage to total consolidated fund of Karnataka is considered. Child centric allocation was 15.76 percent of the consolidated fund of Karnataka as per 2020-21 BE and was revised upward to 15.94 percent as per 2020-21 RE. This implies that cuts in child centric allocations were fewer when compared to the overall reduction in the state budget. The child centric allocations were reduced by 2.23 percent between 2020-21 BE & RE, whereas the size of the consolidated fund of Karnataka got reduced by 3.35 percent.

Differences in child centric allocations between 2020-21 BE and RE by programmes and non-programmes is provided in Table 2.7. Allocations on 100 % child centric programmes was reduced by Rs. 1,670 crore between 2020-21 BE & RE whereas there was an upward revision in allocations on 100% child centric non-programmes, less than 100% child centric programmes and non-programmes. Major cuts were seen only with regard to 100% child centric programmes.

Table 2.6: Child Centric Allocations in Child Budget 2021-22: 2019-20 to 2021-22
(in Rs. Lakhs)

Child Centric Programmes & Non-programmes	2019-2020 (Accounts)	2020-21 (Budget)	2020-21 (Revised)	2021-22 (Budget)
1.100% Child Centric Programmes	1134190.75	1195294.95	1028285.99	1186653.38
2.100% Child Centric Non-Programmes	1718460.54	1873223.62	1884103.77	1891696.95
3.Less than 100% Child Centric Programmes	1246718.49	1179190.23	1252629.63	1166643.98
4.Less than 100% Child Centric Non-Programmes	747246.26	827127.93	968535.06	820791.29
5.Less than 100% Child Centric Programmes & Non- Programmes (adjusted)	676552.24	680743.75	753641.18	674336.79
6.Total allocation on Child Centric Programmes & Non-Programmes (1+2+5)	3529203.53	3749262.32	3666030.94	3752687.12
7.Total Disbursement on Consolidated Fund of Karnataka	22403631.03	23789333.15	22992473.13	24620692.48
8.Total Child Centric allocation as a percentage of total disbursement on Consolidated Fund of Karnataka (6 as a % of 7)	15.75	15.76	15.94	15.24

Source: Child Budget 2021-22, Finance Department, GoK (2021b)

Table 2.7: Child Centric Allocations: Comparison between 2020-21 BE and RE
(in Rs. Lakhs)

Child Centric Programmes & Non-programmes	2020-21 BE	2020-21 RE	Difference
100% Child Centric Programmes	1195295	1028286	167009
100% Child Centric Non-Programmes	1873224	1884104	-10880.1
Less than 100% Child Centric Programmes	400099.2	425017.2	-24918
Less than 100% Child Centric Non-Programmes	280644.5	328623.9	-47979.4
Total Child Centric Allocations	3749262	3666031	83231.38

Note: '-' sign indicate increase in allocation as per RE in comparison to BE

Source: Author's Calculation

The child centric programmes and non-programmes are spread across 12 demands as shown in Table 2.8. The reduction in allocation as per 2020-21 RE when compared to 2020-21 BE was the highest in Education demand followed by Social Welfare demand. In the Education demand, major cuts were in Akshara Dasoha (mid-day meal programme), Vidya Vikasa Scheme and schemes on maintenance expenditure of schools. During the lockdown period in 2020, the mid-day meal programme has been paused. Later, the government decided to distribute the foodgrains directly to students. There was an upward revision in allocation towards programmes like Sarva Shiksha Abhiyana in 2020-21 RE. Under the Social Welfare demand, allocations on the construction and maintenance of residential schools were mainly cut. There was no change in allocation towards pre- and post-matric scholarships and in a few cases, there was an increase in the allocation towards scholarship schemes.

An upward revision in allocation as per 2020-21 RE in comparison to BE was observed in Health & Family Welfare Demand, followed by Food & Civil Supplies, Home & Transport and Women & Child Development. To highlight a few, under the Health & Family Welfare demand, allocation towards programmes such as National Health Mission was increased from Rs 1,390 crore in 2020-21 BE to Rs. 1,594 crore in 2020-21 RE. Similarly, there were substantial increases in non-programmatic allocations towards block grants for PHCs, grants for district hospitals, Institutes of Medical Sciences at various districts, Indira Gandhi Institute of Child Health etc. to meet the Covid-19 induced expenditure.

Allocation towards programmes such as the Integrated Child Development Scheme (ICDS), Integrated Child Protection Scheme, Crèches for Working Mothers and Pradhan Mantri Matru Vandana Yojana under Women & Child Development demand was increased as per 2020-21 RE in comparison to 2020-21 BE. Non-programmatic allocation on the Karnataka State Commission for Protection of Child Rights was also seen an increase in allocation between 2020-21 RE and BE.

Under Home & Transport demand, upward revisions were observed in programmes such as Aarogya Bhagya Scheme for police forces where the benefits would be passed on to the family of policemen including their children. Increased allocations were also seen on subsidy towards students and other concessions extended by the Karnataka State Road Transport Corporation.

It is to be noted that even though the pre-schools and schools were mostly closed due to the Covid-19 pandemic in 2020-21, allocation on most of the programmes designed to meet necessary nutritional requirements like ICDS, Pradhan Mantri Matru Vandana Yojana etc have increased. Foodgrains were directly distributed to children under the mid-day meal programme. In addition, allocations towards most of the scholarship programmes have remained unaltered and, in a few cases, there is an increase in allocation.

Table 2.8: Child Centric Allocations by Demand Numbers: Comparison between 2020-21 BE & RE

(in Rs. Lakhs)

Demand No	Demand Description	2020-21 BE	2020-21 RE	Difference
5	Home & Transport	50067.58	69040.3	-18972.72
8	Forest, Ecology and Environment	16051	12615.93	3435.07
10	Social Welfare	326344.08	246092.96	80251.12
11	Women and Child Development	415767.53	426580.87	-10813.34
12	Information, Tourism and Youth Services	12939.32	12030.17	909.15
13	Food & Civil Supplies	86402.75	110548.01	-24145.27
15	Information Technology	1835.61	1835.61	0
17	Education	2487810.02	2390237.34	97572.68
22	Health & Family Welfare	339038.97	384497.34	-45458.37
23	Labour & Skill Development	9227.91	9183.7	44.21
25	Kannada & Culture	1643.57	1223.7	419.87
27	Law	2134	2145	-11

Source: Author's Calculation

Note: '-' sign indicate increase in allocation as per RE in comparison to BE

A comparison of the child centric allocation between 2020-21 BE & RE by revenue account and capital account is given in Table 2.9. There was an upward revision in child centric allocation under the revenue account except for the 100% child centric programmes. Allocation under capital account on child centric programmes and non-programmes were mostly cut except for less than 100% child centric non-programmes. As observed in the overall state budget, capital expenditure was mainly cut in the Child Budget also.

Table 2.9: Composition of Child Centric Allocation by Revenue Account & Capital Account: Comparison between 2020-21 BE & RE

(in Rs. Lakhs)

Child Centric Programmes & Non-programmes	2020-21 BE		2020-21 RE		Difference b/w 2020-21 BE & RE	
	Revenue Account	Capital Account	Revenue Account	Capital Account	Revenue Account	Capital Account
100% Child Centric Programmes	1047937	147358	911595	116691	136342	30667
100% Child Centric Non-Programmes	1871223.6	2000	1884104	0	-12880.1	2000
Less than 100% Child Centric Programmes	378268.34	21830.9	412346.4	12670.8	-34078.1	9160.08
Less than 100% Child Centric Non-Programmes	254832.26	25812.25	267688.3	60935.7	-12856	-35123

Source: Author's Calculation

Note: '-' sign indicates increase in allocation as per RE in comparison to BE

Child centric allocation by state and district sector is compared in Table 2.10. Of the 308 child centric programmes and non-programmes in 2021-22, a total of 277 child centric programmes and non-programmes were in the state sector and 31 child centric programmes and non-programmes were in the district sector. These 31 child centric programmes and non-programmes under the district sector constitute 69.3% of the total allocations. As shown in Table 2.9, under the state sector, allocations on 100% child centric programmes were cut in 2020-21 RE in comparison to the 2020-21 BE whereas there was an upward revision in other classification. Under the district sector, allocations were cut on 100% and less than 100% child centric programmes, whereas there was an upward revision in 100% and less than 100% child centric non-programmes.

Table 2.10: Child Centric Allocation by State & District Sector: Comparison between 2020-21 BE & RE

Child Centric Programmes & Non-programmes	2020-21 BE		2020-21 RE		Difference b/w 2020-21 BE & RE	
	State Sector	District Sector	State Sector	District Sector	State Sector	District Sector
100% Child Centric Programmes	1047937	147358	911595	116691	136342	30667
100% Child Centric Non-Programmes	1871223.6	2000	1884104	0	-12880.1	2000
Less than 100% Child Centric Programmes	378268.34	21830.9	412346.4	12670.8	-34078.1	9160.08
Less than 100% Child Centric Non-Programmes	254832.26	25812.25	267688.3	60935.7	-12856	-35123

Source: Author's Calculation

Note: '-' sign indicates increase in allocation as per RE in comparison to BE

It may be noted in Table 2.11 that, despite having the fiscal constraint owing to the Covid-19 pandemic, the Government of Karnataka had increased the child centric allocations to Rs. 37526.87 crore in 2021-22 from Rs. 36660.30 crore in 2020-21RE. This indicate a growth of 2.37 percent.

Per capita child centric allocation and child centric allocation as percentage to GSDP is provided in Table 2.11. Per capita child centric allocation declined from Rs. 18,359 in 2020-21 BE to Rs. 17,951 in 2020-21 RE. However, per capita child centric allocation had increased to Rs. 18,387 in 2021-22. This indicates a growth of 2.43 percent between 2020-21 RE and 2021-22 BE and 6.49 percent between 2019-20 and 2021-22 BE. Child centric allocation as percent to GSDP declined slightly from 2.07 percent to 2.03 percent in 2020-21 BE and 2020-21RE respectively. Whereas, child centric allocation as percentage to GSDP was increased to 2.2 percent in 2021-22.

Table 2.11: Child centric allocation: Per Capita & share in GSDP

Allocations	2019-20 Accounts	2020-21 BE	2020-21 RE	2021-22 BE
Total Child Centric Allocations (in Rs. Lakh)	3529203.53	3749262	3666031	3752687
Per Capita Child Centric Allocations (in Rs)	17267	18359	17951	18387
Child Centric Allocation as % to GSDP (in %)	2.077	2.078	2.03	2.2

Source: Author

In a positive note, allocation towards 100% child centric programmes increased by 15.4% and 100% child centric non-programmes by 0.4% between 2020-21 RE and 2021-22 BE. These two categories constituted 82% of the total child budget 2021-22. However, the allocation towards less than 100% child centric programmes and non-programmes was reduced by 10.15%.

Overall, there was a decline in child centric allocation between 2020-21 BE and RE owing to the Covid-19 pandemic induced fiscal constraints. However, the decline was much less than the reduction in the size of the overall state budget. This implied that the cuts in the child centric allocations were less than the cuts in the overall budget. Despite the fiscal constraints, Government of Karnataka had increased the child centric allocations for the FY 2021-22 BE when compared to 2020-21 RE. Child centric allocations both in per capita terms and as percent of GSDP have increased in 2021-22 BE. From the above analysis, it can be concluded that the adverse fiscal impact of the Covid-19 was not seen on the child budget in Karnataka. Government of Karnataka had maintained the required expenditure with borrowings given the shortfall in revenue mobilisation in the FY 2020-21.

2.5. Conclusion

This chapter analysed the fiscal impact of the Covid-19 pandemic on children in Karnataka. Based on the patient level data from April 2020 to 19th July 2020, it was found that 9.8 percent of total Covid-19 cases were under the age group 0 to 18. As on 18th August 2021, nearly 10.7 percent of Covid-19 positive cases were in the age group 0 to 19. Single year of age distribution of Covid-19 infections among children revealed that the number of infections was more between 14 to 18 years. District-wise analysis showed that Covid-19 infections among children were more in the Bangalore Urban district followed by Kalaburagi and Yadagiri. The Covid-19 fatality rate among children was less when compared to other age groups.

Covid-19 induced lockdowns adversely affected the economic activity, state income and revenue mobilization for Karnataka. Adding to it, the share of Karnataka in the divisible pool has declined with the recommendations of the Fifteenth Finance Commission. Overall, there was a shortfall in the receipts of the state. Given the shortfall in revenue mobilization, the GoK had resorted to borrowings to meet the expenditure. It is difficult to cut down the expenditure as more than 85 percent of the revenue receipts are covered by committed expenditure. The ratio had crossed 100 percent for the FY 2020-21. This had resulted in an increase in fiscal and revenue deficits. Government of Karnataka was facing the deficit in its revenue account for the first time since the enactment of KFRA in 2002. Even though there was a revenue crunch, the size of the consolidated fund of Karnataka (budget size) was reduced only by 3.47 percent in 2020-21 RE when compared to 2020-21 BE.

Despite the fiscal distress, the Government of Karnataka had not substantially cut the child budget. When 2020-21 BE figures were compared with the RE, cuts were seen only in 100% child centric programmes, whereas there was an upward revision in other classifications of the child budget. Among the demands where the child centric allocations were high, downward revisions in the allocations were seen in the Education demand and Social Welfare demand and upward revisions in Health & Family Welfare and DWCD. Scheme-wise analysis reveals that the allocations on the construction and maintenance expenditure on schools and hostels were mainly cut. However, allocations towards scholarships, NHM, ICDS, ICPS programmes etc. have seen an increase in 2020-21 RE when compared to 2020-21 BE. The decline in child budget was much less than the reduction in the size of the overall state budget. This implies that the cuts in the child centric allocations were less than the cuts in the overall budget. It is to be noted that even during the pandemic situation, the Government of Karnataka had increased the child centric allocations for the FY 2021-22 BE when compared to 2020-21 RE. Child centric allocations both in per capita terms and as a percentage of GSDP have increased in 2021-22 BE. The Covid-19 induced adverse fiscal impact was not observed on the child budget 2020-21 and 2021-22 in Karnataka.

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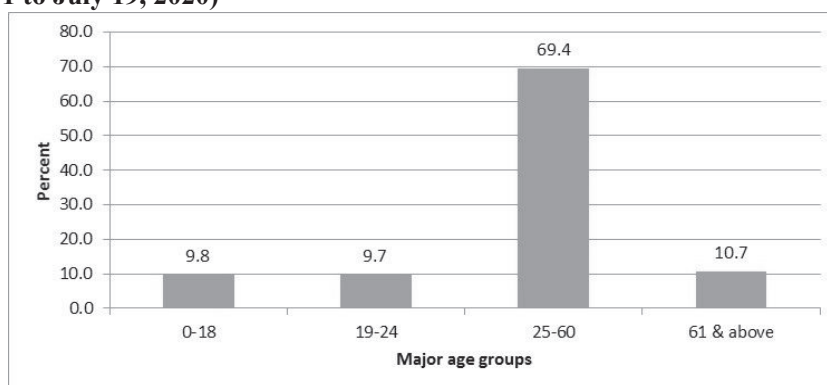
Annexure-2.1

Covid-19 & Children in Karnataka: Analysis using patient level data (March 2020 to 19th July 2020)

In total, 67420 Covid-19 infections were reported till July 19th 2020 in Karnataka. Due to some missing information regarding age, sex, district etc a sample of 63489 was considered for analysis. Within this period, 1403 deaths occurred across different age-sex groups and districts of the state. The total mortality rate was 2.02%. There were very few cases in March 2020.

In Karnataka, the Covid-19 prevalence rate of 1.036 was observed between April and 19th July 2020. During the same period, the Covid-19 prevalence rate (calculated per 1000 populations) was 0.30 for children.

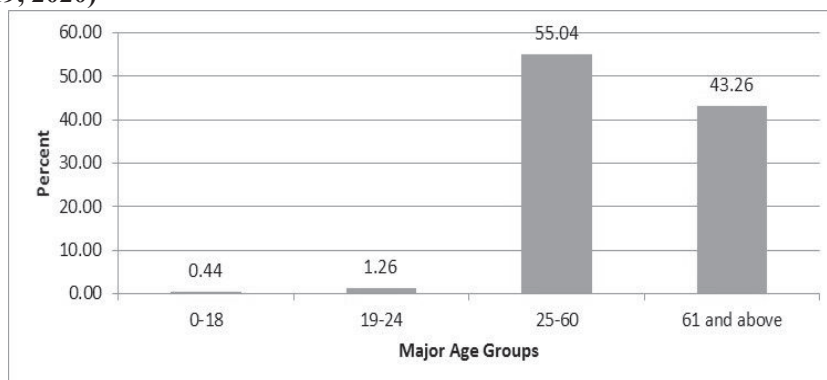
Figure 1. Distribution of Covid-19 positive cases by major age-groups in Karnataka (from April 1 to July 19, 2020)



Source: FPI Research Team 2020-21

The total Covid-19 cases by major age groups in Karnataka for the period April to 19th, July 2020 is shown in Figure 1. It is observed that out of the total infections, 9.8 percent are children. Most of the infections/positive cases are in the age group of 25-60 years (69.4 percent).

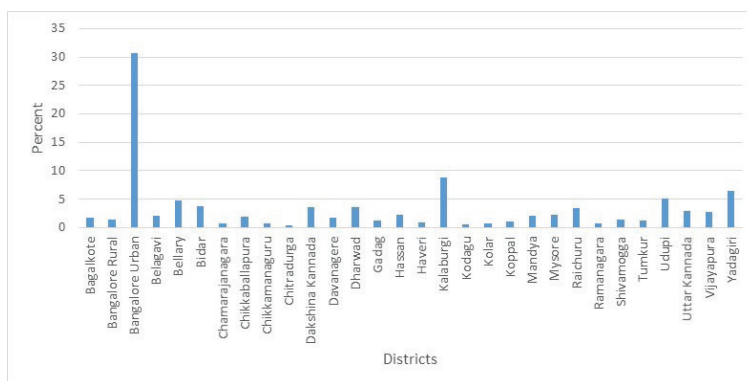
Figure 2. The distribution of Covid 19 fatality by major age-groups in Karnataka (April to July 19, 2020)



Source: FPI Research Team 2020-21

Figure 2 shows the distribution of Covid-19 fatalities that occurred across major age-groups in the state between April, 2020 and 19th July, 2020. The highest fatalities were recorded in the age-group 25-60 years (55 percent) followed by above 60 years age group (43.3 percent). Fatalities were less than 1 percent in the age-group 0-18.

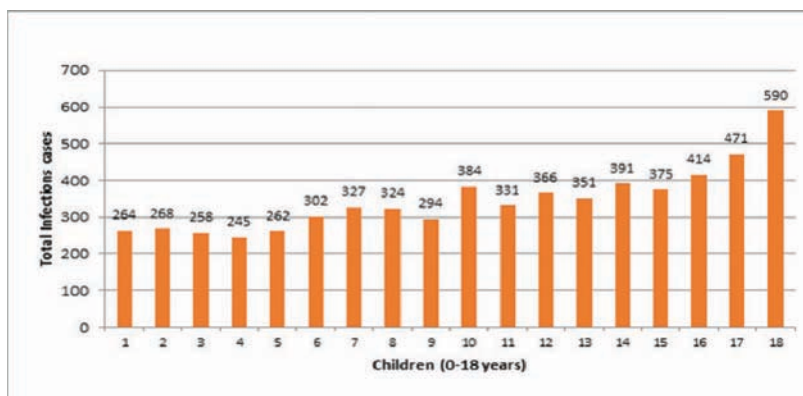
Figure 3. Distribution of Covid-19 infections in children across the districts of Karnataka (April 1 to 19th July, 2020)



Source: FPI Research Team 2020-21

Figure 3 shows the district-wise distribution of total Covid-19 infections in children (0-18 years). The highest concentration of Covid-19 infections in children was found in Bangalore Urban (30.6 percent) followed by Kalaburagi (8.83 percent) and Yadagiri (6.39 percent). The districts where the Covid-19 infections in children were the least include Chitradurga (0.30), Kodagu (0.57 percent), Chikkamagaluru (0.62 percent) and Kolar (0.65 percent).

Figure 4. Distribution of total Covid-19 infection cases by single age (0-18 years) in Karnataka (From April 1 to 19th July, 2020)



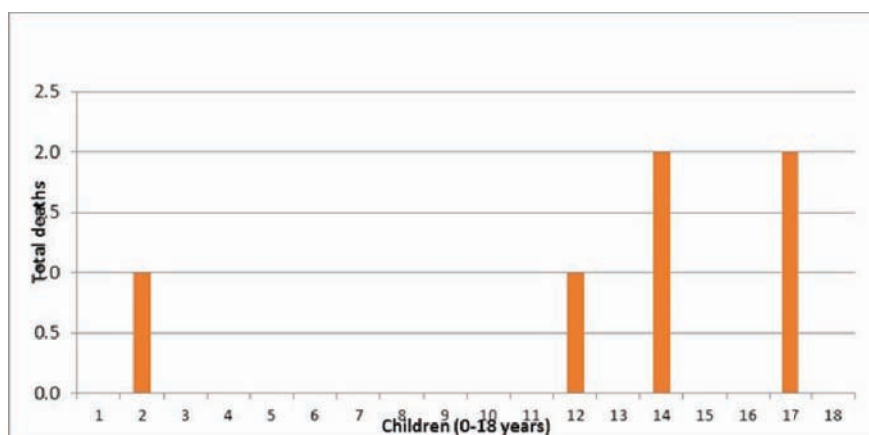
Source: FPI Research Team 2020-21

Single age wise Covid-19 infections in children in Karnataka is presented in Figure 4. The highest concentration of Covid-19 infections was recorded at the age of 18 among the children. Within the children's

age group 0-18 years, the Covid-19 positive cases were highly varied.

Figure 5 shows the total Covid-19 fatalities among the children. Within the age group 0-18, a total of 6 deaths were reported. 2 deaths each at the age of 14 & 17 and one death each in the age 2 and 12

Figure 5. Distribution of total Covid-19 related deaths among children aged 0-18 years, in Karnataka (From April 1 to 19th July, 2020)



Source: FPI Research Team 2020-21

It was observed that 9.79 percent of total infections are in the age group 0-18 despite this including a lockdown period where the movement of people was restricted and limited. The economy was locked except for essential services in phase 1 (till 20th April, 2020).

Chapter-3

Micro and Macroeconomics of Child Health and Nutrition for Child Development and Budget in Karnataka

*Arnab Mukherji*¹

3.1. Introduction

The Financial Year 2020-21 will go down as the year when the Covid-19 (C19) pandemic challenged many lives and livelihoods in many ways that could not have been anticipated. As C19 spread, many countries, including India, chose to protect lives by enacting strict lockdowns starting from 23rd March 2020 and lasting well into quarter 1 of the 2020-21 financial year. The global economy is expected to contract by 4 – 5% while India's economy contracted by 23% in the first quarter and is expected to shrink by 7 – 11% for the year, based on a range of estimates using differing methods.

Using the 1897 Epidemic Act of India, the Indian economy was under 4 phases of lockdown that started with a 14-hour Janata Curfew on the 22nd of March, and went on, in phases, from 25th March to 31st of May, 2020. Subsequently, the economy opened up in phases to enable a return to normalcy during the period 1st of June to 30th of November. This intensive lockdown meant that the economy shrank in size as economic activity stopped, and all non-essential policies came to a standstill as people stopped stepping out or officers and frontline workers were diverted to C19 duty. Anganwadis faced challenges in continuing routine activities such as nutrition, routine health services, and early childcare. As per WHO and UNICEF reports, 80 million children in 68 countries are at risk due to the absence of immunization services. Early reports document that services like immunization were truncated, with at least one lakh children missing their BCG vaccine in March alone (with a lockdown on 23rd March) and a 69 percent drop in measles vaccines between March 2019 and March 2020².

At the same time, the fiscal space of the Union government and state governments declined, with new commitments to battle C19 commitments and reduced tax revenues with GST revenues declining as national collections declined by over 40 percent during the financial year. In this context, we revisit the importance of different schemes that are critical to child development in Karnataka and seek to understand how public policy and budgetary allocation may be tweaked to ensure a stable and growing environment for children.

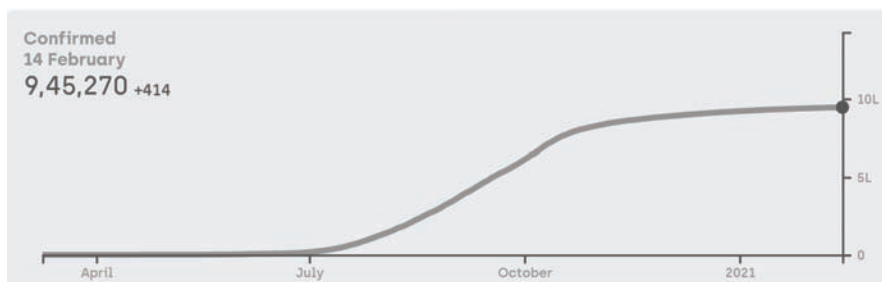
In Karnataka, services like Supplementary Nutrition and Immunization have been a major part of the Health and Nutrition Programme covering both Women and Child Development. Broadly, Karnataka may be seen to have four administrative divisions, the Belgaum Division (north-east Karnataka), the Gulbarga Division (north-west Karnataka), the Mysore Division (south-east Division) and the Bangalore Division (south-west Karnataka). The two northern divisions, particularly a core group of districts within them, have very low human development indicators and this is coterminous with higher SC/ST and high incidence of child marriage, child labour, etc. along with low child health and nutrition statuses. The recently released District Fact Sheets from the 5th round (2019-20) of the National Family Health Survey (NFHS-5) identifies an important pre-C19 baseline and shows important improvements in vaccination from 62.5 percent to

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²See Johari, A. (2020) "With Anganwadis locked down across India, children are missing out on vaccines and nutrition", Scroll, July 5th, see online at: <https://tinyurl.com/yclxs4vw>

84.1 percent in the last 5 years in Karnataka. Modest reductions are also seen in stunting (36.2 percent to 35.4 percent), wasting (26.1 percent to 19.5 percent) and being underweight (35.2 percent to 32.9 percent). However, the combined impact of C19 and the economy wide lockdown (Figure 3.1) may easily reverse these gains in the past five years. More recent data would be relevant, but with scattered writing and limited government reports, revised estimates from NFHS-5 are unlikely to be immediately available.

Figure 3.1: COVID-19 Trends in Karnataka



Note: Data is sourced from <https://www.covid19india.org/>

In this chapter, we review the impact of C19 on the economy of Karnataka. Keeping in view the underlying heterogeneity within the state, we discuss the macroeconomic implications as well as patterns of income receipt and consumption expenditure as the economy weakened in Section 2. In Section 3, we focus on children and discuss several aspects that include their legal status and changes in their health and nutrition status between 2015-16 and 2020-21 using the NFHS data and identify a set of demand allocations that relate to 11 of the 19 SDG indicators that are under the purview of the UNICEF. In Section 3, we further analyse the trends in health and nutrition to establish dimensions of health and nutrition in which Karnataka has done poorly in the last five years and we identify districts in which there are multiple dimensions on which they perform poorly. This allows us to identify priority domains and priority hotspots that need to be kept in mind as the government's fiscal contraction sets in. Section 4 concludes by placing the trade-off facing the government of Karnataka and some of the issues which must be kept in mind while deciding how the contraction will affect the programmatic expenditure of the government of Karnataka on child development. We close in Section 4 with a discussion of the challenges facing the government of Karnataka considering the existing challenges with child indicators in the health (non-mental) and nutrition domain as it faces a shrinking fiscal footprint, considering C19.

3.2. State of the Economy: An Overview

3.2.1. Macroeconomic Issues

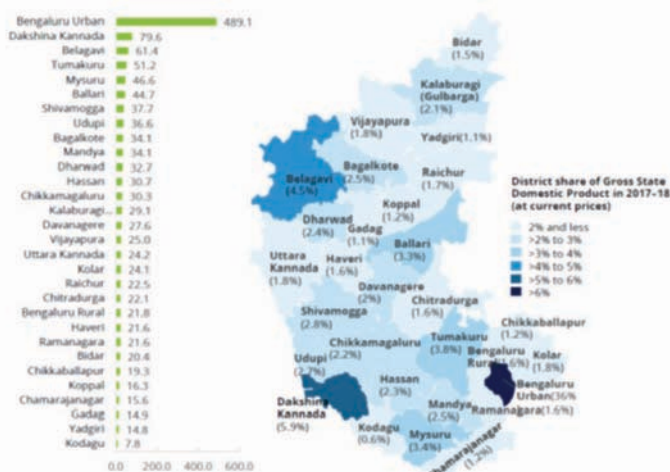
India's economy saw sharp declines as the new financial year, 2020-21 started in April 2021. With C19 related disruption beginning to peak in March 2020, the Government of India chose a path of strict lockdown beginning with the 23rd of March 2021 lockdown. Enacted under the Disaster Management Act of 2005 and the Epidemic Diseases Act of 1897, these lockdowns brought the economy to a halt as strict lockdowns, a stay-at-home policy, and restrictions on free movement of people, goods and services were imposed. These lockdowns have been amongst the strictest possible according to the Oxford C19 Government Response Tracker that rated India's lockdown at a 100 out of a 100 in terms of intensity³.

³<https://www.statista.com/chart/22048/university-of-oxford-coronavirus-containment-and-health-index-selected-countries/>

Karnataka saw these same laws being implemented and faced a harsh economic lockdown as these were all centrally promulgated with the Prime Ministers' announcement and state level implementation. Karnataka's Gross State Domestic Product (GSDP) was estimated to be more than Rs. 16.99 lakh crore (at current prices) in 2019-20. It was estimated to grow up 6.3 percent to Rs 18,05,742 crore in the Budget presented on 5th March 2020⁴. However, the latest reported estimates suggest that Karnataka's economy shrank by 12 percent in 2020-21 and GSDP has reduced by at least Rs. 2 lakh crores⁵. This contraction of the economy was an economy-wide contraction, rather than being localized to any specific sector, and thus also leads to a significant shrinkage in the fiscal space within which the government of Karnataka needs to operate.

In a normal year, such as 2019-20, about 66.2 percent of GSDP in Karnataka comes from the services sector. The secondary sector contributes another 23.6 percent of GSDP, while the rest is from the primary sector. In terms of the tertiary sector, Karnataka's economy plays a role in the national IT and ITeS sector and is both the highest recipient of foreign direct investment and the largest exporter simultaneously. Another notable mention is the emergence of Bengaluru as "India's Start-Up Capital" with 36.8 percent of the country's expenditure in this sector. In the secondary sector, high-tech industries, such as automotive, biotechnology, electronics, and IT/ITeS not only contribute significantly to Karnataka's economy, but they too generate a significant part of the national output. Karnataka's secondary sector is of strategic importance, with almost 44 percent of India's research and development centres being based here.

Figure 3.2: Cross-sectional district level heterogeneity in the economic size using GDDP



Note: The Graph above is taken from Deloitte (2020) that uses data from Economic Survey of Karnataka, 2019-20 to show how economic size of district varies in the left panel in the bar chart and the size of each district relative to the total economy in the map on the right panel. Gross District Domestic Product (at current prices) in 2017-18 or GDDP is measured in Rs '000 crore.

⁴<https://www.prsindia.org/parliamenttrack/budgets/karnataka-budget-analysis-2020-21#:~:text=The%20Gross%20State%20Domestic%20Product,as%20per%20the%20revised%20estimates.>

⁵<https://timesofindia.indiatimes.com/city/bengaluru/karnataka-12-economic-contraction-estimated-before-budget/articleshow/80555133.cms#:~:text=Karnataka%3A%2012%25%20economic%20contraction%20estimated%20before%20budget,-B%20V%20Shiva%20Shankar&text=BENGALURU%3A%20Karnataka's%20economy%20is%20thought,of%20the%202021%2D22%20budget.>

Geographically, much of the growth is narrowly driven by the district of Bengaluru Urban with 36% of the GSDP coming from this sector alone (see Figure 3.2). Almost 45 percent of Karnataka's GSDP comes from the Bengaluru and its surrounding districts reflecting a geographic lopsided distribution of economic activity. Thus, much of the economic activity in Karnataka is agglomerated around the state capital of Bengaluru. While this is excellent to reap economies of scale, network economies and fostering faster learning and growth due to co-location, it also raises challenges when some of the other districts have much lower levels of economic activity, income, and employment. The scope for expansion does exist, with reasonable land-banks spread across the state; however, many of these need careful development and curation and strong state level public policy support for these regions to become economically sustainable.

Table 3.1: Receipts & Expenditure Glance 2019-20 and April-December-2020

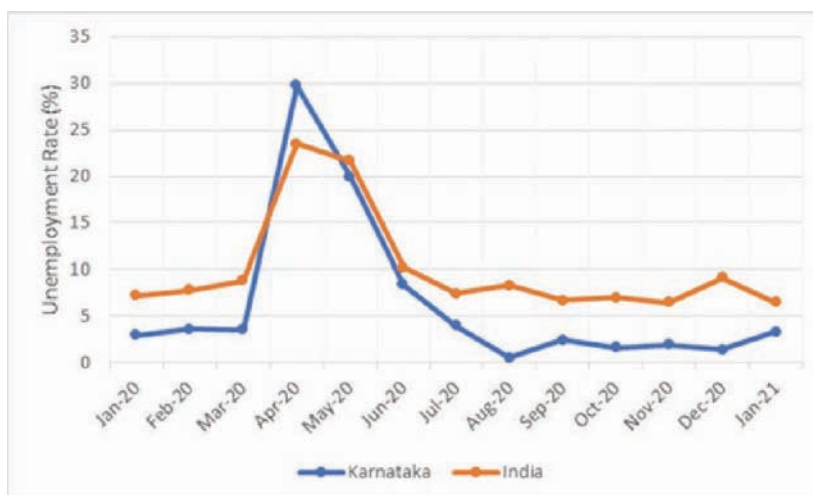
	Categories	2019-20			2020-21		
		B. E.	Apr-Dec	% B. E.	B. E.	Apr-Dec	% B. E.
1	Revenue Receipts	1,81,863	1,29,657	71%	1,79,920	1,06,249	59%
1a	Own Tax Revenue	1,01,744	74,587	73%	1,11,991	66,439	59%
1b	Own Non-Tax Revenue	8,055	4,708	58%	7,767	4,666	60%
1c	Devolution for GOI	39,806	22,536	57%	28,591	13,550	47%
1d	GIA and Contribution	32,257	27,825	86%	31,570	21,594	68%
2	Capital Receipts (Non- debt)	275	74	27%	297	126	42%
2a	Recovery of loans and Advances	195	48	25%	257	104	40%
2b	Other Non-Debt Capital Receipts	80	26	33%	40	22	55%
3	Total Receipts	1,82,138	1,29,731	71%	1,80,216	1,06,375	59%
3a	Public Debt (Receipt)	48,601	30,342	62%	52,918	63,725	120%
3b	Total Receipts including Public Debt	2,30,738	1,60,073	69%	2,33,134	1,70,100	73%
4	Revenue Expenditure	1,81,605	1,19,501	66%	1,79,776	1,10,081	61%
4a	Interest Payments out of 4	19,060	11,998	63%	22,216	14,301	64%
5	Capital Expenditure	42,584	20,967	49%	46,512	21,337	46%
5a	Loans and Advances disbursed out of 5	3,503	2,000	57%	3,452	1,731	50%
6	Total Expenditure (4+5)	2,24,189	1,40,468	63%	2,26,288	1,31,418	58%
6a	Public Debt	9,964	7,303	73%	11,605	9,440	81%
6b	Total Expenditure including Public Debt	2,34,153	1,47,771	63%	2,37,893	1,40,858	59%
7	Fiscal Deficit (6-3)	42,051	10,737		46,072	25,043	
8	Revenue Deficit (4-1)	-258	-10,156		-143	3,832	
9	Primary Deficit (7-4(a))	22,991	-1,261		23,855	10,742	
	GSDP at Current Prices	16,98,685	16,98,685		18,03,609	18,03,609	
	Fiscal Deficit as % to GSDP	2.48%	0.63%		2.55%	1.39%	
	Revenue Deficit as % to GSDP	-0.02%	-0.60%		-0.01%	0.21%	
	Primary Deficit as % to GSDP	1.35%	-0.07%		1.32%	0.60%	

Source: https://finance.karnataka.gov.in/storage/pdf-files/AGglance_dec20.pdf

Many of these opportunities have receded into the distant future, with C19 induced contractions placing major challenges. One significant reduction has been the fiscal contraction that has arisen partly due to the shrinking economy, and partly due to the need to increase welfare and redistributive policies in the face of the widespread pandemic. Table 3.1 presents the income and revenue position of the government of Karnataka as per the Department of Finance of the Government of Karnataka. One important assumption made here is the Advanced Estimates of GSDP and its constituents for 2020-21 which is based on projections

of 2019-20 and shows a 6 percent growth rate. If one were to incorporate the anticipated 12 percent decline in GSDP, then some of the deficit numbers would look very different. Further, as the financial year 2020-21 is incomplete, we look at the revenue and expenditure number up till the April - December of the 2019-20 and 2020-21 years. On this margin, in 2020-21, Karnataka was about 5 percent points behind what it should have been and thus, the anticipated fiscal deficit measures all were higher; revenue deficit was anticipated to be almost 0.8 percent higher this year for Karnataka. In the face of shrinking public expenditures, a narrowing of the risk appetite in the private sector is anticipated in the face of the widespread economic contraction.

Figure 3.3: Unemployment Rates in Karnataka and India, January 2020 to January 2021



Note: The graph is constructed from data made available online by the Center for Monitoring of the Indian Economy at <https://unemploymentinindia.cmie.com>.

Figure 3.3 looks at monthly employment rates for Karnataka and India during the period January 2020 to January 2021 using household data from the Centre for Monitoring Indian Economy. Thus, the data captures both formal and informal sector data; further, since the underlying dataset is a panel dataset, we know that the data provides estimates for the same or a comparable set of households depending on the exact sequence of households interviewed in each of the months. What emerges clearly from Figure 3.3 is that Karnataka underwent a rapid rise in unemployment levels at the start of the economy-wide lockdown. This mirrors the national trend and subsequently, post lockdown, households have started finding work. Interestingly, Karnataka's return to work and decline in unemployment levels has been sharper than that of the nation as a whole; thus, Karnataka appears to have reversed any loss of employment that may have happened by August – September 2020. This constitutes one of the positive signals for Karnataka's economy, suggesting that there might be a faster return to normalcy for households in Karnataka than in the rest of the nation.

3.2.2. Public Expenditures in Karnataka

Karnataka signed the Fiscal Responsibility Act in 2002, even before the FRBM Act of 2003, and has since been within macroeconomic fiscal deficit parameters. While public finance expenditures have remained fiscally prudent since then, Jacob and Chakraborty (2020) note that this been achieved through selective

expenditure compression that have led to compression in capital expenditure, and marginally decreased expenditures on education and social welfare and nutrition. During such times, a natural concern is also the pattern of expenditure supported by these compression pressures. In Karnataka, public expenditure on the social sector has undergone a reduction in favour of water and sanitation even as education and nutrition have undergone a reduction – a natural result of local prioritization in the face of binding budget constraints. Rao et. al. (2020) explore the role of decentralization in decision making in these expenditures within the social sector budget and find that there is little allocative efficiency even as the levels of fiscal autonomy vary from district to district, suggesting that some facets of local planning of public expenditures work, although the performance of these is highly variable.

On the revenue side, after the implementation of GST, there are clear shortfalls that are emerging. Table 3.1 uses fiscal data over the period April 2020-December 2020 for the state of Karnataka and contrasts this for the period April 2019-December 2019. Revenue receipts in 2019-20 had already been to the tune of 79 percent by December 2019 of the estimated total revenue receipts as based on budget estimates (BE) for that year. However, in 2019-20, not only is the projected total revenue receipt estimated to be lower by 1 percent in 2020-21, by December 2019, only 59 percent of the this had been collected, indicating significant shortfalls. Breaking this down, it is evident that this shortfall is pervasive from all sources. Not only is their shortfall on own tax revenues, and own tax revenues for the state of Karnataka, but receipts and devolutions from the Government of India are down as well. The sharpest shortfall so far has been with the devolution from the Government of India and this stands at 47 percent of the estimates, however, this number also appears to be settled towards the end of the financial year, since even last year it was at 57 percent at this stage.

On the expenditure side, there is some evidence of expenditure compression taking place. By December 2020, only 58% of the total expenditures projected for 2020-21 had been made as opposed to 63 percent for the year before. However, quite a large amount is pre-committed expenditures in the form of interest payments, pensions, wages, and salaries and hence significantly more compression in expenditure is unlikely unless there is an attempt at cutting back on schemes that target beneficiaries. While there is genuine reduction in expenditure, there is significant shortage in revenues so that this will not be enough to prevent cascading into deficits and planning on financing such deficits will be a concern for Karnataka in the immediate future.

In absolute terms, the Fiscal Deficit was already twice as large in 2020-21 in December as it was in 2019-20, indicating that there was already significant stress on government expenditures by December 2020. Fiscal Deficit as a percentage of GSDP was 0.63 percent in 2019-20 until December 2019, and this had already risen to 2.55 percent of GSDP by December 2020, suggesting that this might be the first year that the FRMB commitments were at risk in Karnataka. In ordinary years, violations of the FRBM norms would also make it harder to finance these deficits; however, given the general equilibrium effects of C19, violation of these norms in several states and in the nation at large is a likely event and thus, a national approach to managing the C19 driven government debt will be necessary.

3.2.3. Microeconomic Issues

The macroeconomic consequences clearly suggest a large and abrupt shock to incomes and employment for households in Karnataka. One way to measure the consequences of such shocks requires carefully collected data on consumption expenditure. While collection of consumption data has a rich history in India, it needs to be collected carefully and systematically; expenditure data is not collected at the time of expenditure and hence households must recollect this data and there are known biases associated with the

length of the recall, the frequency with which the expenditure is made and careful cues from the data collector are very important in ensuring high quality data collection (Beckett et al. 2001). The Consumer Pyramids Household Survey (CPHS), organized by the Centre for Monitoring Indian Economy (CMIE), is a year-long longitudinal survey that tracks the consumption expenditure of households. Vyas (2019) carefully documents CMIE household survey's sampling design and discusses important trends in consumption expenditure that can be attributed to the policy of demonetization. We use this to understand how incomes and expenditure have changed at the household level.

The CMIE is meant to be a nationally representative survey with a stratified, multi-stage sampling design based on identifying geographically independent units that it terms as homogenous regions (HRs). These HRs represent one or more neighbouring districts within a state, with similar agroclimatic conditions, female literacy, household size, and urbanization levels. HRs are split into urban and rural strata with town and villages forming the primary sampling units (PSU) in each of the respective strata. Systematic simple random sampling within each PSU is used to select the sample of households to be studied (Vyas, 2020). Table 3.2 presents a mapping of each of the districts of Karnataka into 5 homogenous regions that form the highest geographic unit across which the CMIE is stratified.

Table 3.2: CMIE Homogenous Regions within Karnataka

Homogeneous Region	Districts of Karnataka
Bangalore – Kolar	Bangalore, Bangalore Rural, Chikkaballapura, Kolar, Ramanagara
Belgaum - Shimoga	Belgaum, Davanagere, Dharwad, Gadag, Haveri, Shimoga
Bidar - Bellary	Bagalkot, Bellary, Bidar, Bijapur, Gulbarga, Koppal, Raichur, Yadgiri
Chitradurga - Mysore	Chamarajanagar, Chikmagalur, Chitradurga, Hassan, Kodagu, Mandya, Mysore, Tumkur
Uttara Kannada - Dakshin Kannada	Dakshina Kannada, Udupi, Uttara Kannada

Note: The broadest level of stratification is based on a set of districts where agroclimatic conditions, urbanisation levels, female literacy, and household size is factored in to identify a homogenous region.

Two further aspects of the data make this unique: a) being a longitudinal dataset, this allows us to track the same set of households over time to enable us to see how the same household responds to different macroeconomic conditions and b) data collection is done throughout the year and with each household interviewed three times a year, it is possible to generate quarterly longitudinal estimates for each year. Even during the C19, the interviews were conducted using telephonic method to continue capturing the income and expenditure at state level⁶. Our study of how households responded to the C19 shock in Karnataka uses data from wave 16-21 (starting from Jan 2019 to Dec 2020) of the Consumer Pyramids Household Survey (CPHS) that is collected by CMIE.

⁶hCPHS execution during the lockdown of 2020, Mahesh Vyas (19 Aug 2020), *How We Do It Series, Consumer Pyramids Household Survey, CMIE*. <https://register.cmie.com/lib/cphsdx.pdf>

Table 3.3: The Mean and Dispersion of Income and Expenditure in Karnataka

State	Cohort	Income		Expenditure		Residual
		(Rs.)	Gini	(Rs.)	Gini	(Rs.)
Karnataka	Dec 2017	18,118	0.428	10,612	0.283	7,506
	Mar 2018	19,161	0.421	10,961	0.277	8,200
	Dec 2018	18,630	0.429	9,947	0.282	8,684
	Mar 2019	17,256	0.423	10,125	0.269	7,131
	Dec 2019	20,228	0.409	11,296	0.268	8,932
	Mar 2020	25,570	0.438	11,016	0.282	14,554

Source: Author calculations from CMIE's CPHS data.

Notes: 1. The month of April includes April – June quarter households who were interviewed in April 2020. All other row includes households in all three months of the quarter.

2. $COV = [(standard\ deviation/mean) * 100]$ is the coefficient of variation.

3. CPHS data reports household income and consumption expenditure. We construct $R = Y - E$ as the excess of income over current consumption expenditure.

4. All Rs. are in nominal terms and are not inflation adjusted.

Household consumption is key to assessing their welfare, and poverty estimates in India all continue to be based on household consumption expenditure. Table 3.3 presents quarterly estimates for income and expenditure for the last two quarters of the financial years 2017-18, 2018-19 and 2019-20 and the first month of the 2020-21 year. The CPHS data reports both household income (Y) and household expenditure (E) and using this we calculate the residual category ($R = Y - E$) to measure the excess of income over expenditure. Each of these aggregates show somewhat different trends:

Income: The average monthly income reported by each of the quarter specific samples is Rs. 22,581 and this reports significant variation within the sample with an average coefficient of variation (CoV) of 105 percent. Thus, income is dispersed quite widely with the mean and standard deviation being roughly equal. Across quarters, the mean and CoV also vary significantly; income varies from a maximum of Rs. 24,257 in the October – December quarter of 2018 to a minimum of Rs. 19,473 in the January – March 2020 quarter. The January – March 2020 quarter is the last quarter for which we have data and the first quarter where households were partially exposed to the lockdown during the last two weeks. The average income is lowest for the month of April 2020 at Rs. 13,956 and within the month the CoV rises to 176 percent, indicating that not only did the average incomes fall, but also that the distribution of income expanded significantly.

Expenditure: The average monthly expenditure is lower than average income for each of our quarterly samples, indicating that the average person in the sample is above subsistence levels. The average expenditure is Rs. 12,535 across the 6 quarterly samples with a maximum in the October – December 2019 quarter at Rs. 11,296 and a minimum in the October – December 2018 quarter of Rs. 9,947. It falls further to Rs. 7,526 in the month of April i.e. the first full month of lockdown. The CoV for expenditure is smaller than that of income, indicating that income varies within and across the cohort much more than expenditure does. The average quarterly CoV for expenditure is 65 percent and with lockdown, this declines in 59 percent as expenditure levels decline.

Residual: The average monthly residual measures the average monthly income after accounting for monthly current expenditures for the households and collectively reflects household savings, or transfers that reflect gifts, payment towards past borrowings etc. The mean value of the residual is Rs. 10,046 across the 6 quarters and is the lowest in the January – March 2020 quarter at Rs. 8,450; it further declined to Rs. 6,429 during April 2020. The average CoV for this residual category is much higher than for income or expenditure at 209 percent, effectively indicating that the standard deviation is almost twice the mean. Further, this sample wide dispersion is accentuated significantly in the month of April 2020 and rises to 363%, indicating even greater dispersion, suggesting that household budgets and expenditure patterns would have been widely affected. The preliminary evidence from Table 3.3 shows that household budgets have been deeply affected by C19 – incomes declined by 14% in the January – March 2020 cohort from the average and it further reduced by 38 percent in April 2020. This is in line with the 23.9 percent decline reported by MoSPI for the April – June quarter. Further, the increase in CoV suggests that this loss of income has accentuated the dispersion of income; some households must have been impacted more than other households. On the other hand, while monthly consumption expenditure shows a 40 percent decline from its average levels in April 2020, this decline does not see too much change in dispersion. Thus, while mean consumption and hence welfare has gone down, this has been a variance preserving decline, and the entire sample has been affected uniformly. Finally, the Residual income absorbs all the variation in income and is crucial in ensuring that households maintain their monthly consumption and hence both the mean levels decline and the CoV increases – it almost doubles! Thus, with variance of consumption expenditure being smaller than the variance of household incomes, households appear to be relying on residual incomes to try and maintain their consumption expenditure. However, this dependence is not sufficient to insure against income losses faced by households.

Clearly, the impact of C19 on the distribution of income and expenditure is quite significant. We saw this in one way in Table 3.3. Another way to see this is to bifurcate these aggregate numbers according to how education is distributed in the sample (as shown in Table 3.4). CMIE classifies households based on the educational status of all adults in a household into households where all adults hold a graduate degree, most adults hold a graduate degree, some adults hold a graduate degree, all adults hold a matriculation degree, most adults hold a matriculate degree, some adults hold a matriculate degree, all adults are literate, some adults are literate in the household, and all adults are illiterate. Households that have all their adults who are illiterate see the Gini Coefficient rise by almost 0.05 points between March 2019 and March 2020. This is a very large increase in inequality in this group as such changes are seen on a decadal time horizon. This suggests sharp and rapid economic polarization for illiterate households, and their children. A similar, but smaller increase in inequality is seen for households with some literates, as well as for households where all adults are literate. Interestingly, these are consistent with a decline in reported average incomes for all illiterates, but an increase in reported average incomes for households with all literates and some literates. Other household categories show no change in inequality but a rise in incomes; for example, the category of households where all adults in the household hold a graduate degree. Thus, there is clear evidence that in Karnataka, like in much of the rest of the country, households with poorer educational endowments were significantly and negatively affected and experienced large fluctuations in incomes, and related also in expenditures. The scale of these economic fluctuations are large, and would affect household budgets. Through the household budgets they would also negatively affect private expenditure on children, particularly among those with lower levels of education.

Table 3.4: Incomes Distribution across the Education gradient

Education Level	Cohort	Averages			Gini Coefficient (Income)
		R	E	Y	
All Graduates household	Dec 2018	15,961	12,214	8,175	0.360
All Graduates household	Mar 2019	12,443	13,677	6,120	0.356
All Graduates household	Dec 2019	15,639	19,446	5,085	0.352
All Graduates household	Mar 2020	29,215	21,227	0,442	0.343
All Matriculates household	Dec 2018	7,834	9,905	7,739	0.388
All Matriculates household	Mar 2019	6,444	9,732	6,176	0.378
All Matriculates household	Dec 2019	7,576	10,766	8,342	0.365
All Matriculates household	Mar 2020	9,607	9,413	9,020	0.379
Graduate majority household	Dec 2018	13,007	12,068	5,075	0.372
Graduate majority household	Mar 2019	10,813	12,574	3,387	0.362
Graduate majority household	Dec 2019	14,257	14,941	9,198	0.351
Graduate majority household	Mar 2020	20,863	14,911	5,774	0.335
Graduate minority household	Dec 2018	13,057	11,733	4,790	0.372
Graduate minority household	Mar 2019	10,703	12,412	3,115	0.375
Graduate minority household	Dec 2019	13,077	13,878	6,955	0.353
Graduate minority household	Mar 2020	25,026	15,187	0,212	0.358
Households of all illiterates	Dec 2018	4,072	7,319	1,391	0.338
Households of all illiterates	Mar 2019	4,596	7,658	2,254	0.368
Households of all illiterates	Dec 2019	6,172	8,054	4,227	0.364
Households of all illiterates	Mar 2020	5,952	6,055	2,006	0.414
Households of all literates	Dec 2018	6,007	8,672	4,678	0.364
Households of all literates	Mar 2019	5,165	8,752	3,917	0.365
Households of all literates	Dec 2019	6,809	9,715	6,524	0.358
Households of all literates	Mar 2020	9,508	8,797	18,305	0.395
Households of some literates	Dec 2018	5,138	8,523	13,661	0.352
Households of some literates	Mar 2019	4,975	9,386	14,362	0.373
Households of some literates	Dec 2019	6,260	8,601	14,861	0.354
Households of some literates	Mar 2020	14,357	8,993	23,350	0.417
Matriculates majority household	Dec 2018	7,544	9,605	17,148	0.387
Matriculates majority household	Mar 2019	6,199	9,638	15,836	0.380
Matriculates majority household	Dec 2019	7,546	10,153	17,699	0.365
Matriculates majority household	Mar 2020	12,151	9,331	21,481	0.389
Matriculates minority household	Dec 2018	10,184	9,748	19,932	0.381
Matriculates minority household	Mar 2019	8,035	10,172	18,207	0.378
Matriculates minority household	Dec 2019	10,513	10,757	21,270	0.373
Matriculates minority household	Mar 2020	13,025	10,007	23,032	0.394

3.3. Child Budget issues in Karnataka for Health and Nutrition

3.3.1. Status of Children in India

Child's rights in India were first formalized in the Constitution of India where all children are guaranteed each of the fundamental rights. Subsequently, in 1974, with the adoption of the First National Policy for Children, children and their rights were more prominently recognized by declaring children to be the "supremely important asset". These articulations run parallel to the international commitments in the world under the aegis of the UN General Assembly of 1959 where in the UN Declaration of the Rights of Child 1959 placed important focus on children's nutrition, free education, access to healthcare and freedom from exploitation and discrimination (United Nations, 1960). Later, in 1989, the UN Convention on the Rights of the Child (UNCRC) defined every 'child' as 'every human being below the age of eighteen years unless under the law applicable to the child, majority is attained earlier' (UNHR OHCHR, 1989). This constitutes an age dependent definition of childhood that seems to be broadly consistently used internationally. Emphasis on children and child rights are today formalized internationally within almost 19 different indicators of the Sustainable Development Goals (see Table 3.5). Placed under the aegis of the UNICEF, the SDGs provides a common framework for tracking the status of children globally.

Sl. No.	Custodian Indicators	Co-Custodian Indicators
1	Under 5 mortality	Skilled Attendant at Birth
2	Neo-Natal Mortality	Fully Immunized children
3	Early Child Development	Sexual Violence against women and girls, by intimate partner
4	Child Marriage	Sexual Violence against women and girls, by others (not IP)
5	Female Genital Mutilation	Safely Managed Water
6	Child Discipline	Safely Managed Sanitation and Handwashing
7	Sexual Violence Against Children	Child Labour
8	Pro-Poor Public Social Spending	Birth Registration
9		Stunting
10		Wasting/Overweight
11		Anaemia in Women

Source: <https://data.unicef.org/children-sustainable-development-goals/>

Note: The italicized ones are directly related to children, while the remaining create a supportive ecosystem for children.

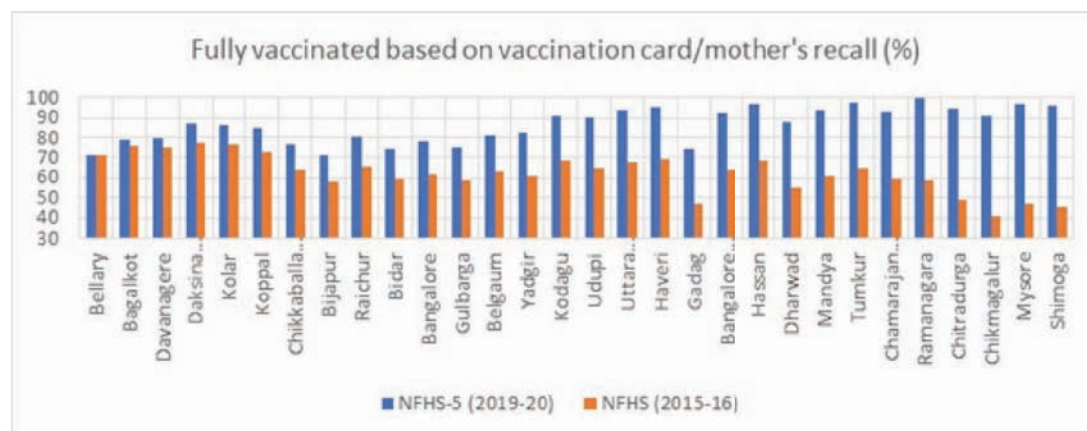
Within India however, there is a wide number of definitions that are used that are not exactly consistent with the international norm. The legal basis for defining a child in India is driven by the context in which a child or a minor is being viewed. Sharma (2019) records these differences for a set of policies that have implications for children and shows this disparity (see Appendix 3.1 for details). We summarize these differences in Table 3.6 to show this discrepancy. This heterogeneity is important in the context of this chapter since programmes designed for children target different age groups and are often run by different departments. Thus, the public expenditure on children is not uniform either in terms of the level at all ages nor do all government departments spend symmetrically across all departments for individuals in the entire 0-18 age group.

Table 3.6: Definition of a Child in India

Some Regulations Pertaining to Children in India	Age (in years)			
	0-14	<15	15-16	16-18
The Child Labour (Protection and Regulation) Act, 1986				
The Beedi and Cigar Workers (Conditions of Employment) Act, 1966				
The Plantations Labour Act, 1951				
The Motor Transport Workers Act, 1961				
The Protection of Children from sexual offences Act, 2012				
The Juvenile Justice (Care and Protection of Children) Act, 2015				
UN Convention on the Rights of the Child 1989				

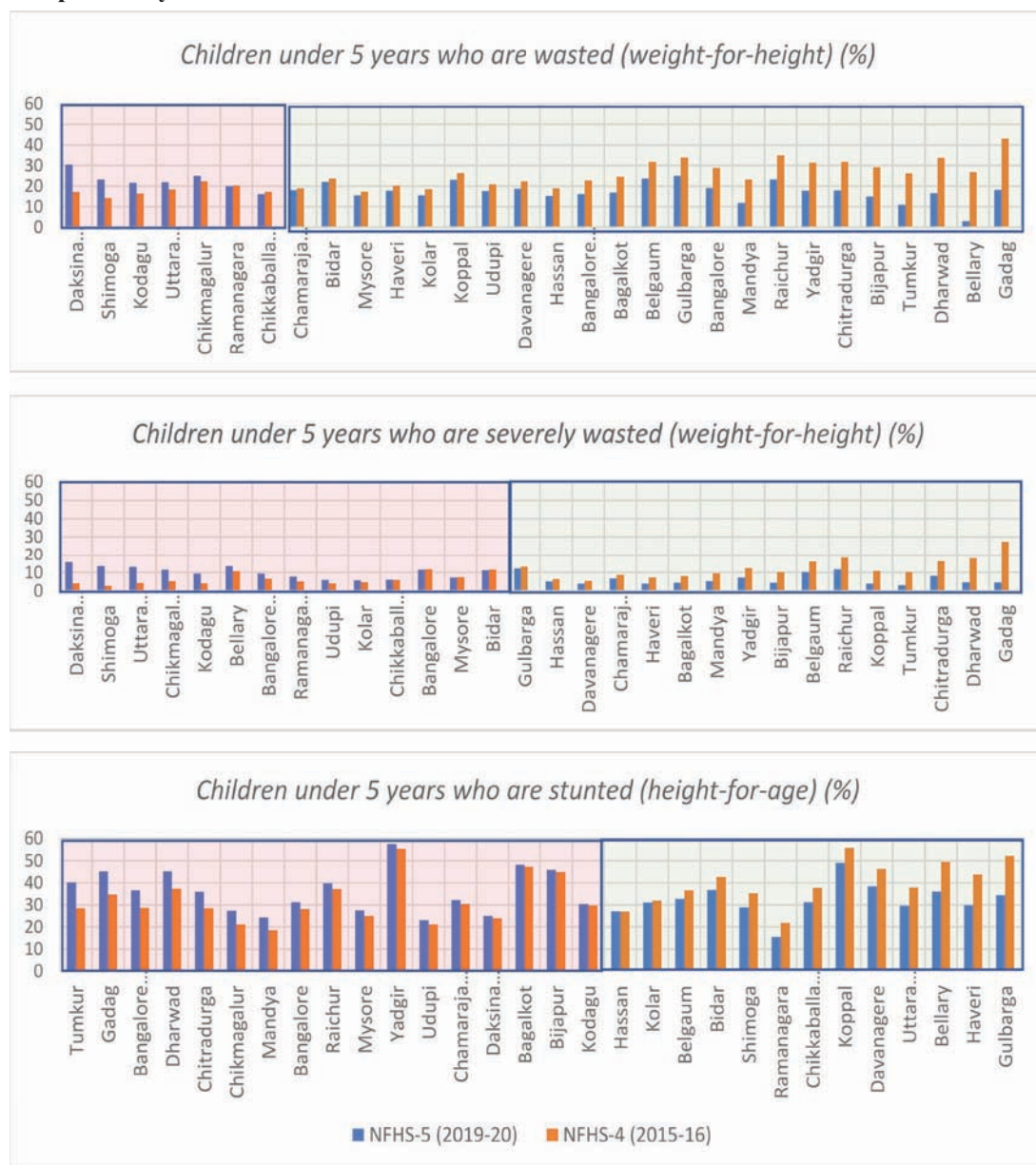
Source: Sharma (2019)

Individuals under the age of 21, particularly those in the 0-18 years, do not have a vote in India and thus, are not a political constituency yet. However, their interests are a part of the constitutional mandate and hence clearly have articulation as a policy priority. The most recent round of data released by the National Family and Health Survey, Wave 5 (NFHS-5) provides some interesting assessment of child health for the year 2019-20 (See Figure-3.4, 3.5 & 3.6). The health status of children in the age group of 0-5 years relating to a range of factors are easily tracked for nutrition, vaccination, and a range of other measures pertaining to early childhood. However, national or state representative data about children in the age group of 5 – 18 years of age is scarce as there are no surveys that track the health status of individuals in this group. For example, NFHS-5 collects data on women in the 15-45 years age group, covering 3 of these 13 years on which data is available.

Figure 3.4: Vaccination trends of children aged 12-23 months in the last five years

Note: Districts sorted by smallest vaccination gains between waves on the left, to the largest gains on the right

Figure 3.5: Wasting and Stunting trends of children less than 5 years old in Karnataka, in past five years

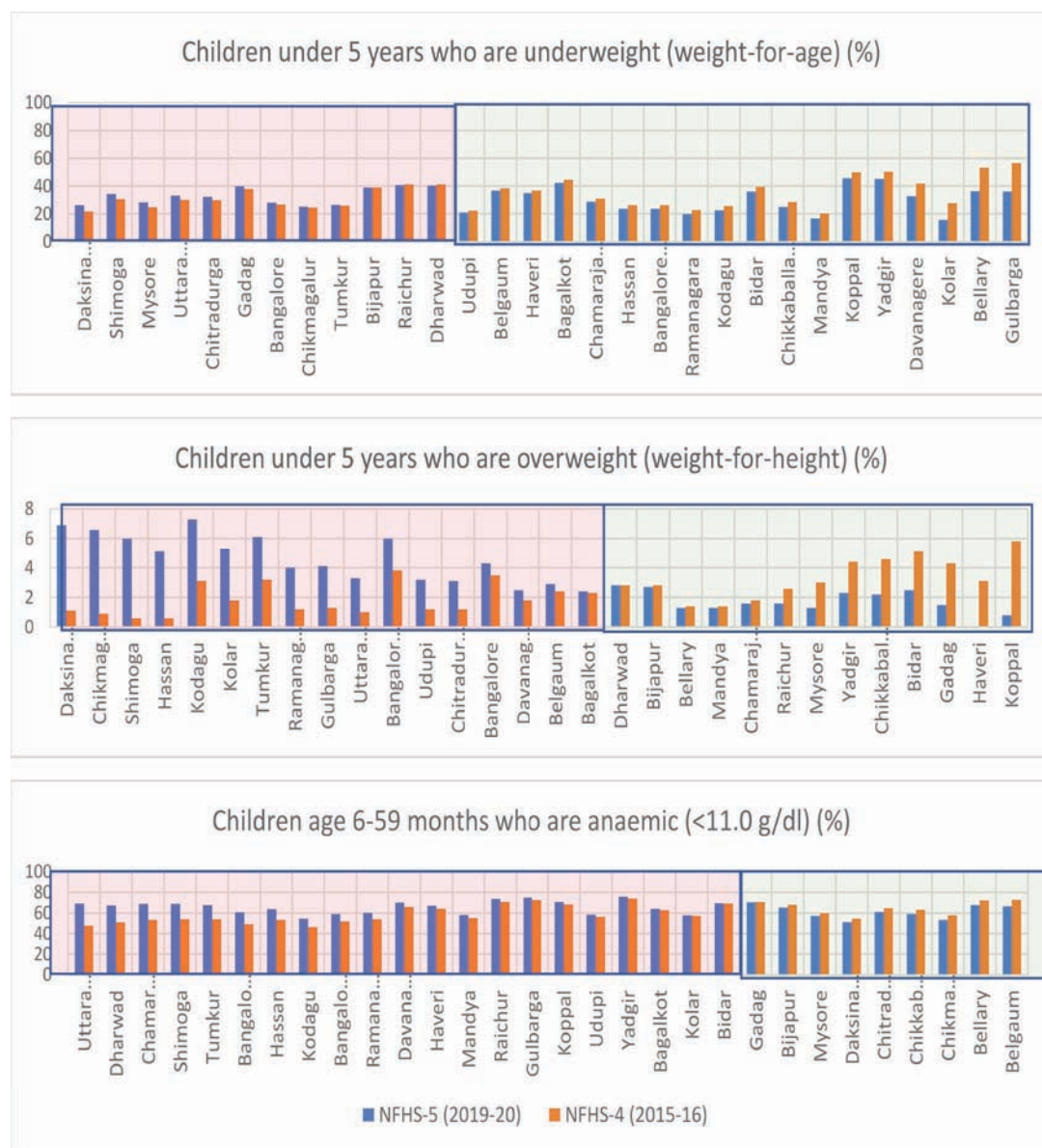


Note: Districts sorted by largest reversals in child health status on the left (shaded red) to the largest gains on the right (shaded green).

While some kinds of deficit financing may be sustainable in the short to medium-term, it is clearly a very important time to be asking how one can prioritize expenditures made by the government. In this aspect too, children emerge as an important target beneficiary group as children are at a sensitive stage of life,

and early childhood care is the focal point of many of the schemes that target their nurture, nutrition, and healthcare. These schemes are all well-designed and without further review it is difficult to discuss how to prioritize them. Children's interests and programmes that serve their needs must be at the front and centre of the government's prioritization efforts and ring-fenced from fiscal reductions.

Figure 3.6: Trends in Nutritional Status of Children in Districts of Karnataka



Note: Districts sorted by largest reversals in child nutritional status on the left (shaded red) to the largest gains on the right (shaded green)

Unit level data of NFHS-5 remains unavailable during 2019-20. However, district level factsheets have been shared and this generates insights on children in different age-groups.

3.2. Schemes and Budgetary Allocations

Government of Karnataka resented its first child budget for the year 2020-21 on 5th March 2020 by funding 279 programmes with the allocation of Rs. 363.4 billion for children below 18 years. Karnataka joins the select group of states including Kerala, Assam, Bihar and Orissa that have a separate budgetary allocation for child development. Following the practice in the classification of child centric grants in the State Budget of Karnataka, a scheme may be classified as either a 100% Child Centric Allocation (100CCA) or a less than 100% Child Centric Allocation (L100CCA). The 100CCA allocations are for programmes or activities that directly benefit children or pregnant and lactating mothers such as the many nutritional schemes that apply to only these groups, for example the ICDS or the Poshan Abhiyan. The L100CCA allocations are those that indirectly benefit children for aid to the disabled or the National Health Mission that focuses on the general population. For the current financial year (2020-21) the child budget's major focus for programme are in the areas of education (67 percent), health (16 percent), nutrition (13 percent), protection (1 percent) and others (3 percent).

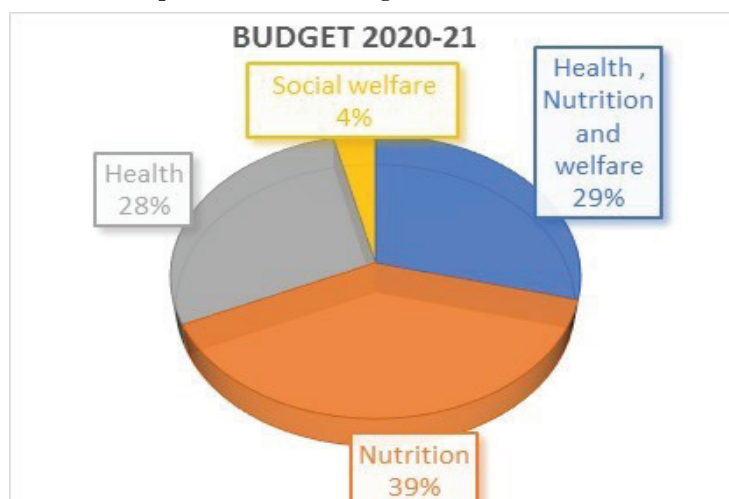
Table 3.7: Child Centric Programmes Being Studied

Category	Programmes	Beneficiaries	Type	Budget 2020-21 (in Rs. Lakhs)
Health	National Health Mission (NHM)	Children (0-18 years)	L100CCA	1,39,000.0
	Aids and Appliances for the Disabled	Children (0-18 years)	L100CCA	2,220.0
	Suchi Programme	Adolescent girls (10-18 years)	100CCA	4,700.0
	Indira Gandhi Institute of Child Health	Children (0-18 years)	100CCA	5,171.0
	Construction of 450-Bed Hospital at Indira Gandhi Institute of Child Health	Children (0-18 years)	100CCA	2,000.0
Health, Nutrition, and Welfare	Creches for Working Mothers	Children 0-6 years	100CCA	500.0
	Block Grants	Children 0-6 years	100CCA	30.0
	Integrated Child Development Service (ICDS)	children (0-6 years) + Adolescent girls (10-18 years)	100CCA	1,57,091.8
Nutrition	Block Grants (ICDS-National Nutrition Mission (NNM))	Children 0-6 years	100CCA	1,97,174.5
	Meeting Medical Expenses of Malnourished Children (Balasanjivini)	Severely malnourished children (0-6 years).	100CCA	200.0

Category	Programmes	Beneficiaries	Type	Budget 2020-21 (in Rs. Lakhs)
Nutrition	Poshan Abhiyaan (National Nutrition Mission)	Children (0-6 years) + Adolescent girls (10-18 years)	100CCA	12,500.0
	Rajiv Gandhi Scheme for Empowerment of Adolescent Girls (SABALA)	Girls in the age group of (11-18) years	100CCA	712.0
Social Welfare	Scholarship to the Physically Handicapped	School-going Children (5 - 18 years)	100CCA	625.0
	Integrated Child Protection Scheme	Children (0-18 years)	100CCA	9,130.0
	Bhagya Lakshmi	Girl children (0-18) in BPL families	100CCA	10,000.0
			Total	5,41,054.3

Note: This set of 15 activities (programmes and non-programmes) are from Demand No. 11 (WCD) and 22 (HFW). Source: GoK Child Budget document.

Figure 3.7: Sectoral Share of Expenditures across Programmes

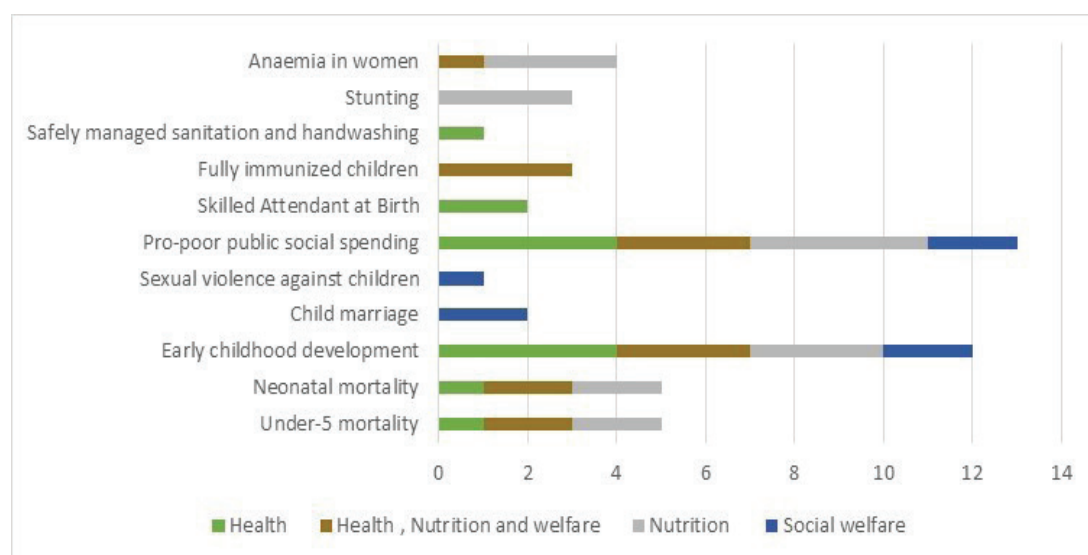


Source: Same as Table-3.7

In this chapter, as we focus on general health (excluding mental health) and the nutrition sector related allocations and focus on 15 programmes and activities listed in Table 3.7. Broadly, these are split into 4 categories: a) Health, b) Health, Nutrition and Welfare, c) Nutrition, and d) Social Welfare. Collectively, these 15 programmes have a fiscal footprint of Rs. 5,41,054.3 Lakhs and Figure 3.7 shows that categories a) and b), both pertaining to health, each contribute about 28% and 29% respectively of the total expenditure.

Further, Nutrition accounts for 39% of the total expenditure made under this set of 15 programmes and activities. These programmes collectively target the age group of 0-18 years and capture many aspects of the SDG goals that are relevant to children. Using the UNICEF identified custodian indicators for SDG one can see in Figure 3.8 that 11 of the indicators can easily be mapped onto these 15 schemes. Further, the most active indicators appear to be the pro-poor public social spending, and early childhood development domains. Thus, the diversity of the schemes represents a useful mix as they are currently structured. Of the indicators that are not mapped onto these, for example, female genital mutilation, or safely managed water, some are perhaps culturally not relevant, while others would be captured outside the set of schemes that we are studying. Table 3.7 also documents the allocations that have been made in 2020-21 and three programmes and activities account for about 91% of the total allocation.

Figure 3.8: Classification of Child Centric Programmes from different sectors by SDG Indicators



Source: Same as Table-3.5 & 3.7

The largest of all the allocations is for the Block Grants pertaining to National Nutrition Mission activities under ICDS with an allocation of Rs. 197,174 lakh, accounting for about 36 percent of the total allocation in the group of schemes we study. These Block Grants were initiated in 1975 as a part of the ICDS and have a 50:50 sharing norm in financial allocations between the Union government and the state government. The objective of the Block Grant is to provide nutritious food to children in 0-6 years of age. The norm for providing nutritious food includes (a) 500 calories of energy and 12-15 gms of protein to 0-6 years children, (b) 600 calories of energy and 18-20 gms of protein to pregnant women/ lactating mothers/ adolescent girls and (c) 800 calories of energy and 20-25 gms of protein to severely malnourished children as a supplement to their normal intake to promote early childhood nutrition and development.

The second largest activity in terms of financial allocation is also associated with ICDS schemes and captures the remaining part of the activities under this; constitutes 29 percent of the total allocation to these programmes and activities. ICDS beneficiaries include children in the 0-6 years of age group as well

as adolescent girls in the 10-18 years of age group. Starting in 1975, this is being funded by the Union government and relates to providing health check-up, immunization, nutrition and health education, pre-school education, supplementary nutrition, and referral services for children. Being a scheme that has been in place for decades, ICDS has seen several evaluations of note and in general the design of the programme is widely appreciated (Gragnotati et al. 2006). A key concern has been the failure to eradicate malnutrition among children despite an appropriate design for the scheme. Gragnolati et al. (2006) suggest that more can be done by reaching younger children, specifically, those in the 0-3 years of age group, better targeting of poorer states, and by extension, poorer districts, and gram panchayats.

The third largest activity in terms of financial allocation is the National Health Mission (NHM). NHM receives 26 percent of the total allocation to these schemes. Initiated in 2005 as the National Rural Health Mission, NHM is a programme with shared financial responsibilities of 60:40 between the Union government and the state. Targeting children in the 0-18 years of age group, NHM is designed to provide accessible, affordable, and quality healthcare, especially to vulnerable groups such as women, Scheduled Castes (SC), Scheduled Tribes (ST), children, aged, disabled, poor migrants, people living with HIV/AIDS and sexual minorities. Some of the key components of NHM are: (i) NRHM/RCH Flexi pool, (ii) NUHM Flexi pool, (iii) Flexible pool for communicable disease, (iv) Flexible pool for non-communicable troubles including injury and trauma, (v) Infrastructure maintenance and (vi) the Family Welfare Central Sector component. Choudhury and Mohanty (2018) analyse the public finance foundation of NHM and document that across 29 states of India, only 55% of funds allocated to NHM were utilized in 2015-16 and 2016-17. The authors go on to reflect on the design of the programme and point out using data from some specific states, not Karnataka, that as NHM is designed to utilize implementing outside the administrative framework of the state government, its rigid and fragmented financial management design has contributed to its weak utilization.

3.3.3. Priority Areas

A priority area may be deemed as a priority either on account of its importance on theoretical grounds in so far as child development, health and nutrition particularly are concerned, or because it is a domain that needs urgent reform or re-design to enable better functioning of the scheme. Without careful scheme-specific details, it is difficult to assess this kind of priority. Instead, we focus on the idea of geographic priority as a means of identifying regions where programmatic intervention is of the utmost importance. Specifically, using the recently released NFHS 5 fact sheets to identify geographic priorities that must be kept in mind in any planning or re-budgeting exercise that may be of relevance in a year where C19 has affected both the macroeconomic balance, as well as reduced the fiscal space within which governments must prioritise its expenditures.

Table 3.8 seeks to identify how each district in the state of Karnataka has performed on six child health dimensions between 2015-16 and 2019-20 i.e., this presents a pre-C19. These six dimensions are wasting, severe wasting, stunting, weight for age, anaemia, and vaccination status for children, largely in the 0-5 years of age group. These dimensions broadly capture health and nutrition related indicators for children and overlap with not only with the first 1000 days of life when interventions have the highest value, but this is also the age-group where programmes tend to be the weakest, based on past programme implementation literature.

Table 3.8: District Child Health Status according to extent of Decline between NFHS waves

Districts of Karnataka	Wasting	Severely Wasting	Stunted	Weight for Age	Anaemic	Vaccination	Falling Behind (# Red/6)
Bagalkot	Yellow	Yellow	Red	Yellow	Red	Yellow	33%
Bangalore	Yellow	Yellow	Red	Red	Red	Yellow	50%
Bangalore Rural	Yellow	Red	Red	Yellow	Red	Green	50%
Belgaum	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	0%
Bellary	Green	Red	Yellow	Green	Yellow	Yellow	17%
Bidar	Yellow	Yellow	Yellow	Yellow	Red	Yellow	17%
Bijapur	Green	Yellow	Red	Red	Yellow	Yellow	33%
Chamarajanagar	Yellow	Yellow	Red	Red	Red	Green	33%
Chikkaballapura	Yellow	Red	Yellow	Yellow	Yellow	Yellow	17%
Chikmagalur	Red	Red	Red	Red	Yellow	Green	67%
Chitradurga	Yellow	Green	Red	Red	Yellow	Green	33%
Dakshina Kannada	Red	Red	Red	Red	Yellow	Yellow	67%
Davanagere	Yellow	Yellow	Yellow	Yellow	Red	Yellow	17%
Dharwad	Green	Green	Red	Yellow	Red	Green	33%
Gadag	Green	Green	Red	Red	Yellow	Green	33%
Gulbarga	Yellow	Yellow	Green	Green	Red	Yellow	17%
Hassan	Yellow	Yellow	Red	Yellow	Red	Green	33%
Haveri	Yellow	Yellow	Yellow	Yellow	Red	Green	17%
Kodagu	Red	Red	Red	Yellow	Red	Yellow	67%
Kolar	Yellow	Red	Yellow	Yellow	Red	Yellow	33%
Koppal	Yellow	Yellow	Yellow	Yellow	Red	Yellow	17%
Mandya	Yellow	Yellow	Red	Red	Red	Green	33%
Mysore	Yellow	Yellow	Red	Red	Yellow	Green	33%
Raichur	Yellow	Yellow	Red	Yellow	Red	Yellow	33%
Ramanagara	Yellow	Red	Yellow	Yellow	Red	Green	33%
Shimoga	Red	Red	Yellow	Red	Red	Green	67%
Tumkur	Green	Yellow	Red	Red	Red	Green	50%
Udupi	Yellow	Red	Red	Yellow	Red	Yellow	50%
Uttara Kannada	Red	Red	Yellow	Red	Red	Green	67%
Yadgir	Yellow	Yellow	Red	Yellow	Red	Yellow	33%

Note: Columns on Wasting, Severely Wasting, Stunting, Weight for Age, Anaemia, and Vaccination are constructed from NFHS-4 and NFHS-5 data. Districts falling behind are coloured in red. Districts that show modest gains, i.e., gains less than 5 percent between the waves, are coloured yellow, while larger gains are coloured green and, in some cases, exceptional gains are coloured in dark green. The last column simply measures the fraction of dimensions on which a state is falling behind (i.e., is red) out of the 6 dimensions; thus, larger values indicate falling behind on a greater number of dimensions. The colour coding for the last column is dark green if there are no reds (0 percent), yellow if there are 1 or 2 reds (17 percent or 33 percent) and red for 3 or more reds (50 percent or 67 percent). On Anaemia, 21 out of 30 districts register a decline in NFHS-5 when compared to NFHS-4 indicating that anaemia is perhaps the most widespread deficit in Karnataka.

For each indicator in Table 3.8, we assess if a district is doing better in 2019-20 than in 2015-16 as per the NFHS surveys. If a district is doing worse on an indicator, for example, in 2015-16, if the fraction of children who were wasted was lower than the fraction of children who are wasted in 2019-20, then we colour this cell red to indicate things have become worse and the district is falling behind its own achievements in the last 5 years; this is true for the districts of Uttara Kannada, Shimoga, Dakshina Kannada, and Chikmagalur for the wasting dimension. In general, with time, and rising incomes, health indicators and child health indicators tend to improve with time. Thus, if we see a modest gain, between 0 – 5% points on an indicator within a district, we colour this district yellow. Thus, for Anaemia, we find that 21 of the 30 districts report higher levels of anaemia in 2019-20 than in 2015-16, and are coloured red, but in eight of the remaining nine districts, there have been modest gains, and these have been coloured yellow. The remaining district, Belgaum, is the only district to report a significant decline, a decline exceeding 5 percent, in anaemia levels in 2019-20 when compared to the 2015-16 numbers and thus is coded light green. In some instances, there have been significant improvements in health outcome; for example, in Bijapur, wasting reduced to 15 percent from 29.1 percent in the last 5 years. Similarly, Gulbarga's rates of stunting declined from 52 percent to 34.5 percent, while vaccination rates have risen sharply across Karnataka with 17 districts recording more than a 25 percent-point increase in vaccine coverage rates. These large improvements in the 6 dimensions of health and nutrition are coloured in dark green.

Thus, we have classified each district into one of 4 categories (Red, Yellow, Light Green, Dark Green) that are broadly consistent with Falling Behind, Modest Gain, Good Gains, and Significant Gains. Table 3.8 shows that 17 percent of the districts are falling behind on Wasting, 37 percent of the districts are falling behind on Severe Wasting, 63 percent of districts are falling behind on Stunting, 33 percent of districts are falling behind on Weight for Age and 70 percent of districts are falling behind on Anaemia. No district has fallen behind on Vaccination rates, indicating that on this one measure, there is resounding improvement in the last 5 years. Reading down the columns of Table 3.8 gives us a way to prioritize which dimensions of health and nutrition need critical attention. In this sense, in Karnataka, severe wasting and anaemia are two very important domains on which many districts were failing to meet their achievements from 5 years ago even before COVID-19 became widespread.

The last column of Table 3.7 calculates the ratio of the number of dimensions on which a district is falling behind (i.e., is red) to the total number of dimensions. Districts with a ratio of 50 percent or more are coloured red in this column to identify districts where there is a convergence of failures on multiple dimensions. For example, Chikmagalur and Dakshina Kannada both have a score of 67 percent, indicating that it is falling behind on 4 of the 6 dimensions; these are Wasting, Severe Wasting, Stunting, and Weight for Age. Similarly, Udupi has a score of 50 percent and is falling behind its 2015-16 numbers on Severe Wasting, Stunting, and Anaemia. Thus, this column identifies a geographic focus of where the priority is most needed.

3.4. Discussions

The C19 pandemic has affected every part of the world, including children, and in multiple dimensions. The Human Development Report for 2020 summarizes this by noting that the C19 “*crisis is hitting hard on all of human development's constitutive elements: income (with the largest contraction in economic activity since the Great Depression), health (directly causing a death toll over 300,000 and indirectly leading potentially to an additional 6,000 child deaths every day from preventable causes over the next 6 months) and education (with effective out-of-school rates – meaning, accounting for the inability to access the internet – in primary education expected to drop to the levels of actual rates of the mid-1980s levels). This, not counting*

*less visible indirect effects, including increased domestic violence, yet to be fully documented.*⁷ While the entire world is affected, children are particularly vulnerable, with little ability to voice their challenges, and the first 1000 days of a child's life is a period where we now recognize that investments tend to be critical for nurture and long-term behavioural and cognitive development of the child. Clearly, C19 has disrupted the ability of households in taking care of children, as well as affected the routine functioning of various social policies that target children. In this chapter, we focussed on households and social policy in the state of Karnataka to see how children and policies that target child health and nutrition may be better prioritized or targeted.

C19 driven disruptions to the economy have first and foremost affected households' abilities to earn incomes, particularly those who were in the informal sector. Incomes have declined across education and occupational categories with the Gini coefficient rising, indicating rising inequalities. Some of the income losses and increases in Gini coefficient are reversing gains that have taken decades to achieve. While this is true of the world, and India too, it is particularly true for Karnataka where quarterly fluctuations in income and expenditure have increased significantly when we compare C19 affected quarters to pre-C19 quarters. The difference between income and expenditure, reflecting the sum of dissaving, gifts, borrowing, asset sales, etc. has been even more volatile, indicating significant dependence on financing routine expenditures outside of income. Children at home are thus living in economically more challenging conditions than ever before in Karnataka and combined with study from home policies, their reliance on the home environment has also become much deeper than ever before. This is also at a time when some households will clearly struggle in providing for children.

At the level of Social Policy too, we see that there have been widespread reports of government schemes stalling in the media. There is clearly evidence of rising deficits of the state government as it tries to sustain its expenditures in the face of diminishing revenues and reduced transfers from the Union government. Allocations to policies that affect children have not seen a drastic scale back yet, but with revised estimates for 2020-21 still awaited, we will know the full extent of this only in the future. On the face of it, there certainly is a reduced fiscal ability for the state to finance any kind of expenditure.

NFHS-5 data clearly establishes that even as Karnataka was entering C19, there is ample evidence to show that children were doing worse than 5 years ago, i.e., worse in 2019-20 than in 2015-16. A close look at the data shows that on health and nutrition measures, children are worse off in important ways, suggesting that the existing schemes and programmes have not led to all-round improvements as may have been envisaged. Further, the district level fact sheets give us the ability to identify specific districts where these measures are particularly poor. Thus, in this chapter we identify district level hotspots where child health and nutritional measures have become worse on multiple dimensions, showcasing a convergence of challenges that face children, and of course, also social policy. Urgency in action, and thought is needed to address these deficits that would have only been accentuated due to C19 and the associated economy wide lockdown.

With vaccination trends improving significantly in the last 5 years of the indicators we studied, it turns out that many of the indicators of under-nutrition for children are worse and these are worse particularly in the districts of Bangalore Rural, Belgaum, Chikmagalur, Dakshina Kannada, Kodagu, Shimoga, Tumkur, Udupi, and Uttara Kannada. What is surprising is that these are not all very poor in per capita terms, suggesting that the existing pattern of programmes is systematically unable to identify "at risk" children.

⁷ COVID-19 and Human Development: Assessing the Crisis, Envisioning the Recovery | Human Development Reports (undp.org)

Thus, any attempt at addressing children's health and nutritional status needs to begin with an identification of how specific schemes function or have changed, since some of the schemes studied in this chapter have been in existence since before 2015-16. Scheme-specific changes are not the focus of this chapter; however, there certainly may be scope for scheme-specific restructuring to target the process in identifying whom to engage with, and how the engagement process pans out. However, identifying the districts in which child development is already weak on the malnutrition dimension can certainly guide any such re-optimization calculus. As the second wave of C19 cases appears to loom ahead of in the summer of 2021, institutionalized attempts of creating child development in Karnataka will remain a critical objective to achieve to avert widespread setback on child health, nutrition and development pathways.

The chapter was written at a point in time when the Covid-19 Wave 1 had peaked, but Wave 2 was not on the horizon, i.e. around November 2020. At that time, neither was the microdata from CMIE available to capture the April–June 2020 quarter and nor was the fiscal data ready beyond the Budget Estimates (BE). Further, the contemporaneous public expenditure data, also taken also from the CAG website, shows that by December in FY2019-20, about 71% of total revenues had been received, whereas it was merely 59% in FY2020-21. The analysis presented is thus based on what would be seen as the impacts associated with very early exposure.

Overall, this chapter presents a framework for prioritizing districts for intervention in the context of children's nutritional status. As our exposure and understanding of Covid-19 and its economic shock changes, both the underlying data and inference will change. Hopefully, this prioritization schema to identify districts for intervention will remain useful.

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Appendix 3.1

Different co-existing Legal Definitions of a Child in India

The legal identification of a child in India varies with the context in which the child is being identified. Since definitions are critical to application of law, and the idea that a human's maturity varies with different aspects of growing up, it makes sense to do this. However, it also leads to significant complications and lack of internal legal conformity within India's legal system regarding the category of a "child". Thus, it is not surprising the definition of a 'child' in India varies with different statutes. For example:

- ❖ Section 2(ii) of The Child Labour (Protection and Regulation) Act, 1986 states that "child means a person who has not completed his fourteenth year of age. This Act aims at prohibiting the engagement of children in work. Therefore, this Act makes provisions for the persons who have not completed their fourteenth year of age.
- ❖ According to Section 2(c) of The Plantations Labour Act, 1951, "child means a person who has not completed his fifteenth year." This Act has been formed for the welfare of people who are engaged in plantation. Section 24 of the Act further categorises young children and states that "no child who has not completed his twelfth year shall be required or allowed to work in any plantation." Section 25 prohibits the engagement of 'child' in the plantation work except between the hours of 6 A.M. and 7 P.M.
- ❖ The Motor Transport Workers Act, 1961 which aims at regulation of conditions of work of motor transport workers, defines child as "a person who has not completed his fifteenth year." Section 21 of the Act prohibits the employment of a 'child' in motor transport undertaking.
- ❖ According to Section 2(b) of The Beedi and Cigar Workers (Conditions of Employment) Act, 1966, "Child means a person who has not completed fourteen years of age." This Act makes provisions for the welfare of the workers who are engaged in beedi and cigar manufacturing institutions. Section 24 of the Act says that, "No child is required or allowed to work in any industry premises."
- ❖ Definition of child in The Prohibitions of Child Marriage Act, 2006 is, "child means a person who, if a male, has not completed twenty-one years of age, and if a female, has not completed eighteen years of age." The main objective of this Act is to prevent child marriages and Section 3 of the Act makes the child marriage voidable at the option of a person who was a child at the time of marriage.
- ❖ Child according to The Juvenile Justice (Care and Protection of Children) Act, 2015 "means a person who has not completed eighteen years of age." Juvenile Justice Act makes provisions for the welfare and developmental needs of the juveniles. A person who has not completed eighteen years of age is given the status of child under this Act and therefore, it is applicable to them.
- ❖ Section 2(d) of The Protection of Children from sexual offences Act, 2012 states that, "child means any person below the age of eighteen years." This Act simply aims to protect the children from sexual offences and harassment.

Thus, not only age, but also the time of the day seems play a role in the legal definition of a child reflecting complication of local practice and culture, some of which are even work driven in original and application. For more details see the note by Ritika Sharma (2019) available online at: <http://lawtimesjournal.in/who-is-a-child-why-is-it-difficult-to-define-a-child/>.

Chapter-4

Mental Health Issues and Challenges of Children in Karnataka

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4.1. Introduction

The World Health Organization (WHO) has long recognized the need for countries to allocate a higher proportion of their national budgets to develop adequate infrastructure and services for mental health, including human resource development to provide for preventive and curative mental health services (World Health Organization, 2003). Several studies have particularly established the importance and need for providing children with appropriate and high quality mental health care and support (Ritblatt et al., 2017), (Richter et al., 2017), (McGorry et al., 2007) so as to reduce the burden of mental health problems in future generations and ensure the optimum development of vulnerable children and adolescents (Kieling et al., 2011). Early effective intervention, that focuses on child and adolescent mental health, has the potential for greater personal, social and economic benefits than intervention at any other time in the life span (McGorry et al., 2007) and hence the need to invest in infrastructure, facilities and services that would support and enhance optimal child development and mental health.

Key challenges in addressing young people's mental health, aside from the stigma associated with mental health disorders, include a shortage of mental health professionals, the relatively low skills, capacities and motivational levels of non-specialist health workers (and in the case of India, child care and protection functionaries), to provide quality mental health care and services (Patel et al., 2007) in the various spaces that children inhabit, such as in pre-schools, schools, and child care institutions.

It is not actually a matter of surprise that India, like other low resource settings, has not prioritized child development and mental health services, in terms of its policy and practice, and consequently, in terms of its financial and human resource investments. The reasons for this lack of prioritization range from the need to meet the basic needs of child survival (nutrition and health) to perceptions that meeting children's physical and material needs, (in terms of food, clothing, shelter, health care) are of the utmost importance and doing so is sufficient, or that mental and psychological well-being automatically follow from children's material needs being met. Whatever the reason, it has resulted in the lack of recognition of the importance of child development and mental health needs, from both short- and long-term perspectives, and consequently, a lack of investment in human and financial resources to meet these critical needs in children and adolescents.

This chapter argues for the need for the state to invest more intensively in facilities, infrastructure, human resources and services that would enhance child and adolescent development and mental health. The arguments are made using state-specific data, where available i.e., pertaining to Karnataka, to make a strong case of child budgeting in this state. However, the content and arguments presented in the chapter would be applicable to the country at large. Beginning with a brief overview of child and adolescent psychiatric disorders in India, the chapter moves on to focus on children in adversity, and the (unmet) developmental

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and mental health needs in preschool, school and child care institutions, necessitating investment in mental health support and services in these spaces. It also describes mental health services set up by the state (at district-level), in terms of their gaps and functionality, necessitating further investment in state health services by way of human resource development and skill enhancement in child mental health. The chapter concludes with recommendations for policy and practice, and the implications that these have for child budgeting and related financial investments.

4.1.1. Child & Adolescent Psychiatric Disorders in India: The Treatment Gap

One of the earliest prevalence studies on child and adolescent mental health disorders in Karnataka was conducted in 2005 in urban middle-class, urban slum and rural areas of Bangalore. Overall, 12.5 percent of children between the ages 0 and 16 years were found to have psychiatric morbidities, which were significantly associated with physical abuse of children and mental health disorders in their parents. Over 13 percent of children between 0 to 3 years had morbidities related to breath holding spells, pica, behaviour disorder NOS, expressive language disorder and intellectual disability; 12 percent of children between 4 and 16 years presented most frequently with enuresis, specific phobia, hyperkinetic disorders, stuttering and oppositional defiant disorder (Srinath et al., 2005).

A relatively recent systematic review, including studies from school and community-based settings, in India, reported that in the wake of the changing economic, familial, and social support systems, there are variations in the prevalence of adolescent mental health issues such as behavioural problems, psychiatric morbidity, stress, suicide-related behaviours, depression, anxiety, aggression, and self-concept. Some of the risk factors associated with adolescent mental health problems were female gender, academic difficulties, parental and family conflicts, school absenteeism and school dropout issues. Factors such as mothers' employment status, parental involvement, belonging to nuclear families and availing of education in government schools were somewhat ambiguous in terms of whether they posed risks of adolescent mental health problems (Aggarwal & Berk, 2015).

Amongst the few epidemiological studies on childhood psychiatric disorders in India is an earlier school-based study in Northern India, covering children between 4 and 11 years of age, in which a prevalence rate of 6.33% was found (Malhotra & K. Pradhan, 2013). Around the same time, in 2007, a study in a tertiary child mental health facility in Northern India, conducted over a 26-year period, found that the common child psychiatric problems that were referred for assistance were intellectual disability (18.4 percent-33.2 percent), neurotic and stress-related disorders (16.4 percent-18.5 percent), epilepsy and organic brain disorder (7.1 percent-15.1 percent) and hyperkinetic and conduct disorders (8.3 percent-17.9 percent); it also found trends of decreased psychiatric disorders in children under age five, and that children between 10 and 15 years increasingly presented with a diagnosis of psychotic disorders, affective disorders, disorders of psychological development, and hyperkinetic and conduct disorders (Malhotra et al., 2007).

There is currently a significant 'treatment gap' in regard to mental health service delivery in India. The National Mental Health Survey (NMHS) 2015-16 reported an overall treatment gap of 83 percent. The treatment gap for common mental disorders was reported at 85.0%, whereas for severe mental disorders, the treatment gap was reported at 73.6 percent (Gururaj G et al., 2016). Broadly speaking, the treatment gap occurs at two levels:

(i) Most overtly, the treatment gap occurs at primary, secondary and tertiary health care facility and service levels. Specialised mental health services in tertiary care facilities are usually referred cases of severe mental disorders. Currently, there are inadequate primary, secondary and tertiary health care facilities in the

country which exacerbates the problem of affordability and accessibility of mental health services to the large section of the child population with psychiatric morbidity (Thirunavukarasu, 2011) (Gururaj G et al., 2016). There is also a shortage of Child Guidance Clinics (CGC) across the country—between 1937 and 2003, only 164 CGCs have been set up in the entire country, and that too concentrated mostly in urban areas. It has been estimated that to target coverage of 1 CGC per lakh population, there will be a need for 10,050 CGCs in the entire country (Shastri, 2008).

There is thus a requirement for mental health services to be provided at the Primary Health Care (PHC) and Community Health Care (CHC) level in a greater capacity to adequately address the demand for these services given the prevalence rates of psychiatric morbidity in India. As reported in certain studies, there are over 50 million children who suffer from mental health disorders with an additional 9.8 million adolescents (aged 13-17 years) who suffer from serious mental illnesses (Hossain & Purohit, 2019). Therefore, there is a substantial disease burden to be met by adequate and effective provision of mental health services in existing facilities.

(ii) However, there is also a covert level at which the treatment gap occurs. At a first level, caregivers and child care service providers often do not recognize and/or seek help for child mental health and development problems, either due to lack of knowledge and awareness or due to the stigma of mental health disorders. Literature to this effect, albeit in other countries, states that the reason for high prevalence and low treatment is the prevalent (low) levels of child mental literacy in the general community (Tully et al., 2019); the barriers to accessing treatment for child mental health disorders included views and attitudes towards services and treatment, and knowledge and understanding of mental health problems and the help-seeking process (T. Reardon et al., 2017). In the Indian context as well, it has been suggested that the presence of a treatment facility (although essential) does not necessarily ensure that children and adolescents with mental health problems will utilize such services; and that parent/ caregiver education is of utmost importance to promote treatment seeking, without which there is likely to be a significant delay in accessing mental health services (Shrivastava et al., 2013).

Lack of investment in child and adolescent services in India are thus at two levels i.e., establishment of child and adolescent mental health services, with trained personnel, as well as public child mental health education and awareness. A Lancet review of barriers to mental health service development discusses how the relative absence of child and adolescent mental health on the public health priority agenda impacts the amount of funding received—and thus results also in low numbers and few types of workers trained in mental health care (Saraceno et al., 2007).

4.1.2. Some are Less Equal than Others: Heightened Vulnerability of Children in Adversity

It is important to note that the prevalence of disorders in a clinic population usually differs from that in the community (Malhotra et al., 2007), because usually severe and acute cases access tertiary care services i.e. mild to moderate cases of mental health problems often do not find their way here. In India, given the stigma of accessing child mental health care services at specialized tertiary mental health facilities, many families and children in need of treatment and care do not access it. Additionally, as already mentioned, poor awareness of child and adolescent mental health issues, including on what issues constitute of, when and where to seek help, also serve as reasons for different prevalence rates within clinic populations as compared to school and community-based settings.

Epidemiological studies that are focused on clinic, school and community-based settings exclude certain sub-groups of children who are at risk of mental health disorders. This sub-group comprises children

in adversity or children living in difficult circumstances. India is home to over 30% of almost 385 million children living in extreme poverty or adversity, the highest in South Asia (UNICEF & World Bank Group, 2016). For children, ‘adversity’ has been defined as the experience of life events and circumstances which may combine to threaten or challenge healthy development (Daniel et al., 2011). This definition assumes that children’s developmental trajectories can be affected by various adverse factors such as incidents of physical or sexual abuse, traumatic incidents of loss and bereavement, chronic situations such as environments of neglect, experiences of discrimination, and family stressors, structural inequalities and socio-economic disadvantages (Daniel, 2010). Children in adversity thus belong to families characterized by various demographic vulnerabilities such as poor socio-economic status and unemployment, single-parent families, migrant labour, daily wage earners, and psychosocial risks such as neglect, violence, abuse, parental marital discord, illness/disability in primary caregivers, separation from caregivers due to death or abandonment and so on. Always vulnerable, both demographic and psychosocial vulnerabilities are also likely to be exacerbated by the current Covid pandemic, placing them at heightened risks of child protection and psychosocial problems.

A related concept to children in adversity is that of child poverty. While children in adversity may vary in terms of their socio-economic context, psychosocial vulnerability and psychiatric morbidity, child poverty plays a significant role across these differential aspects in adversely impacting the child’s development. This has prompted a growing impetus worldwide to address child poverty in its idiosyncratic context in order to mitigate the impact of childhood deprivation on the child’s life-course. In this regard, policy approaches that characterise children as ‘scale-up adults’ have been criticised for not adequately addressing child specific vulnerabilities and preferred outcomes. In the Indian context, broad-based means-tested social welfare programmes aimed at reducing poverty have not been able to adequately improve the socio-economic outcomes for affected children. There are implicit assumptions in such broad-based policy making that negatively affect outcomes (Nakray, 2015). While economic approaches to child vulnerability are legitimate, such programmes have then failed to take into account how adverse childhood experiences exacerbate children’s risks and vulnerabilities, with long term consequences for their development and mental health.

Childhood maltreatment experiences, a critical aspect of childhood adversity, can alter brain physiology and lead to poor cognitive-emotional interactions, that in turn lead to poor mental health outcomes (Perry, 2009); vulnerability to mental health problems can thus be understood as changes in neurocognitive systems requiring adaptation or altered calibration to early neglectful or maltreating environments (McCrorry & Viding, 2015). Maltreatment, stress/ anxiety symptoms, cognitive functioning or information processing and behavioural decision-making are closely inter-related issues.

Exposure to childhood abuse and neglect at any stage of development can have long-lasting consequences, associated with a significant increase in risk for psychiatric and medical disorders, particularly for mood disorders and suicide ideation (Lippard & Nemeroff, 2019). Certain childhood adversities, namely physical and sexual abuse, neglect, and parental psychopathology are associated with increased risk of post-traumatic stress disorder (PTSD) (McLaughlin et al., 2017), with low social support strongly influencing the association between childhood adversity and PTSD experiences (Murphy et al., 2014).

The need to invest in facilities and services that ensure the protection and mental health of children in adversity is therefore critical—not only are they likely to be at higher risk of developmental and mental health problems, but due to their adverse circumstances of poor socio-economic status and inadequate social support, they are also the least likely to access mental health services, especially at tertiary level facilities where in India, most child mental health services, if at all, are located. Consequently, this chapter therefore

focuses on the need for child budgeting and financial investments that bolster support and services in the contexts and spaces inhabited by children in adversity.

4.2. The Need for Investing in Mental Health Support & Services in Contexts and Spaces Inhabited by Children in Adversity

While school and community-based research studies may provide more accurate figures on prevalence of child psychiatric disorders, the methodologies they adopt (as in the case of the erstwhile-mentioned epidemiological studies) include detailed psychological evaluation, using standardized screening and assessment proformas; thus, the studies are likely to identify only those children who meet the diagnostic criteria as per the International Classification of Diseases (Srinath et al., 2005), (Malhotra et al., 2007). In other words, while standardized instruments and valid diagnostic criteria certainly are of value in terms of their specificity in identifying children with mental health disorders, they are unlikely to have had the sensitivity to identify children who may have mild to moderate issues, particularly in the realm of emotional and behavioural problems. Children in adversity are a case in point—they are likely to have mild to moderate (as well as severe) mental health issues which are likely to become more serious if timely interventions are not made to address the prevalence of psychiatric morbidity and the psychosocial factors that exacerbate the underlying mental health issues. This sub-section therefore describes the contexts and spaces which children in adversity inhabit, how and why they are at risk of developmental and mental health problems, and the consequent need to invest in mental health support and services within these spaces. Some of the common spaces include state-run schools and preschools (anganwadis) and child care institutions.

4.2.1. State-Supported Preschools or Anganwadis

The period from birth to 5 years is a critical period, wherein rapid brain development lays the foundation for cognitive and social skills, such as attentiveness, motivation, self-control and sociability, necessary for school, health and later life (Heckman, 2014); thus, quality early childhood programmes impact human development in early and later human development in cognitive, health and socioemotional domains (Aboud, 2006), (Pence, 2008), (Siraj-Blatchford & Woodhead, 2009). Early childhood programmes are thus being seen as critical interventions to alleviating poverty and achieving social and economic equity (Engle et al., 2007), (Grantham-McGregor et al., 2007).

Perhaps because preschool is viewed through an essentially education lens, the emphasis tends to be on early stimulation and developmental activities. In countries such as India, especially, the neglect of mental health and child protection aspects of pre-schoolers is coupled with a failure to recognize the developmental impact (Hildyard & Wolfe, 2002) of mental health problems. While every child requires effective opportunities for early childhood care and development, at-risk children from vulnerable families and communities, lacking in education, social and economic resources, are less likely to receive developmental and stimulation inputs (Heckman, 2014), and are also at higher risk of neglect and abuse. A systematic review on preschool children who have been neglected or emotionally abused found that these children exhibit a range of emotional and behavioural issues such as angry- disruptive behaviour, conduct problems, oppositional behaviour, and low ego control; withdrawal or passivity, negative self-esteem, anxious or avoidant behaviours, poor emotional knowledge, and difficulties in interpreting emotional expressions in others; developmental delay and poor social and peer interactions (Naughton et al., 2013). Thus, accurate identification of young children at risk for mental health problems must form a key component of early childhood (preventive) intervention programmes, without which children in need of early intervention may not be identified and receive appropriate care.

India's Integrated Child Development Services Scheme (ICDS) a country-wide Early Childhood Care and Development (ECCD) programme, is the world's largest welfare scheme. Linked to the PHCs, it provides an integrated approach for the provision of basic services for improved care for children under age 6, through health, nutrition, water and environmental sanitation, non-formal education, as well as nutrition and health care for expectant and lactating mothers, and other women and adolescent girls in a community. This scheme is implemented through community-based early childhood care centers or Anganwadis, with the Anganwadi worker and helper being its key service providers (U & R, 1999). The ICDS provides a huge opportunity to incorporate child development and mental health components into ECCD because of its universal coverage agenda, particularly in socio-economically deprived communities where some of the most vulnerable children reside. Also, the Anganwadi worker conducts non-formal education and early stimulation activities for a given group of children, on a daily basis, over a relatively long time period (such as a year). This provides a perfect platform, not only for early screening and referral for developmental delays, emotional and behavioural and protection issues, but also to engage children in personal safety awareness programmes. However, there is inadequate training and capacity building of Anganwadi workers in the use of systematic assessments in child protection and in the assessment of child mental health and development issues. Such screening tools, checklists and protocols for systematic evaluation of young child issues have not been adopted by the ICDS programme (Krishna et al., 2020).

In the context of the above needs, early childhood educators are required to have a complex understanding of child development and early education issues so as to provide rich, meaningful educational experiences for children in their care, particularly for those from vulnerable and disadvantaged backgrounds. The knowledge, skills, and practices of early childhood educators are thus important factors in determining how much children learn and benefit from preschool programmes. Metanalytic studies have shown that specialized training of early childhood educators improves the competencies of early childhood teachers, including their attitudes, knowledge, and skills (Fukkink & Lont, 2007) and that multidimensional methods of training have positive effects on their knowledge and skill acquisition (Joyce & Showers, 2002).

Based on the view that if early childhood includes support for growth in cognition, language, motor skills, adaptive skills and social-emotional functioning, the child is more likely to succeed in school and later contribute to society, economic analysts have made a strong case for investing heavily in intervention programmes for this life stage, also stating that such educational investments yield the highest public returns (Rolnick & Grunewald, 2003).

4.2.2. Government (Aided) Schools

School is one of the many spaces that children inhabit; depending on the type of school i.e., day school, boarding or hostel, they may spend varied amounts of time at school. The nature and type of the school also influences the types of children who attend them—for instance, government schools are often attended by children from lower socio-economic strata (SES), and adverse backgrounds, with exposure to fewer opportunities for development and stimulation, and more protection risks such as family conflicts, abuse and neglect. Such children are therefore likely to be at greater risk of learning difficulties, and emotional and behavioural problems, than children from secure homes and intact families, with better access to basic needs and facilities. Thus, the contexts from which children are drawn impact the ways in which their mental health issues play out in the school space.

While issues such as developmental disabilities and specific learning disorders play out across different types of schools, there is evidence that low SES and exposure to adversity are linked to decreased educational success (Sheridan & McLaughlin, 2016). Early experiences and environmental influences can have a lasting impact on learning (linguistics, cognitive and socio emotional skills), behaviour and health. Children from low-SES families often begin kindergarten with significantly less linguistic knowledge (Purcell-Gates et al., 1995). As such, children from low-income families enter high school with average literacy skills five years behind those of high-income students (S. F. Reardon et al., 2012). Children from less advantaged homes score at least ten per cent lower than the national average on national achievement scores in mathematics and reading (Hochschild, 2003). Children in impoverished settings are more likely to be absent from school throughout their educational experiences, further increasing the learning gap between them and their wealthier peers (Zhang, 2003). A study on school dropouts in India found that several factors relating to low education in parents, low socio-economic status, as well as poor child growth and educational trajectories, that are frequently present in vulnerable communities and families, predict school dropout (Marphatia et al., 2019).

Recent studies on mental health of school children in India have raised issues around how the Indian school education system, focused on book learning and memorization of lessons has created much stress in students as they have little time for socialization and recreation (Deb et al., 2015). Studies showing that a third of students had psychiatric problems, and over 80 percent of them reporting academics-related anxiety, and that one-fourth of children reported symptoms of depression (Ranasinghe et al., 2016), make a case for the need for mental health interventions in schools. School mental health studies in India have also found that common problems observed in school pertain to physical fights, engagement in viewing of pornography, poor scholastic performance, truancy and conduct disorder, substance use and relationship and sexuality-related issues (Jayaprakash & Sharija, 2017). Thus, amongst others, factors such as academic stress, violence, bullying, [exposure to] substance use, sexuality-related risk behaviours, over-crowding and poor infrastructure (Srikala & Kishore, 2010), place school-age children particularly at higher risk of mental health problems. A systematic review on adolescent mental health in India reports that in addition to family conflicts and related factors, academic difficulties, school absenteeism, school dropout and other school related factors are major risk factors for psychiatric morbidity (Aggarwal & Berk, 2015).

Educational environments exert a significant influence on children's well-being, thereby offering unique opportunities to address the determinants of mental health. In addition, school-based service provisions can increase access to suitable interventions over and above the existing mental healthcare systems, which are typically fragmented, under- resourced, and unsuited for children and adolescents' specific needs and preferences (Parikh et al., 2019). School-based preventive interventions for children involving teacher training and incorporating social-emotional curriculums into classroom teaching, have shown improvements in child problem behaviours (Baker-Henningham et al., 2009), (H et al., 2007). Evidence for school mental interventions in India show the effectiveness of brief lay counsellor-delivered problem-solving intervention, which resulted in the enhancement of psychosocial outcomes in students (Michelson et al., 2020) and the integration of life skills education into schools, which led to positive changes in classroom behaviour and interaction, and greater empowerment of adolescents (Srikala & Kishore, 2010). School-Wide Positive Behavioural Interventions and Supports (SWPBIS), a universal prevention strategy currently implemented in over 16,000 schools across the United States to reduce students' behaviour problems by altering staff behaviours and developing systems and supports to meet children's behavioural needs, has resulted in significant improvements in children's behaviour problems, concentration difficulties, social-emotional functioning, and prosocial behaviour (Bradshaw et al., 2012). Thus, from providing opportunities for early

identification and interventions, through increasing teacher knowledge and sensitivities, the education system can facilitate the enhancement of child mental health through awareness and intervention.

While school mental health is in its stages of infancy in India, with requisite human resources being a major stumbling block, teacher training workshops to create awareness and sensitivities around child mental health issues are being attempted by mental health institutes such as the Central Institute of Psychiatry, Ranchi, India (Kumar et al., 2009), and National Institute of Mental Health and Neuro-Sciences (NIMHANS), Bengaluru, the latter through its community-based and outreach child protection and mental health initiatives over recent years.

The Rashtriya Bal Swasthya Karyakram (RBSK), launched under the National Rural Health Mission, which has now been extended to the National Urban Health Mission, may be considered the Government of India's flagship programme on school mental health. Targeting children between the ages 0 to 6 years in preschools, as well as older children in schools with developmental delays and disabilities⁴, it seeks to target early intervention services for vulnerable and at-risk children. There is also the Sarva Shiksha Abhiyan⁵, another flagship programme of the Government of India, for the Universalization of Elementary Education, and of which life skills and addressing disability and special needs in children are critical elements. The recognition of the importance of school mental health and the need to integrate child mental health into the education system has also prompted many schools in India to appoint counsellors. In recent years, the government has made it mandatory for CBSE schools to appoint counsellors; Navodaya Vidyalaya Samiti (NVS) has recruited 1,176 counsellors for the Jawahar Navodaya Vidyalayas (JNV) across the country⁶.

However, given the scale and need, especially in government (aided) schools, where at-risk children from vulnerable families and communities go, there is a tremendous need for intensive investment in child and adolescent mental health support services in schools, vis a vis training of teachers and appointment and training of counsellors.

4.2.3. State Child Care Institutions

While children living in institutional care are not treated as a homogenous group by the framework of the Juvenile Justice Act i.e., they are broadly classified as children in need of care and protection (CNCP) and children in conflict with the law (CICL), the institutional factors that affect children living in CCIs are largely the same. Therefore, it may be pertinent to briefly examine the institutional contexts of these children. These contexts are significant to develop an understanding of potential action areas and to bring about greater compliance with the legal entitlements and developmental and mental health needs of these institutionalised children.

In 2018, a report was released by the Ministry of Women and Child Development (MoWCD), Government of India, after a mapping and review exercise of Child Care Institutions (CCIs) in the country (MoWCD, 2018). Of the 9,589 CCIs reported in the country, 911 CCIs were present in Karnataka. Karnataka-specific data has been used to highlight critical gaps and deficits pertaining to institutional capacity and services in CCIs, as described below, which have implications for children's development and mental health.

⁴Ministry of Health & Family Welfare (2013). *Rashtriya Bal Swasthya Karyakram (RBSK). Child Health Screening and Early Intervention Services under NRHM. Government of India.*

⁵Ministry of Education <https://www.aicte-india.org/reports/overview/Sarva-Shiksha-Abhiyan>

⁶Outlook, 8th November 2019. <https://www.outlookindia.com/newscroll/over-1100-counsellors-recruited-in-jnvs-after-several-incidents-of-suicides-by-students/1658067>

(a) Physical Infrastructure and Facilities

In Table 4.1, the proportion of CCIs in Karnataka with the requisite infrastructural facilities for children reveal that there is a severe shortfall in certain basic facilities, including with regard to age and sex segregation of toilets/latrines. Table 4.2 also reflects the available infrastructural facilities in regard to education, counselling and recreational services, and reveals a gap in institutional arrangements for such services to be provided within CCIs (MoWCD, 2018).

Table 4.1: Category-wise distribution of infrastructure facilities in CCIs in Karnataka, 2018

Total Homes	Dormitories	Sick Rooms	Visitors' Rooms	Dining Halls	Bathrooms	Toilets/Latrines	Kitchens
911	768	296	373	650	843	845	668

Source: Report of the Committee for Analysing Data of Mapping and Review Exercise of Child Care Institutions under the Juvenile Justice (Care and Protection of Children) Act, 2015 and Other Homes, 2018

Table 4.2: Category-wise distribution of educational/recreational/mental health facilities in CCIs in Karnataka, 2018

Total Homes	Educational rooms	Counselling rooms	Recreation rooms	Vocational training	Libraries	Toilets/Latrines	Kitchens
911	498	248	297	203	314	845	668

Source: Report of the Committee for Analysing Data of Mapping and Review Exercise of Child Care Institutions under the Juvenile Justice (Care and Protection of Children) Act, 2015 and Other Homes, 2018

While there is not much literature that focuses on poor environment and inadequate facilities (often due to overcrowding), in child care institutions, there is considerable literature in the prison context on how overcrowding can lead to insanitary, violent conditions that are harmful not only to the physical health, but also the mental health and well-being of the inmates (UNODC, 2013). While the context of prisons is a very different one from child care institutions, there are some similarities between the residents of both institutions—namely that of being confined to a space, having to share resources and facilities with a large numbers of individuals, and being restricted in terms of mobility. We may, therefore, extrapolate some of the problems that are experienced by prison inmates to institutionalized children, particularly in terms of their impact on mental well-being.

Literature acknowledges that open-air recreation and access to outdoor spaces, including outdoor activity, allows for relaxation, a break from daily routines and opportunities to form social relationships (Macnaughten & Urry, 2000). The paucity of play and recreational spaces for children in institutions is especially worrying as these are physical and infrastructural facilities that are essential for child development and psychosocial wellbeing, with already vulnerable children at risk of further emotional and mental stress when not permitted access to adequate play and recreation spaces (Ramaswamy & Seshadri, 2020). Security considerations pertaining to children running away has been a reason for not enabling access to children to open play spaces, especially, and gender discriminatory attitudes seem to be apparent, when it is observed that boys' institutions are more likely than girls' institutions to have large open spaces for play (Ramaswamy & Seshadri, 2020).

(b) Services Enabling Child Development and Mental Health

Availability and access of infrastructure is actually related to its use i.e. opportunities for optimal child development entails engaging institutionalized children in education, social skills, life skills, leisure and recreation activities, within the available spaces (Ramaswamy & Seshadri, 2020). Also, in light of the restorative framework of the juvenile justice system, lack of provision of infrastructural facilities may significantly hamper the rehabilitative mandates of CCIs, thereby limiting the child's prospects for rehabilitation and social reintegration. Furthermore, in accordance with Rule 38 of the Juvenile Justice (Care and Protection of Children) Model Rules, 2016 (JJ Rules), recreational facilities including indoor and outdoor games, yoga and meditation, music, dance, television, picnic and outings, cultural programmes, gardening, library are required to be provided in order to facilitate the child's development and foster a sense of belonging amongst children in CCIs/homes (Juvenile Justice Model Rules, 2016). Recreational facilities and time for play are also significantly associated with healthy brain development; and the need for recreational facilities is even more apparent in the context of children in adversity, to promote positive mental health outcomes and reduce psychosocial risk factors that may cause behavioural problems in at-risk children (Milteer et al., 2012).

According to the mapping exercise report of MoWCD, a range of services requiring CCIs to link with external professionals/organisations, in order to provide children with rehabilitative opportunities, have not been adequately provided for in these homes. It is evident from the data reflected in the Table-4.3 that a majority of CCIs are not providing the requisite services across the state. Specifically, in the context of educational services, mental health services, vocational training, life skills workshops, legal aid services, over 60 percent of CCIs have not made arrangements for the provision of these services through the assistance of external individuals/organisations (MoWCD, 2018).

Table 4.3: Proportion of CCIs with External Linkages to Enable Access to Development and Mental Health-Related Services, Karnataka 2018

Development and Mental Health-Related Services	Proportion of Homes
Mental health services for children, parents and staff	36.0
Education	37.1
Vocational training	30.3
Life skills & issue-based workshops	38.75
Recreational activity	57.8
Health (including speech / physiotherapy services)	26.5
Legal aid services	17.9
De-addiction services	7.6

Source: Report of the Committee for Analysing Data of Mapping and Review Exercise of Child Care Institutions under the Juvenile Justice (Care and Protection of Children) Act, 2015 and Other Homes, 2018

The most substantial shortfall is seen in Table-4.3 in the case of de-addiction services, wherein only 7.6 percent of the CCIs in Karnataka are providing de-addiction services (MoWCD, 2018). Given the wide prevalence of substance use disorders, and the role of substance use as a psychosocial risk factor for CICL, there are serious implications to such a paucity in the provision of service for the treatment gap in respect of substance use disorders. The NMHS 2015-16 conducted by NIMHANS found a treatment gap for substance use disorders in adolescents (aged 13-17 years), to the extent of 86.3 percent for alcohol use disorders and 91.8 percent for tobacco use disorders (Gururaj G et al., 2016).

CCIs are also meant to provide children with opportunities for educational enhancement, skill development and life skills training so that, upon attaining the age of 18, these children can be placed in employment and socially re-integrated. However, in Karnataka, only 21.3 percent of CCIs had linkages with professionals/institutions/community-based organisations (CBOs) for the provision of aftercare to facilitate reintegration of the child. Furthermore, only half (50.7 percent) of CCIs in Karnataka were reported to have linkages with professionals/institutions/CBOs for restoration and rehabilitation of children (MoWCD, 2018).

In accordance with the legislative framework under the Juvenile Justice Act, provisions for educational facilities based on the age and special needs of the child are to be made in CCIs (Ministry of Law and Justice, 2016). As is mandated in Rule 36 of the Juvenile Justice Rules, 2016, CCIs should provide education to children, in keeping with their age and ability, both inside the institution or outside, in accordance with the requirement arising therein (Juvenile Justice Model Rules, 2016). The educational opportunities to be provided by CCIs include mainstream inclusive schools, bridge schools, open schooling and non-formal mechanisms of learning where required. The provision of educational services is important to ensure timely identification of learning disabilities amongst children in CCIs so that appropriate measures can be incorporated in the child's individual care plan (ICP). Additionally, vocational training (including occupational therapy, skill and interest-based training) is to be provided with the goal of placement of the child in appropriate employment in the future (Juvenile Justice Model Rules, 2016).

(c) Staff Issues

The MoWCD report documents high staff vacancy rates in CCIs across the country, raising serious concerns about the standards of care within the institutions. In Karnataka, out of 911 CCIs, 890 (97.69 percent) reported vacancies in full-time positions while 170 (18.66 percent) reported vacancies in part-time positions (MoWCD, 2018).

While the MoWCD report flags the issue of paucity of staff, as pertinent, if not more so, is the quality of institutional staff, in terms of their skills and capacities to engage with a vulnerable child population. There is the large body of evidence on the adverse developmental and mental health impacts of institutionalisation in children, (Maclean, 2003), (Colvert et al., 2008), (Tizard & Rees, 1975), (Chisholm et al., 1995), (Hodges & Tizard, 1989), (Ellis et al., 2004), (Vorria et al., 2003), including the impact of poor attachment relationships on socio-emotional outcomes of institutional children (Vorria et al., 2003), (Muhamedrahimov et al., 2004), (McLaughlin et al., 2012), (Smyke et al., 2012).

Thus, staff-child ratios are not the only reason for poor quality care. In a majority of our child care institutions, staff lack the understanding, orientation, and skills to assist children with difficult and traumatic experiences. Consequently, and due to untreated mental health issues and unresolved trauma, children who already come from difficult circumstances, may even experience a deterioration in their mental health. These aspects of quality of care are in addition to those stemming from attachment issues and consequent emotional difficulties that children experience due to severance of family ties, in the form of separation, rejection, abandonment, relinquishment to an institution and lack of predictability (Ramaswamy & Seshadri, 2020). Such issues highlight the need for staff orientation and training on child development and mental health, as well as the need for providing access to specialized counselling services for children who tend to have exceedingly complex mental health needs, given their adverse circumstances and experiences.

4.3. Access to Child Mental Health Services at Primary and Secondary Level

4.3.1. Integration of Child Mental Health Services into Primary Healthcare Centres

A recent effort to integrate child mental health into primary healthcare in Karnataka was made by the Community Child and Adolescent Mental Health Service Project. Located in the NIMHANS Department of Child and Adolescent Psychiatry, between 2014 and 2020, this pilot project aimed, through the integration of child mental health services into primary healthcare centres, to increase community awareness on child mental health issues, ensure early and more accurate identification and referral of children with developmental disabilities and other emotional/behavioural disorders, provide first level/primary healthcare and services to children with developmental disabilities and emotional and behavioural problems, including guidance on home-based care to parents and training for children with disability. These objectives were translated into practice through: development and use of screening tools for use with children seeking various types of health services in the PHC so as to enable medical officers (MOs) and auxiliary nurse midwives (ANMs) to screen children who might be presenting medical complaints for child mental health disorders; provision of depth assessment and first level responses to children screened/ identified in PHCs (through periodic/ scheduled visits to PHCs) with behavioural/ emotional problems and developmental disabilities; referral of severe and acute child mental health issues to the Department of Child & Adolescent Psychiatry, NIMHANS. The project implemented these activities through training workshops for MOs and ANMs, On-the-job training and support of PHC staff in the clinic and community, participating alongside PHC officers in awareness sessions/ home visits, and working with them to demonstrate the use of screening/ identification tools and first-level responses (NIMHANS,201 2016).

The above-described pilot project enabled an understanding of the tremendous need in communities for child and adolescent mental health services, including the barriers to accessing child mental health services at tertiary care—ranging from awareness to financial constraints and stigma and discrimination issues. There is little doubt about the potential for integrating child mental health care into primary healthcare services, due to increased accessibility, affordability and decreased stigma offered by accessing mental healthcare in PHCs.

The project, however, highlighted, many challenges in integrating mental health care services into PHCs, namely those pertaining the lack of willingness and the ability of the PHC workers to provide screening and first level responses for child mental health issues; and such difficulties, amongst others, may be attributed to health workers not receiving remuneration in a timely fashion, the lack of incentive to work on child mental health and development as this issue has not taken the form of a vertical programme (such as immunization, tuberculosis, HIV/AIDS, family planning etc) (NIMHANS, 2016). Thus, the potential of PHCs to provide basic child mental health care, as well as the challenges in doing so, are indicative of the need for the state to invest in child mental health and development services at primary healthcare levels.

4.3.2. Child Mental Health Services at Secondary Level: The Potential and Functioning of the District Mental Health Programmes (DMHPs)

As reported in the NMHS 2015-16, Rs. 1000 (median) and above had to be spent for treatment of any mental disorder which is a significant amount in the Indian context. (Gururaj G et al., 2016) As of 2013, it was estimated that 20.91% of the population in Karnataka was below the poverty line (Government of India, 2013). In this context, such high out-of-pocket costs significantly hamper the accessibility and affordability

of mental health services. Qualitative interviews conducted during the NMHS revealed that in the absence of state insurance, there was a significant impediment to accessing mental health services in light of the high out-of-pocket costs. A study conducted in Chandigarh (Waraich et al., 2003) noted that a major reason why patients with mental health problems did not avail of psychiatric services in the large district hospitals related to the distance and high treatment costs involved.

In order to address the burden of mental illness in the community, by ensuring affordable access to mental healthcare, the Government of India launched the National Mental Health Programme (NMHP) in 1982 with the aim of preventing and treating mental and neurological disorders and the associated disabilities; using mental health technologies to improve general health services; and applying mental health principles to improve the quality of life. The District Mental Health Programme (DMHP) was started under the NMHP in 1996 to decentralize mental health services by integrating these services with the general healthcare delivery system. In 2017, the Mental Health Care Act came into force and superseded the previously existing Mental Health Act, 1987. The new Act respects the right of individuals with mental illness to be treated equally and advocates for an environment that is conducive for recovery, rehabilitation and inclusion of people with mental illness. The broad aims of the DMHP are: a) setting up psychiatric services in peripheral areas, b) training primary health care personnel and c) involving the community in the promotion of mental health care (Waraich et al., 2003). The DMHPs have thus developed decentralised community-based approaches to mental health service delivery in ways to address the challenges of accessibility and affordability.

However, evaluations of DMHPs have not been favourable. In a study authorised by the Ministry of Health and Family Welfare (MoHFW), Government of India, it was reported that while a majority of the DMHPs started under the 9th Five-Year Plan period continue to be operational at the district and sub-divisional level, there has not been significant improvement in the provision of mental health services by general physicians at the CHC/PHC level. In this regard, it was observed that about 61 percent of the patients accessed the jurisdictional district hospital/mental hospital as their first point of contact. Consequently, the percentage of beneficiaries accessing CHCs and PHCs was 12.7 percent and 11.5 percent respectively (ICMR, 2011). Thus, accessibility to services is still an issue despite the successes of the DMHP in decentralising mental health care services at the district and sub-divisional level. Additionally, in regard to drug procurement, most DMHPs reported delays and difficulties in procuring drugs. The most significant factor resulting in these delays was attributed to the lack of a dedicated drug procurement mechanism in place for DMHPs and the requisite financial autonomy for the nodal officers of the concerned DMHPs.

The MoHFW study generated mixed findings with regard to community awareness and involvement in mental health service delivery: DMHPs have succeeded in positively impacting community awareness on mental health with nearly 90 percent of the respondents knowing about mental illness in districts where DMHP had a presence, as opposed to just under 75 percent with knowledge in districts where DMHPs were absent (ICMR, 2011). Additionally, over 50 percent of the respondents from the DMHP districts concurred that with proper medication and counselling, mentally ill individuals can be treated. The figures were substantially lower for non-DMHP districts where only 30 percent of the respondents agreed with the same (ICMR, 2011). However, while the DMHP has been able to spread awareness in the districts where it was being implemented, there has not been sufficient engagement at the community level to bring about greater utilisation of primary care services for mental health treatment. This was observed in Gulbarga (renamed Kalabargi on 1st November 2014) district of Karnataka also, wherein it was reported that 96 percent of the funds allocated for trainings has been utilised by the DMHP, but only 35 percent of the funds allocated for Information Education Communication (IEC) were utilised. Low utilisation of funds allocated for trainings and IEC was reported in most districts on account of the immense groundwork required for these tasks,

specifically in the context of IEC. Community outreach programmes require networking with community members and engaging in different capacities to increase awareness and change perceptions of mental health service delivery. The study noted that there were insufficient organizational skills in the DMHP team, lack of community participation and poor coordination with the district health system.

In addition to issues of fund allocation and utilization (as shown in the box 4.1), there were other issues pertaining to the functioning of the Gulbarga DMHP (ICMR, 2011). While a substantial number of trainings had been conducted for the PHC/CHC staff, duty doctors, ANMs and Anganwadi workers, there were significant infrastructural and staff limitations in the programme. Most significantly, there was no psychiatric wing at the district hospital. Therefore, unlike other districts, the DMHP was not run by a psychiatrist. The programme was managed with the assistance of a psychologist and a psychiatric nurse. Owing to the lack of a psychiatry wing, there was no Outpatient Department or facility for inpatients in the Gulbarga District Hospital. A number of patients were either reported to have been admitted in a general ward or been referred to a different district hospital, thus defeating the purpose of having the DMHP in the district. This also had an impact on linkages with the PHCs and CHCs wherein it was observed that referrals from PHCs/CHC were very rare (ICMR, 2011).

Box 4.1: Allocation and Utilisation of funds by Gulbarga DMHP, Karnataka under the 10th Plan

Gulbarga, Karnataka was one of the 20 districts surveyed and is useful as a point of reference in respect of the performance of the DMHP. The figures provided below are for with reference to the DMHP in Gulbarga (in Rs.):

- Funds received: 2,620,000
- Funds utilised: 1,751,533 (66.9 percent)
- Funds unutilised: 868,467 (33.1 percent)
- Balance amount to be received by the DMHP: 8,630,000 (77 percent)

From these figures, there appears to be an underutilisation of funds for the programme. Additionally, over 77 percent of the funds allocated to the programme under the 10th Plan had yet to be received by the DMHP. This trend was observed across most of the districts evaluated. The reason identified for this was the lack of completion of the requisite administrative processes, by the DMHPs, to enable further disbursement of fund instalments. As was noted by the ICMR report (ICMR, 2011), nodal officers for most of the DMHPs surveyed had not submitted utilisation certificates to ensure that the remaining allocated funds were disbursed.

Based on the National Survey of Mental Health Resources conducted by the Directorate General of Health Services in 2002, the national deficit of psychiatrists in India, assuming the target number to be 1.0 per 100,000 population, was calculated to be 77 percent (Thirunavukarasu et al., 2010). Two strategies have been recommended to mitigate this problem:

- Training non-psychiatrist health professionals in basic psychiatric skills necessary to identify mental health disorders and refer them for specialist care.
- Introducing strict policies wherein the GP/specialist must document the presence of mental disorders and ensure appropriate referrals to specialists where necessary. (Thirunavukarasu et al., 2010)

In recent years, institutions such as NIMHANS, through its National Digital Academy, have introduced training via virtual knowledge networks for DMHP staff. While this has ensured distance education modes of training in ways that allow large numbers of DMHP staff to avail of requisite training, whilst also continuing

with their clinical and community work in mental health, most of this training has been on adult psychiatry and mental health-related issues.

One of the first capacity building initiatives for DMHP services was in Karnataka, where in 2019, the National Health Mission, Government of Karnataka, with a view to enhancing child and adolescent mental health at the district and community level, supported the training of 325 DMHP staff (including psychologists, social workers and nurses). The training initiative was implemented by the Department of Child & Adolescent Psychiatry, NIMHANS. The content focussed on child development, parenting and a range of child and adolescent mental health disorders. While the impact is yet to be assessed, this programme certainly highlighted the importance of child and adolescent mental health, erstwhile a frequently neglected agenda, especially in community health. Some of the learnings from this training initiative were: the importance of using creative and participatory methodologies, and the need for intensive case-based discussions and skills training in psychosocial care and therapeutic methods.

There continues, however, to be a gap in the child and adolescent mental health services provided by DMHPs around the country, with a serious need for investment in training and capacity building programmes for DMHP staff on child and adolescent mental health interventions. DMHP training on child mental health issues, in several states, such as Chhattisgarh, Tamil Nadu, Orissa and Mizoram, is now being facilitated through SAMVAD, the NIMHANS national initiative on child protection, mental health, and psychosocial care launched in 2020 under the aegis of the Ministry of Women and Child Development, Government of India.

Another targeted government programme that operates at a secondary level, Rashtriya Kishor Swasthya Karyakram (RKSK), whose objective is to focus on various adolescent health issues, provides critical opportunities for addressing child and adolescent mental health issues around the country, at the community level. RKSK's mandate that has been expanded to include injuries and (gender-based) violence, non-communicable diseases, mental health and substance misuse (in addition to sexual and reproductive health) is in keeping with preventive and curative adolescent mental health agendas. With its paradigm shift from the existing clinic-based services to promotion of mental health, prevention of mental illness and assisting adolescents within schools, families and communities, RKSK provides a critical opportunity for the provision of adolescent mental health interventions.

However, while the programme aims to raise awareness of mental health issues and substance use, it does not contain mechanisms to facilitate clinical and psychological support for the same. The effectiveness of such a programme is restricted by the lack of a holistic approach to mental health issues. In the National Mental Health Policy (2014) as well, there has been insufficient prioritization of mental health objectives for children and adolescents. (Hossain & Purohit, 2019)

That only 0.06% of the national health budget in India is allocated to mental health is reflective of the low-level policy prioritization, and consequently it has implications for financial outlays, in light of the child mental health treatment gaps and challenges, especially at primary and secondary levels of healthcare. This proportion of allocation is also substantially lower than the average proportion of 1.54% of the total budget for mental health allocations in low-income countries (Hossain & Purohit, 2019).

4.4. Implications for Child Budgeting in Karnataka

Literature on child budgeting is focused on a variety of child health and development related issues, such as planning and delivery of health services, maternal, neonatal and child health (La Vincente et al., 2013), (Kurniawan et al., 2012), gender rights and sensitivity with regard to interventions for the girl child

(Nomdo, 2006), (Muchabaiwa, 2010), and schooling education (Burckbuchler, 2008), (Wakelee & Itkonen, 2013). However, another article, located within the larger domains of child poverty and ecological contexts of deprivation and well-being, highlights the need to move beyond such vertical approaches and suggests that child budgeting understand and respond to children's needs in the context of risk and vulnerability and develop a comprehensive social policy approach to address the emerging issues (Nakray, 2015).

Consequently, and in consideration of the transdisciplinary nature of the domain of child development and mental health i.e., with issues of vulnerability and targeting rooted in disciplines of sociology, economics, health, and protection, and practice and interventions playing out in spaces of education, health, care and protection (to name a few), it is critical for child budgeting to consider multiple sectors and departments for investment in services.

In conclusion, the importance of integrating child mental health and development services into various child services and programmes, pertaining to health, education, early childhood development and care, protection and law, is increasingly being acknowledged. Training opportunities for various kinds of mental health personnel are gradually increasing in various academic institutions in the country and recently, there has been a major initiative in the growth of private psychiatric services to fill a vacuum that the public mental health services have been slow to address. A number of non-governmental organizations have also initiated activities related to rehabilitation programmes, human rights of mentally ill people, and school mental health programmes. Despite all these efforts and progress, a lot has still to be done towards all aspects of mental health care in India in respect of training, research, and provision of clinical services to promote mental health in all sections of society (Khandelwal et al., 2004).

Such initiatives that meet standards of quality and coverage would entail the state leading and undertaking intensive measures to ensure child budgeting, with particular emphasis on identifying and targeting the most vulnerable children in communities (children in adversity), and investing in physical infrastructure/basic facilities and human resources (including training and sensitization) in various child care services, to enhance child and adolescent mental health/development, and to facilitate public health education and awareness in the context of mental health care.

4.5. Recommendations for Policy

In the light of the above, the following is a summary of recommendations for key policy interventions to improve the accessibility of mental health and child development services in the state of Karnataka. The systemic gaps and deficits highlighted above raise key issues for consideration, in the context of investment in services for children from vulnerable circumstances, and therefore, have wider implications for child budgeting exercises in states across India.

4.5.1. *Addressing the Mental Health Treatment Gap and the Imperative for Decentralisation of Mental Health Services*

- Expansion of child mental health services at the PHC/CHC level: There is a need for trained personnel at the community-level, and therefore, non-specialist health workers need to be capacitated. Frontline health workers (like ANMs and ASHA workers), at the primary healthcare level (PHCs & CHCs), are key stakeholders in the provision of basic mental health services (including depth assessment and screening for mental health morbidities/developmental issues, provision of first-level responses & referral services for serious child mental health issues).

- Current issues in capacity-building initiatives for these stakeholders include: i) low motivational levels and lack of willingness to administer screening tools and assessments, in part due to remuneration issues; ii) absence of a vertical programme (like in the case of immunisation, nutrition etc.) that prioritises child mental health and development services. Therefore, there is a need to develop a vertical programme, at the state-level, to prioritise capacity-building and timely remuneration for non-specialist health workers in order to facilitate effective mental health service provision in communities.
- In addition to improving mental health service accessibility, public child mental health education and awareness is critical to addressing the stigma surrounding mental health. Parent/ caregiver education is of special significance in order to promote treatment seeking, in the absence of which, there is likely to be a considerable delay in accessing mental health services. Primary healthcare workers and key child development functionaries like Anganwadi workers play a critical role in this context.
- In the context of secondary-level mental healthcare service provision, key issues identified in the 2011 performance audit of DMHPs across the country raise challenges at two levels:
 - o Structural Issues with regard to human resources and mental health service availability: As noted in the performance audit, in the case of Gulbarga, there was no psychiatry wing of the District Hospital which had severe ramifications for the staff availability in the DMHP as well as linkages with PHCs/CHCs. Therefore, it is critical that secondary-level mental health infrastructure is provided at the district level, so as to ensure that vulnerable populations are not required to bear exorbitant treatment costs.

In terms of fund allocation and utilisation, there is also an urgent need to ensure adequate training of DMHP nodal officers in the administration and management of the DMHP so that administrative processes required for fund allocations are completed in a timely manner. This will ensure that the vast sums of unallocated funds are disbursed to strengthen the DMHPs.

- o Capacitation of DMHP Staff: Additionally, capacity-building programmes for DMHP staff is critical towards facilitating more significant community outreach and better utilisation of funds available for IEC activities. Training and capacity-building of DMHP staff is also an imperative in regard to skill development in the context of child development and child mental health.

4.5.2. Prioritising the needs of at-risk children in financial investments (context-specific interventions)

- There is a need to adopt a more proactive prevention-based approach to addressing psychosocial vulnerabilities in children in adversity. It follows that the need to invest in the following facilities and services (responsible for ensuring the protection and mental health of children in adversity) is critical:
 - o Early Childhood Care Services: In order to facilitate accurate identification of young children at-risk, there is a requirement to facilitate capacity-building programmes for anganwadi staff in the use of systematic assessments for protection and mental health/development issues. Specifically, this involves developing the staff's skills in early screening and referral for: developmental delays, emotional/behavioural and protection issues; and engaging children in personal safety awareness programmes.
 - o Government (Aided) Schools: Keeping in mind the scale of mental health morbidity, especially in government (aided) schools, where at-risk children from vulnerable families and communities go,

there is a tremendous need for intensive investment in child and adolescent mental health support services in schools, vis-à-vis training of teachers (on early identification and first-level intervention) and appointment and training of counsellors.

- o State Child Care Institutions: From the point of view of child development and mental health, the following interventions are needed to address the gaps in CCIs' institutional capacity across Karnataka:
 - a) Play and recreational facilities are essential to child development and psychosocial wellbeing, with already vulnerable children at risk of further emotional and mental stress when not permitted access to adequate play and recreation spaces. In line with the findings of the 2018 review and mapping exercise of CCIs, institutional arrangements need to be significantly enhanced. Security considerations and gender-discriminatory attitudes must not disenable children from accessing open play spaces.
 - b) In order to ensure that children in institutions have access to opportunities for rehabilitation, all child care institutions that have not enabled linkages with external professionals/organisations to provide rehabilitative services (including educational services, mental health services, vocational training, life skills workshops, legal aid services and de-addiction services) must be required to ensure that these legally-mandated services are provided, and furthermore, receive necessary financial support in ensuring provision of the same. Specifically, given that only 7.6 percent of CCIs in Karnataka were reported to be providing de-addiction services in 2018, there is a significant requirement for more de-addiction facilities to be established and services made available to children in CCIs. It is also recommended that mental health and rehabilitation services are to be provided by organizations, including government agencies, at the secondary and tertiary level with facilities and requisite professional expertise in assessment, certification and treatment interventions.
 - c) In the context of social reintegration (a key mandate of the Juvenile Justice Act, 2015), there is an urgent need for aftercare services to be significantly enhanced as only 21.3 percent CCIs in Karnataka were reported to have external linkages for provision of aftercare i.e., services including housing, life skills training, legal awareness-building, vocational training and employment, to facilitate social reintegration of children leaving institutionalised care, between the ages of 18-21.
 - d) Current staff vacancies in full-time and part-time posts in CCIs need to be filled in order to ensure feasible staff-child ratios. Additionally, CCI personnel require staff orientation and training on child development and mental health, in order to capacitate CCI staff in assisting children with difficult and traumatic experiences.

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Chapter-5

Micro and Macroeconomics of Child Education for Child Development in Karnataka

Jyotsna Jha¹

5.1. Introduction

Karnataka is one of the educationally advanced states in India in relative terms. It is ranked the fifth and considered a ‘frontrunner’ in its position for the SDG 4 focused on quality education (NITI Aayog, 2018). It is also ranked third in an Education and Empowerment Index that includes indices on schooling participation at both elementary and secondary levels, and also takes empowerment indicators such as early marriage and adverse child sex ratio into consideration (Jha et al., 2019). However, the state still has a long way to go, as is clear from the index values (Table 5.1). While Karnataka has a higher score (76) in the Index that takes only education and schooling related indicators into account, i.e., SDG Index, the state has a low index value (0.596) when empowerment indices are also added to schooling indices, i.e., E&E Index). This means that though schooling participation may have gone up to an extent, the state still needs to do much more work on converting education into a vehicle of social change, which is still not at hand.

Table 5.1: Karnataka’s relative position in education related indicators (2018-19)²

	Karnataka	Best performing state	All-India	Comment / source
SDG 4 (Quality Education)	5 (Rank) 76 (SDG Index score)	Kerala 87 (SDG Index score)	N.A. 58 (SDG Index score)	NITI Aayog (2018)
Education and Empowerment Index (E&E Index)	3 (Rank) 0.596 (Index value)	Kerala 0.989 (Index value)	N. A. 0.48 (Index value)	Jha et. al. (2019)*

Source: School Education in Karnataka 2018-19

http://schooleducation.kar.nic.in/databank/GoKReport1819Final_230919.pdf

*<http://cbps.in/wp-content/uploads/Public-Finance-for-Children-PF4C-across-16-Indian-States.pdf>

The analysis of Performance Grade Indicators (PGI) in Table 5.2 shows similar trends: the state is better than the national averages in most cases, but there is scope and need for improvement. Interestingly, the only constituent of PGI where Karnataka’s score is lower than the national average is Governance. All these indices presented in both the Tables, however, are based on data from 2015-2019, and Covid-19 may have caused damage to the gains already made, as is clear from most accounts coming from diverse sources.

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²All data used in the chapter are the latest data available in the public domain at the time of writing the paper.

Table 5.2: Performance Grade Indicators (PGIs)*: Karnataka's relative position (2018-19)

Domain	Total Weight	National Avg.	Karnataka
Learning outcomes and quality	180	137	160
Access outcomes	80	65	69
Infrastructure and facilities	150	96	100
Equity outcomes	230	205	212
Governance processes	360	190	165
Total	1000	693	706

Source: School Education in Karnataka 2018-19

http://schooleducation.kar.nic.in/databank/GoKReport1819Final_230919.pdf

*The Government of India uses this index based on a variety of criteria related to enrolment, achievement levels, equity and governance to rate states (PGI (seshagun.gov.in))

5.1.1. Scope of the chapter

This chapter focuses on the education sector with (a) a brief review of current approaches to child development policies and programmes, and (b) recommends innovative and future investment policies and programmes for child development and Child Budget, with special reference to the education sector. The scope of this paper excludes the National Education Policy 2020 and its budgetary implications for Karnataka State. However, it includes a section on the post-Covid challenges in view of its significant impact on school education worldwide.

The chapter is aimed at informing the Government of Karnataka (GoK) in a manner that it reflects both a long-term perspective and addresses short term and immediate concerns. Rather than going to the current approaches and policies without understanding the challenges, the chapter first analyses the status and challenges in detail while paying greater attention to the post-pandemic context. Next, the chapter presents a review of the existing policies, programmes, expenditure and institutions while using the analysis of status and challenges as a backdrop to examine the policies. The priority areas that need greater attention have been embedded in the policy analysis but presented in the boxes to establish the linkages. In the end, a recap of changes suggested for the policies has been added. School education is discussed first followed by early childhood education, as some of the recent policy decisions in the area of school education have implications for early childhood education as well, and it appeared logical to have this sequence rather than the other way round.

The chapter pays special attention to certain principles/features to the extent the data allowed the analysis. These are:

1. Congruence between short, medium and long-term priorities for Child Education in Karnataka: While the focus is on the 2021-22 budget, a long term perspective has been applied so that the 2021-22 public spending on education is geared towards the long term objectives in the sector.
2. Impact of the pandemic on the education sector: Special note has been taken of the post-pandemic challenges for the education sector in Karnataka, and how it panned out in different parts of the state.
3. Persistent/structural challenges: The pandemic merely exposed and exacerbated a number of challenges that the education sector faces, and hence it is important not to lose sight of those while trying to address the immediate post-pandemic issues for the coming year's budget. Therefore, the structural

reasons that guide certain education related challenges have been kept in sight.

4. Convergence with other sectors/departments: Education has always been closely linked with a number of other sectors/departments. For instance, all feedback from the field in the post-Covid scenario point towards the need for greater attention to the issues of child protection, as the cases of child marriage, child labour and trafficking are rising /likely to rise in the post-pandemic phase. This calls for convergence with the Department of Women and Child Development (WCD) and Department of Social Welfare. The chapter pays attention and highlights these linkages.
5. Macro-economic impact of the pandemic: Considering that the pandemic has adversely impacted the economy with implications for both the (i) state budget and (ii) households' income and well-being, the paper tries to distinguish between high and low priorities (e.g., what investment is non-negotiable) while also paying attention to the aspects of efficiency (e.g., how to get maximum returns with the same level of expenditure).

5.2. Status and challenges: School education

The state follows a system of schools where the first ten years of schooling is under the Department of School Education while the two years of senior secondary schooling, known largely as Pre-University College (PUC) level, is under a separate department, known as the Department of Pre-University Education. The analysis in the paper is geared more towards the first ten years of schooling and also pre-education years, which is currently under the Department of Women and Child Development (WCD) with some exceptions where it goes to the Department of School Education.

At the level of the first ten years of schooling, the state has more than 76,000 institutions with an enrollment of over one crore students in 2018-19. The government and aided schools together cover about 65 percent of schools while the private schools cover about 26 percent of the schools (Table 5.3). The private schools cover a bigger percentage of the enrolment (42 percent) compared to their share in number while the opposite is true for the government and aided schools put together (55 percent). This obviously means that the government schools are smaller and much more widespread in rural areas as compared to private schools that are largely concentrated in urban areas. From the perspective of gender, an important observation is that the male-female ratio is tilted towards girls in government and aided schools while the opposite is true for private schools.

Table 5.3: The distribution of schools in Karnataka (grade 1-10)

Institutions	Number of Schools	Total Enrolment	Male:Female ratio
Govt School	48210	43,79,254	48:52
Private Unaided School	19769	44,01,309	56:44
Aided School	7256	13,36,556	52:48
Others	1501	2,60,261	48:52
Total	76744	10377380	52:48

Source: School Education in Karnataka 2018-19

http://schooleducation.kar.nic.in/databank/GoKReport1819Final_230919.pdf

The fact that private unaided schools have a gender disparity in favour of boys is a well-known fact, as parents prefer to send their boys to private schools in search of 'better quality' and English medium

education even if they can barely afford it. The so-called budget or affordable private schools emerged as a major response to such demand, which however, has also taken a major blow during Covid-19. Due to prolonged school closure and the inability to collect fees from students, they have closed down or are facing the risk of closure. Their ability to retain teachers and support staff is low and the salary cuts are not feasible as they have anyway been largely operating with low salaries. They are also facing the risk of increased dropouts from schools because parents have moved back to their villages or are unable to pay school fees due to loss of income and livelihoods.³ This also throws a challenge to the public system as many of these children may look for government schools for enrolment and they have a right to be enrolled there. Whether the public system is ready for this challenge or not is something that deserves attention.

Box 5.1: Flight from private to government schools in post-Covid phase: the infrastructure and teaching challenges

One of the challenges that the education system in Karnataka may face in coming years is the flight of students, both boys and girls, from private schools to government schools. ASER 2021 has already reported that the government school enrolment share has gone up in many states including Karnataka due to the shifting of children from private to state schools in response to Covid enabled crises.⁴ This could be happening for two reasons. One is the impact of Covid-19 on parental livelihoods, especially for the poorer sections, making it difficult for such parents to afford private schooling⁵. Many children from low-income neighbourhoods attend private schools in urban areas and reports of a large number of parents withdrawing their children from private schools has been there in the newspapers⁶. While this may include those parents who have gone back to their home states, Karnataka too has received returning migrants from Mumbai and other parts of India. Therefore, it is likely that the demand for state or government schools, including that for boys, may go up in future for a variety of reasons. Newspaper reports are already suggesting that Kannada medium schools in certain districts that had zero admission for a few years are experiencing a revival in admission.⁷ It could also be due to fear of infection associated with sending children to distant private schools using transport as compared to using local government schools.

In response to this shift, the public system of government schools needs to be prepared with adequate infrastructure and teachers to be able to respond to this challenge.

The private school crisis would also mean that boys have also become vulnerable and government schools may also see a higher number of boys entering there. However, that would be the case if government schools themselves are able to retain all girls who have been enrolled there, as higher incidence of girls dropping out of schools and early marriage have been coming from several parts of India. In general, gender disparity is not high in Karnataka and the state aggregate figures show that boys are at a disadvantage when it

³https://www.indiaspend.com/wp-content/uploads/2020/06/School-Readiness-_post-COVID-Report_Dream-a-Dream_06.06.2020.pdf; <https://medium.com/@vishaltalreja/the-brewing-crisis-in-the-affordable-private-schools-of-india-84f3ca17801f>

⁴Number of children out of schools in Karnataka plummets to 1.6% | Bengaluru News - Times of India (indiatimes.com)

⁵<http://cbps.in/wp-content/uploads/Report-Final-1.pdf>

⁶<https://www.thehindu.com/news/cities/bangalore/parents-pull-students-out-of-schools-as-families-return-to-their-hometowns/article33272654.ece>

⁷<https://www.thehindu.com/news/national/karnataka/covid-19-impact-govt-schools-survive-reopening-after-two-year-closure/article32563387.ece>

comes to the secondary or post-elementary stage. The enrolment figures from 2018-19 show that the average annual drop-out for both boys and girls is less than 1% at primary and less than 2% at upper-primary level, but these go up to nearly 10% for boys and 6% for girls at the secondary stage. As a result, transition rates also witness a decline at the secondary stage.

What is also noticeable is that though retention and transition rates remain high, the net enrolment ratios (NER) remain low: in the range of 65-68 for both boys and girls at secondary stage. This means that about 35-37 percent of the relevant age group children don't attend schools in grades IX and X. At primary level, about 5 percent and at upper-primary level about 17-18 percent children of the relevant age group don't attend schools (Table 5.4). This implies that while a majority of those who join the level tend to continue, there is a significant proportion who are not in age-appropriate grades and some stay outside the school as well.

Table 5.4: Basic Educational Indicators at school level

	Primary (Grade 1-5)			Upper Primary (Grade 6-8)			Secondary (Grade 9-10)		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
1. Net Enrolment Ratio	97.65	96.21	96.96	82.68	84.14	83.38	65.40	67.38	66.34
2. Retention Rate	95.95	95.95	95.95	98.38	98.45	98.41	90.19	92.06	91.09
3. Transition Rate	100.12	100.21	100.16	99.79	99.49	99.65	92.1	95.69	93.8
4. Avg Annual Dropout	0.99	0.85	0.92	1.21	1.97	1.58	9.74	6.23	8.08
5. Promotion Rate	99.01	99.15	99.08	98.79	98.03	98.42	90.26	93.77	91.92

Source: School Education in Karnataka 2018-19- Department of Primary and Secondary Education. http://www.schooleducation.kar.nic.in/databank/GoKReport1819Final_230919.pdf

The representation of marginalised groups such as SCs and STs seems proportional or higher to their population proportion in the state as well as in districts (Annex 5.1). The analysis of district-wise data for these parameters shows that in general, North Karnataka districts are performing lesser as compared to others. Yadgir in particular has more less performing indicators than others, and Chamarajanagar is the only district in South Karnataka where some of these enrolment and transition indicators are comparable to those in North Karnataka. Reports from Karnataka and other states are showing that girls are also facing the threatening consequences for health, due to the sudden closure of government schools that supplied them with everyday essentials such as nutritious mid-day meals, Iron Folic tablets (IFA) and sanitary pads. School for them is not only a place for learning but also a site where they make friends and receive psychological support. Poverty, income losses and the fear of 'elopement' are threatening to reverse the gains made in recent years in reducing child marriage with parental aspirations for girls' education fading with looming uncertainties and the need of more hands to support the family.⁸

Box 5.2: Possibility of higher drop out of girls in North Karnataka districts

Considering that North Karnataka is also the district with a higher incidence of child marriage and a higher level of adverse child sex ratio⁹, it becomes imperative to be watchful against the possibility of the dropout rates for girls going high in the post-Covid period.

⁸<https://www.ukfiet.org/2020/covid-19-and-the-interruption-to-schooling-in-rural-karnataka/>

⁹<http://cbps.in/wp-content/uploads/An-analysis-of-the-Bhagyalakshmi-scheme-in-Karnataka-Report-6Jan2021.pdf>;
<http://cbps.in/wp-content/uploads/Public-Expenditure-Series-2-of-8-An-Analysis-of-the-Bhagyalakshmi-Conditional-Cash-Transfer-Scheme-in-Karnataka.pdf>

Government schools in Karnataka have a lower Pupil Teacher Ratio (PTR) as compared to private schools, which also happen to be much below the norms of 1:30 at primary and 1:35 at upper primary level (Table 5.5). The aggregate, however, does not reveal the truth fully and the district wise data reveals that only 6 out of 30 districts had less than five per cent schools with PTRs higher than 1:30 at primary level, and 6 out of 30 had more than 20 per cent of schools with PTR higher than 1:30, with nearly 39 percent of primary schools having PTR higher than the prescribed RTE norm in Yadgir. The situation is better at the upper primary stage with only two districts, Bellary and Yadgir, having more than five per cent schools having PTR of higher than 1:35. Yadgir stands out with more than 35 per cent schools having a PTR of more than 1:30 and 1:35 respectively at primary and upper primary levels. The narrative remains the same for Student Classroom Ratio (SCR): the average for the state is low (Table 5.6) but individual districts tell a different story. North Karnataka districts are worse placed in case of pupils as well although a number of other districts also face the problem of higher SCR (Please refer to the Annex 5.1).

Table 5.5: Pupil-Teacher Ratio (PTR) in Karnataka

Institutions	Elementary	Secondary
Govt School	22.5	13.0
Private School	34.7	16.5
Aided School	70.4	30.6
Others	59.7	21.6

Source: School Education in Karnataka 2018-19- Department of Primary and Secondary Education.
http://www.schooleducation.kar.nic.in/databank/GoKReport1819Final_230919.pdf
http://ssakarnataka.gov.in/pdfs/data/GoKReport1819Final_230919.pdf

Table 5.6: Student-Classroom Ratio (SCR) in Karnataka

Institutions	Elementary	Secondary
Govt School	18.0	26.0
Private School	28.0	22.0
Aided School	33.0	25.0
Others	39.0	33.0

Source: School Education in Karnataka 2018-19- Department of Primary and Secondary Education.
http://www.schooleducation.kar.nic.in/databank/GoKReport1819Final_230919.pdf
http://ssakarnataka.gov.in/pdfs/data/GoKReport1819Final_230919.pdf

The presence of many small schools is a major issue in the state, as at least 19 per cent or more schools in each district have a total enrolment of less than 50; this proportion goes beyond 30 per cent in 20 of the state's 30 districts, but this problem exists more in Mysuru and Bengaluru divisions rather than in the North Karnataka (Annex 5.1).

Nearly 54% of government lower primary schools in Karnataka have enrolment of less than 25, and cumulatively about 85% of them have enrolment of 50 or less, which comes to an average of 10 children per class.more than 70% of the lower primary schools in Hassan, Kodagu, Chikmagalur, Uttara Kannada, Tumakuru, Ramanagara, Bengaluru Rural and Mandya have enrolment of less than 25. On the

contrary, northern and north-eastern Karnataka (Hyderabad-Karnataka) districts considered as backward like Koppal, Yadgir, Gadag, Ballari, Raichur, Dharwad and Bagalkot have less than 25% of schools with enrolment less than 25. Hassan has more than 80% of government primary schools with enrolment below 25. Koppal has the least, only 17.6% schools below an enrolment of 25.Further, the distribution of government higher primary schools shows that 50% of them have enrolment of less than 110. The top 5 districts in terms of small higher primary schools are Hassan, Chikmagalur, Uttara Kannada, Bengaluru Rural, and Kolar; as against Yadgir, Raichur, Haveri, Bagalkot and Gadag.... A clear pattern emerges when we club the districts according to administrative divisionsshrinking strength is a problem less severe in the districts of Kalaburagi and Belagavi divisions as compared to Bengaluru and Mysuru divisions. (Akshara Foundation, 2018)¹⁰

The quality of education has been a major concern across the country. Karnataka is not an exception, but Karnataka's performance on an average has been better than national average if we go by the indicator of class-wise and subject-wise learning outcomes. The National Achievement Survey 2019 (NAS) results reveal that though Karnataka also follows the same pattern where the average learning outcome scores go down with the grades, the average score in the state remains higher than national averages for all subjects and grades covered in the study (Table 5.7). Another important point is that the state has negligible disparities based on gender, location (urban: rural), management (government: government aided) and social groups.¹¹

Table 5.7: National Achievement Survey (NAS) 2019- Average scores in Karnataka

	Class 3			Class 5			Class 8			
	Language	Maths	EVS	Language	Maths	EVS	Language	Maths	Science	Social science
Karnataka	77	74	73	71	67	67	62	50	52	51
National	67	63	64	58	53	56	56	42	44	43

Source: http://nas.schooleduinfo.in/dashboard/nas_ncert#/

Karnataka has conducted its own Census-based State Achievement Survey (C-SAS) and though in general the results are encouraging, there specific areas where the state needs to focus on. A clear message is to focus on secondary classes from 8th to 10th where not only the average scores are declining for the second language, science and mathematics but the decline is obvious in all kinds of learning: knowledge, understanding and application (Tables 5.8 and 5.9).

Table 5.8: Census-based State Achievement Survey (C-SAS), Karnataka, 2018-19

Grade	Languages			Core Subjects			Overall
	L1*	L2*	L3*	Maths	EVS/ Science	Social Studies	
4	72	66	-	70	71	-	70
5	67	70	-	72	77	-	71
6	71	69	64	63	66	68	67
7	73	71	61	64	63	66	66

¹⁰<https://akshara.org.in/wp-content/uploads/Restructuring-Government-Schools-report.pdf>

¹¹http://nas.schooleduinfo.in/dashboard/nas_ncert#/

Grade	Languages			Core Subjects			Overall
	L1*	L2*	L3*	Maths	EVS/ Science	Social Studies	
8	66	54	58	61	53	58	58
9	71	51	65	59	48	66	60
10	66	49	52	53	58	67	58
Overall	70	62	60	64	63	65	63

*Languages: Kannada/English/Urdu/Hindi/Marathi/Tamil depending on the region. L1, L2 and L3 represent the chosen first, second and third languages of the students.

Source: School Education in Karnataka 2018-19- Department of Primary and Secondary Education.
http://www.schooleducation.kar.nic.in/databank/GoKReport1819Final_230919.pdf

Table 5.9: Census-based State Achievement Survey: Grade and average scores for Knowledge (K), Understanding (U) and Application (A)

Class	Language 1*			Language 2*			Science			Maths		
	K	U	A	K	U	A	K	U	A	K	U	A
4	74	72	72	70	73	56	78	74	61	75	72	66
5	72	64	68	74	69	71	70	79	79	74	72	71
6	78	68	73	72	70	69	74	62	66	74	64	57
7	76	69	79	72	66	80	73	63	57	60	69	59
8	64	66	68	56	54	52	52	53	53	61	62	59
9	72	77	68	53	51	46	55	49	43	66	59	55
10	67	69	65	54	44	51	65	58	51	53	54	52

*Languages: Kannada/English/Urdu/Hindi/Marathi/Tamil depending on the region

Source: School Education in Karnataka 2018-19- Department of Primary and Secondary Education.
http://www.schooleducation.kar.nic.in/databank/GoKReport1819Final_230919.pdf

Table 5.9 clearly shows a decline in scores for all three dimensions: Knowledge (K), Understanding (U) and Application (A), this becoming common in grade VIII for the second language and Science, and in grade X for Mathematics. This would have definitely become further declining due to the long school closure that has followed the lockdown that the country saw during March-April 2019 and later in 2020 due to the much severe second wave of Covid-19, as absence of face-to-face classes have made the teaching-learning process more impersonal and complex.

Box 5.3: Learning Loss: Aggravating the challenge of quality during post-Covid phase

The challenge of quality has become more daunting and complex in the post-Covid period because of the lockdown and thereafter prolonged school closure. It is not only the fear of drop-out due to prolonged absence from school but also the fear of learning that is being reported by almost every study that has been undertaken in different parts of the country. This is likely to impact children in all stages and from all classes, but the impact would be different, with this being perhaps more adverse for those coming from poorer backgrounds and facing livelihood and income losses¹². Absence of reading materials and a literate environment at home could severely affect the reading abilities and habits of children at all levels. This could have serious implications for second language and science subjects where learning outcomes have already been low at the secondary stage.

Most state governments including Karnataka used educational telecasts as a means to continue education. Private schools opted for online education using various means including Whatsapp groups, Zoom and Google Meet to conduct classes. However, the response to these, as being reported by a number of studies and newspaper reports, has not been very high, especially for girls and if we take children from the poorer strata. Several surveys have shown that only about 10-12 percent children accessed technology enabled education¹³. A four-state study showed that while 52 percent of these children had a TV set at home, only 11 percent watched education related programmes; also, deep-rooted structural divides came to the fore when a smaller percentage of girls (26 percent) reported having access to a phone as compared to boys (37 percent). The mental health issues are also linked here, as 80 percent of more than three thousand children in the age-group of 10-18 years in the four-state study said that 'life was better before' on a question related to school closure and their being confined to their homes. A majority of these children also cited the reason as meeting friends in the schools and learning from their teachers, indicating that: (i) they felt isolated and (ii) the technology enabled education was not really reaching them¹⁴.

A recent five-state (including Karnataka) study, undertaken in January 2021, reveals the extent and nature of the learning loss to be particularly high in both language and mathematics.¹⁵ This clearly establishes the need for focussing not only on the current class but also the class abilities in the months to come irrespective whether the TC telecasts and other means were adopted or not.

Children from the households facing financial difficulties had lower access to both phones and internet, and they were much more uncertain about returning to school. Karnataka was no exception when it came to students belonging to less affluent families or living in remote places with no mobile network being left behind because of the cost of digital devices, data plans, or network connectivity and the prevalent gender-divide.¹⁶

¹²<https://www.unicef.org/romania/press-releases/two-thirds-worlds-school-age-children-have-no-internet-access-home-new-unicef-itu>

¹³<https://timesofindia.indiatimes.com/city/jaipur/lockdown-hit-education-of-girls-more-than-boys-study/articleshow/80141960.cms>; <https://www.idsj.org/wp-content/uploads/2020/11/WP-179.pdf>

¹⁴<http://cbps.in/wp-content/uploads/Report-Final-1.pdf>; <https://www.thehindu.com/news/cities/bangalore/with-schools-shut-special-children-cut-off-from-social-skills-training-and-therapy/article32993173.ece>

¹⁵https://azimpremjiuniversity.edu.in/SitePages/pdf/Field_Studies_Loss_of_Learning_during_the_Pandemic.pdf

¹⁶<https://www.forbesindia.com/article/iim-bangalore/challenges-of-online-education-in-rural-karnataka/62349/1>; <https://www.iimb.ac.in/sites/default/files/2020-09/Challenges-online-education-Rural-Karnataka.pdf>; <https://www.thehindu.com/education/multiple-education-challenges-for-students-teachers-and-parents/article32246834.ece>; <https://www.newindianexpress.com/states/karnataka/2020/nov/01/children-take-the-hit-as-education-goes-for-a-toss-amid-pandemic-2217804.html>

Although the Karnataka government has taken the decision to cut the syllabus of the ongoing classes by 30%¹⁷, that alone may not be enough to address the issue of widened digital divide and enhanced learning gaps.

Box 5.4: Widened digital divide and enhanced learning gaps

All this has implications for future – this is indicative of not only a widened digital divide but also an enhanced learning divide as well. While learning loss or lack of progress may be a fact for a majority of students, for some it would perhaps mean much more regression and lack of continuity than others. That would imply that post-Covid schooling has to be prepared for a more diverse classroom situation where some students would call for much more attention than others. This may also call for a differential curriculum planning where children who have not been able to access any teaching during Covid are given time and attention for the curriculum that they have not been able to cover. This is also linked to the issue of drop-out as allowing this gap to continue or widen may lead to the dropping out of students due to an inability to cope with the requirements of a higher class while not being able to learn what they should have for the previous class.

Karnataka government had initially banned online classes till class V but later allowed it with guidelines once the High Court intervened and gave a stay to that order¹⁸. The state also launched the Vidhyagama programme where it encouraged teachers to go to villages and teach in open spaces but stopped it upon facing criticism for putting children in risk, and then it was later restarted¹⁹. Continued uncertainty around Covid, its new mutations and vaccine including its effectiveness for all new mutations has also led to uncertainty around school reopening and the issues relating to the safety of children and teachers in such cases. The reaction of parents has also been mixed, although in general the spread of the virus has been less and the demand for opening the schools has been higher in rural areas as compared with urban areas. Nevertheless, the school authorities and teachers face a challenge in terms of keeping the school premises clean, maintaining social distance for students and avoiding any eruption of mass infections since the time schools have been allowed to reopen²⁰. There is also a conversation around following the hybrid model of a mix of physical and technology-based or other forms of distant teaching-learning to deal with the issue of social distancing.

¹⁷<https://bangaloremirror.indiatimes.com/bangalore/others/too-early-to-reopen-schools-say-parents/articleshow/78819262.cms>; https://www.indiaspend.com/wp-content/uploads/2020/06/School-Readiness-_post-COVID-Report_Dream-a-Dream_06.06.2020.pdf

¹⁸<https://www.tribuneindia.com/news/schools/karnataka-issues-ban-on-online-classes-for-primary-kids-99581>
<https://economictimes.indiatimes.com/industry/services/education/karnataka-bans-online-education-for-children-up-to-class-v/articleshow/76306008.cms?from=mdr>

¹⁹<https://timesofindia.indiatimes.com/city/bengaluru/karnataka-government-stops-vidhyagama-program-to-prevent-possible-covid-19-spread/articleshow/78592191.cms>

<https://www.india.com/education/school-reopening-news-karnataka-to-reopen-schools-for-classes-10-12-from-january-1-sops-to-be-announced-soon-4278029/>; <https://www.thehindu.com/news/national/karnataka/state-govt-set-to-recommence-vidyagama-this-time-in-schools/article33339946.ece>

²⁰At the time of writing this paper, all classes were allowed to be conducted physically inside the school premises in Karnataka. <https://www.thenewsminute.com/article/karnataka-schools-open-more-students-atmosphere-still-uncertain-142753>; <https://www.brookings.edu/blog/education-plus-development/2020/05/14/covid-19-in-india-education-disrupted-and-lessons-learned/>

Box 5.5: Need for retraining of teachers to deal with multiple challenges

Teachers are going to face multiple challenges; while the challenges that they already face have deepened, new challenges have emerged like never before: Students facing renewed chances of dropping out due to various reasons including parental economic condition and early marriage, issues of mental health and need for psychological support, reduced nutritional level and increased health issues of students are going to make the issue of learning gaps and divides even worse than before. Many teachers have been at the forefront of government responses to Covid and have played an active role in contact tracing, technology-based education and providing parental support. The expectations from them on various fronts including school and class management, teaching using multiple pedagogies and approaches, and responding to emerging needs to students are going to be high and of a diverse nature – they indeed need enhanced support and training to deal with these challenges.

5.3. Review of existing policies and suggestions for strengthening school education

The draft Karnataka Education Rules 2017²¹ along with the Karnataka Education Act 1983 and the rules framed for the Right to Education Act provide the legal framework for school education services in the state.²² Like most other states, Karnataka also uses a schematic approach to introduce new initiatives, although the state has been one of the pioneers in undertaking several institutional reform measures in the realm of education administration and teacher management including technology enabled teacher recruitment and teacher transfer processes that have brought in greater transparency and accountability (Minni and Jha, 2021). As a result, the state has experienced much less incidence of legal cases and related issues, as has been common in a number of Indian states. This also means that there exists greater potential for paying attention to educational challenges related reforms and practices, and in this section, we limit our analysis to schemes and initiatives that directly relate to the challenges identified above. For the sake of clarity, the discussion is being organised thematically/schematically as appropriate without necessarily following one of the two.

5.3.1. School infrastructure

The policy commits itself to adequate and appropriate physical infrastructure for schools including those for children with disability, including sports and playground as well as computer lab facilities. However, the actual situation varies from district to district. In this year of crisis when the union government's allocation for the flagship programme Samagra Shiksha (SS) has also declined, and the state would also be hard-pressed for resources, convergence and decentralisation could provide effective solutions.

Box 5.6: Pool resources and ensure greater efficiency: link panchayats, MGNREGA, FC funds, GPDP and school infrastructure

Linking the school infrastructure development with schemes like MGNREGA and also with the Department of Rural Development and Panchayati Raj (RDPR) for effective pooling of resources and local monitoring can be an effective solution. The MGNREGA has been a lifeline in terms of providing livelihood opportunities during Covid and due to economic downturn, the dependence on the same is likely to be high in coming years as well. It would be prudent to link the MGNREGA allocations with

²¹<http://www.schooleducation.kar.nic.in/pdf/files/SchRegnAmendDraftRules050118.pdf>

²²See http://righttoeducation.in/sites/default/files/Karnataka_rte-rules_2012.pdf#overlay-context=

filling the existing gaps in school infrastructure, bringing Panchayat institutions to the forefront for planning and monitoring. The RDPR has initiated a drive for child friendly panchayats and upgrading school infrastructure could be a part of that. This could also ensure avoiding duplication of efforts and also bring in greater efficiency if GPs can ensure water and fund availability using their own resources from other sources such as Finance Commission (FC) Grant, and make school infrastructure a part of GPDP (Gram Panchayat Development Plan).

5.3.2. Elementary and secondary school education: teachers, schools and quality of learning

Despite having in place a progressive and responsive teacher recruitment and transfer policy, that considers both the PTR and teachers' needs, several districts in North Karnataka face the issue of a good proportion of schools having higher than desired PTRs while in South Karnataka, a large number of districts have a very high proportion of schools with the number of students being less than 50. While it is important to ensure the presence of the primary school within a distance of one kilometer, as guaranteed by the RTE, it is also important to ensure more efficient and effective distribution of resources such as teachers – this is the rationale used by those who recommend restructuring or rationalization of schools citing that the practice of multi-grade teaching is not conducive for learning (Akshara Foundation, 2018).

As far as the quality of education and the experience of learning is concerned, the evidence in favour of small schools seems to outweigh those in favour of large schools. Small schools, despite low infrastructure and under-staffing, tend to have more 'essential' learning experiences as compared to big schools where some students may perform excellently, while most students remain peripheral participants (Sako, 1997)²³. More recently and based on research using Indian data, Dongre and Tewary (2020) argue on very similar lines: despite having multi-grade teaching and low level of infrastructure, the learning outcomes are not low for students in small schools even after controlling for child, household and village attributes. They, therefore, argue against rationalisation as it may have severe consequences on children's access to schools without any meaningful impact on learning levels.²⁴ While pointing out to the desirability of having small rather than large schools, they also define 'small' differently: 'an effective size for an elementary school is in the range of 300-400 students and that of 400-800 students is appropriate for a secondary school' (Cotton, 1996, p3)²⁵.

A linked issue is that of medium of instruction and that of quality in public and private schools. Although research has often showed that there is not much of a difference in the learning outcomes of children in government and private schools, especially if the family background is controlled for (World Development Report, 2018), the quality is considered better in private schools in people's perception.²⁶ It is difficult not to take note of the fact of preference for 'English medium' education and the perception that government schools do not offer high-quality education. Karnataka government has also taken note of the same and introduced certain initiatives, including opening of Karnataka Public Schools (KPS) in selected localities.

²³Sako T. (1997) "Big School, Small School" Revisited. In: Wapner S., Demick J., Yamamoto T., Takahashi T. (eds) *Handbook of Japan-United States Environment-Behavior Research*. Springer, Boston, MA. https://doi.org/10.1007/978-1-4899-0286-3_19 (DOI https://doi.org/10.1007/978-1-4899-0286-3_19)

²⁴Dongre and Tewary, (2020), *Pain without gain?: Impact of school rationalisation in India*, *International Journal of Educational Development* 72:102142, January 2020 (DOI: 10.1016/j.ijedudev.2019.102142)

²⁵<https://educationnorthwest.org/sites/default/files/SizeClimateandPerformance.pdf>

²⁶Azeem Premji Foundation (APF) study in four states including Karnataka, conducted in 2018. <https://idronline.org/are-private-schools-really-better-than-government-schools/>

KPS has been conceived as an integrated school from pre-school to class 12 in one premises, allowing pooling of resources in terms of infrastructure, teachers and others such as library, labs and other technology enabled services. The government announced the opening of 176 such schools, one in each taluka, in 2018 and followed it up by the announcement of adding 100 more KPS in 2019. The government has made itself accountable to a quality norm by declaring that one of the objectives of these schools was to ensure that at least three-fourths of all students in each class achieve a minimum three-fourths of learning competencies prescribed for their class and the remaining one-fourth of students achieve a minimum half of the learning competencies. In the first phase, 57 KPS were set up by ‘consolidating’ existing schools. The website lists all 276 schools and also provides other details such as establishment of infrastructure and transfer of funds²⁷.

The KPS has been conceptualized to be an ‘English medium’ school. In addition, the state also decided to introduce English medium education in 1000 schools since 2018 with a plan to bring higher numbers of such sections in more and more schools in future.²⁸ In general, this move was received with enthusiasm by parents, but there are a number of unresolved challenges that the government must be aware of and address before those become insurmountable in future.²⁹ In addition to the issue of teacher training for teaching all subjects in English, the experiences from similar experiments in the neighbouring state, Andhra Pradesh, tell us that it can lead to very undesirable consequences for children’s learning, both for English and local language medium children. A recent study showed that instead of offering a choice to students, in practice, all students from better socio-economic backgrounds were pushed towards opting for English medium while others were admitted to Telugu medium, leading to a labelling of these groups who are almost universally taught together in the same classroom because of the paucity of classrooms for separate sections for two mediums; Telugu medium students also faced discrimination and lack of attention, despite the fact that they deserved higher attention due to their social capital deficit. English-medium students in general fared better as compared to Telugu medium, but even English medium teaching was not necessarily in English, and all students did not perform well in language-based questions in Maths and in open-ended or creative writing-based questions in language (Jha. et al, 2020)³⁰. This means that if one discounts the socio-economic background, the performance of children did not improve because of change in medium while it led to worse treatment for Telugu medium students.

Box 5.7: KPS or Consolidating Schools: ensuring gain without pain

Considering that the state has been struggling to ensure even a minimum of two teachers in every primary school and the numbers of students are very low in a large number of schools, and also the problem of dropout at transition points from one level to the other, it may be a good idea to establish bigger and integrated schools at central locations such as taluka and hobli headquarters. However, it may not necessarily be at the cost of closing existing schools indiscriminately. What needs to be ensured in this context is the following:

1. It is not necessarily the number of children in a school but the ease of access that should determine whether a particular school should be closed or not. The presence of a primary school in the vicinity enables people to send their children there and there is enough evidence to suggest that absence of schools close to the habitation acts as a barrier for poorer families to send their children to school located far³¹. It is important to retain schools at all costs from where children are not able to go

²⁷<https://ssk.karnataka.gov.in/Home/ProgrammesKPS#Webportal>

²⁸<https://www.thehindu.com/news/national/karnataka/1000-karnataka-public-schools-to-have-english-medium-sections/article26240990.ece>

²⁹<https://www.thenewsminute.com/article/karnataka-s-english-medium-schools-demand-training-teachers-challenge-119183>

³⁰AJWS_report.indb (cbps.in)

³¹Dongre and Tewary (2020), cited earlier.

anywhere else irrespective of the number of children studying there to ensure their schooling, as ensured under the RTE.

2. Making all possible arrangements, transport as well as escort, to ensure that children enrolled in school being 'closed' are taken to the school which is closest – their admission to these new schools has to be made the first priority without any compromise. Social contact and mobilization of parents would also be important using the existing School Development Management Committees (SDMC) and PRIs. Only after the parent of each child agrees to send their children, a school should be declared closed.
3. In urban as well as rural areas, considering that a greater number of children could be opting for government schools due to the closure of private schools or unaffordability of parents (post-Covid impact), any decision to close or amalgamate schools needs to be linked to these possibilities. Enhancing the scope of PRIs in these decisions would make it easier for the Department of Education to act.

It is important to incorporate these points as non-negotiables in the KPS conception.

While it is important to pay attention to parental aspiration for English education and also the power of English in giving an edge in labour market or even as a social prestige value, it is also important not to succumb to policy choices that may prove counterproductive. In this context, the decision to adopt the Nali-Kali approach for teaching English in all government schools in Karnataka is a welcome step³².

Box 5.8: Continue and Strengthen Nali-Kali to address learning loss for primary stage children

Karnataka has successfully introduced and used the Nali-Kali approach of teaching learning in primary schools for more than a decade. It is a learning-ladder-based approach using cards and other materials as learning resource that allows multi-level and multi-grade situations to be dealt with easily. Children can learn at their own pace and milestone-based evaluations allow them to complete their stages at their own pace. While the implementation of the approach has not been uniform across the state, the evaluations have found it particularly effective in enabling effective learning among children from disadvantaged groups and in rural areas³³.

It is important to continue and strengthen the approach, as it has the potential to address the issue of learning loss caused by school closure during Covid. The children can be easily evaluated and go back to the milestones that they may have cleared earlier but have regressed from hence.

Also, it is important that the same spirit is maintained in the Nali-Kali English, allowing children to learn at their own pace and not create the classes that can be discriminatory to some children.

Karnataka has partnered with NGOs to improve the quality of learning. 'Odu Karnataka' in partnership with Pratham, 'Ganita Kalike' with Akshara foundation are a few examples of such partnership. The Viswasa Kirana programme is held during the mid-term vacation to bridge the learning gaps of grade 4-9 students identified through the State-Wide Achievement Survey in all Government Schools. The state has also gradually increased the use of Technology-Assisted Learning in the regular classrooms. The state

³²<https://www.englishhub.co.in/2020/10/english-nali-kali-enk-class-1-download.html>; <https://www.englishhub.co.in/2020/10/rw-ladder-and-evaluation.html>

³³http://ssakarnataka.gov.in/pdfs/int_rems/NaliKali.pdf

introduced a novel approach by developing module-based training of serving teachers at elementary level, where teachers could choose the modules they wanted rather than being forced to attend the training as designed. The modules covered diverse areas of perspective building to concept and theory, and pedagogy and practical problems of any subject teaching. This initiative, known as Guru Chethana, was introduced in 2017 and has been received well³⁴.

The state also intended to provide special need-based training to teachers of secondary and higher secondary classes, covering all three streams, namely, Science, Commerce and Arts. The learning issues are far more complex and outcomes far more problematic at secondary level, as discussed earlier. There is undoubtedly a need for paying greater attention to the teaching of Second Language, Science and Mathematics at this stage. The likelihood of huge learning loss at this stage makes this problem even worse. Unlike years of engagement with elementary schooling teaching reforms, secondary education interventions, even through centrally sponsored schemes such as Rashtriya Madhyamik Shiksha Abhiyan (RMSA) and now merged with Sarva Shiksha Abhiyan (SSA) to make it Samagra Shiksha (SS) have been less rigorous and effective in the country as a whole and Karnataka does not seem to be an exception. With decreasing allocation to SS in this year's central budget, it is imperative that the state itself develop robust solutions using the resources that are available locally.

Box 5.9: Improving secondary level teaching - learning in Science, Mathematics and Second language: access the wide technical resources locally available

The state houses a number of national science institutions, giving the capital city Bangalore the tag of being the Science Capital of the nation.³⁵ Karnataka also has a number of state universities that are known to be doing well in Science and Mathematics. These institutions can serve as a major technical resource without costing much to the state government, if approached to develop novel teaching methods and approaches for improving the teaching-learning of Science and Mathematics at secondary level in consultation with teachers and DSERT faculties. These collaborations can strengthen the existing initiatives. Some such collaborations already exist³⁶ but there is a need to go beyond these to make it useful for all secondary school students in the state.

For second language, a deeper analysis of the scores and subjects that are commonly opted for and the reasons for low scores in collaboration with the Regional College of Education, Mysuru, may be a helpful exercise. Teaching methods for second language have to be very different from those for the first language, as this may not be part of the child's spoken and written environment at all. A re-examination of the curriculum/syllabus may also be helpful in this regard.

5.3.3. Skills Education

Skills education is another area that needs attention. The state had implemented the National Skills Qualifications Framework (NSQF) based skills programme under RMSA in selected institutions, but research showed it had a number of problems linked with planning and implementation on the one side, and matching it with the student's aspirations and the industry's needs on the other. In addition to the issues related with the

³⁴<http://dsert.kar.nic.in/guruchethana/programme-overview.html>

³⁵It includes Indian Institute of Science (ranked number 1 university), Jawaharlal Nehru Centre for Advanced Scientific Research, Raman Research Institute, International Centre for Theoretical Sciences, Regional College of Education (NCERT) and a number of other central institutions in the areas of Power, Wood, etc.

³⁶<https://bengaluru.citizenmatters.in/jawaharlal-nehru-planetarium-science-classes-for-teachers-26142>; <https://www.taralaya.org/sow.html>

appropriateness of curriculum, quality of teaching and limited or no relevance to the industry, the fact that two levels of skills education were located in secondary schools and the other two levels in pre-university colleges itself led to confusion and dropouts. The completion of four levels was essential for getting the first level of certification and a number of students never reached that stage.³⁷ The state had also launched 'Hosa Hejje' in 2009 with three components: 'Angla', which aimed to impart the English language to the students, 'Vikasana', which aimed at provide holistic education and 'Sahyog', which aimed to provide industrial training^{38,39}. The 'Nipunya Nidhi' was launched in 2013-14 which was a continuum to 'Hosa Hejje'. This scheme wanted to use tools like Edusat to provide training in communication and computers⁴⁰.

Karnataka took note of a number of prevalent issues and developed a new comprehensive Skill Development Policy (2017-2030)⁴¹. This sought to address the issues of asymmetry of information, inadequacy of career-centric training and the problem of under investment in skill education. The primary thrust of the policy is on IT, health, education, construction, tourism and the hospitality sectors. The policy envisaged the involvement of GPs and ULBs in disseminating information, institutionalizing a premium wage in collaboration with the industries. It also aimed at bringing skills education on par with general education by having both practical and theoretical frameworks. Years down the line, the feedback on its implementation, however, is not encouraging. In addition to reports of dummy enrolment, more serious allegations of the whole programme becoming a number game with mismatches between geographical vantage points and the skills being offered and certification being granted have also been reported.⁴²

Box 5.10: Skill-based education: rethinking and reorganization required

In order to make skill-based education really valuable and relevant, it is important to make it a rigorous parallel scheme, taking institutional arrangements as well as labour market needs into account. For instance, since Karnataka has a PUC (Pre-University College) system at grades 11th and 12th level, it may be more feasible to have a post-secondary skills-based PUC that is rigorous enough, and also allows them to join either the labour market or higher education upon completing the level. The courses need to have both theoretical and practical, hard and soft skills, and also the industrial attachment elements, and hence geographical mapping and matching would also help. It is important to argue for a decentralised approach rather than following the national approach whether it matches with the existing institutional arrangements or not. Also important is to pay attention to the fact that these courses are not seen as 'second grade' for poorer students, but are parallel and equally valued options for all.

Karnataka has a large number of hostels and residential schools run by the state government under diverse schemes to enable children from rural areas and those belonging to disadvantaged groups to attend schools. In addition to Ashram schools, Navodaya schools and Kasturba Gandhi Balika Vidyalayas (KGBVs), the state has also its own scheme known as Morarji Desai residential schools modelled after Navodaya Vidyalayas. In total, the state has more than 800 government run residential schools (including PUC)⁴³. Except KGBVs that are run by the Department of Education, all other residential schools are run by

³⁷http://cbps.in/wp-content/uploads/Final-Skills-Full-Report_19-July-2019.pdf

³⁸<https://www.skillreporter.com/tag/karnataka-skill-development/>

³⁹<https://karunadu.karnataka.gov.in/jnanaayoga/Other%20Reports/KjaRecommendationSkillDevelopment.pdf>

See <https://www.kaushalkar.com/wp-content/uploads/2019/04/Karnataka-Skill-development-policy.pdf>

⁴⁰See <https://www.dce.kar.nic.in/Naipunyanidhi.html>.

⁴¹<https://www.kaushalkar.com/wp-content/uploads/2019/04/Karnataka-Skill-development-policy.pdf>

⁴²*Residential Schools and Colleges Details - Karnataka Residential Educational Institutions Society*

⁴³http://kreis.kar.nic.in/ENGLISH/academic_E.html

the Department of Social Welfare through a registered trust. In addition, more than two thousand hostels also exist for secondary, PUC and higher education levels.

Box 5.11: Convert hostels into cooperative and collective, learning spaces

Like all other segments, these schools have also been hit hard by the pandemic, especially so because of the residential nature of the schools. When reopening, these students will need additional support outside the school to be able to make up for their losses in learning and possibly mental health issues for some. This can also be seen as an opportunity to convert these hostels and residential spaces into learning spaces in a more planned manner. At present, while residential schools do have greater space and scope for learning, hostels usually serve only as residential spaces. Converting these into learning spaces through resources such as library and games, and activities built around these in addition to involving children in the management of hostels could help in addressing learning as well as mental health issues. The presence of a well-trained teacher cum counsellor in hostels may go a long way towards this.

5.4. Status and Challenges: Early Childhood Education

The issue of early childhood education is a complex issue. While the critical role of Early Childhood Care and Education (ECCE) is well-established by research, there are debates around various approaches including how best it can be delivered; whether independent ECCE centres or pre-schools attached to schools are better has been a matter of debate. However, the fact remains that State sponsored ICDS (Integrated Child Development Services) centres known as Anganwadis remain the most important provider of ECCE in India including in Karnataka though private pre-school centres – both independent and part of schools - have emerged as a major provider for non-poor, not only in urban and peri-urban areas but also in rural areas. This is especially true for the age group of 4 and 5 years where nearly 30 percent and 45 percent attend private pre-schools in rural Karnataka though at the age of 3, only 8 percent do so. The share of ICDS centres in the ECCE enrolment remains high but declines with age: 82 percent at age 3, 66 percent at age 4 and 45 percent at age 5⁴⁴.

The ECCE issue becomes more complex also because of the element of care in general but especially so in the case of ICDS centres. Anganwadis are meant to provide food, preschool education, primary healthcare, immunization, health check-up and referral services to children under 6 years of age and lactating mothers. It is common to refer to these as ‘feeding centres’ and the quality and effectiveness of the early childhood education has been often questioned. However, a recent study conducted in Karnataka using a small but equal number of anganwadi and private pre-schools provides critical insights into this:

.....the quality of private preschools was neither significantly better than that of anganwadi centres, nor were they age-appropriate for ECCE aged children. Though anganwadi centres are far from perfect and were found lacking in terms of infrastructural facilities and curricular material, private preschools were largely observed to be equally poorly equipped..... private preschools were found to be actively engaged in age-inappropriate pedagogies such as formal, instructional literacy and numeracy, with little to no focus on other critical domains of development, having potentially adverse consequences for children’s learning capacities. In comparison, anganwadi centres, though not focussing sufficiently on curricular transactions in the domains of literacy and numeracy, were found to be utilizing informal teaching-learning strategies directed towards other domains of development such as cognitive and motor skills.(CBPS, 2020)⁴⁵

⁴⁴<http://cbps.in/wp-content/uploads/CBPS-FINAL-REPORT-CSSS-ICSSR-Feb-2020.pdf>

⁴⁵Ibid

Karnataka decided to bring pre-schools, Montessoris, play homes and daycare centres under the ambit of the Karnataka Education Act by bringing in an amendment in the then legislature session. This move was prompted by a number of cases involving pre-schools in the state as also there were no laws to register these institutions as individuals but they could do so only by registering them as trusts and societies. This inclusion of preschools was meant to enable better monitoring of schools and ensuring the protection of the child's rights. This initiative was proposed keeping in mind the model of cities including Delhi and Chennai where pre-schools come under the ambit of the department of education.⁴⁶

The Karnataka State Education Policy (2016) had identified that not enough has been done to address the lacuna in ECCE from the age of three years. The policy also pointed out lacunae in the quality of teacher preparation and training. The policy suggested to ensure interaction of Anganwadis with the department of education and primary schools. The National Early Childhood Education Policy including the national curriculum framework quality standards for ECCE must be applicable across the state. The government and private schools were required to develop a suitable curriculum for preschools and only qualified teachers must be given charge of the children⁴⁷. The National Education Policy, 2020 also brings early childhood education under the ambit of the education policy, extending the period of early childhood up to the age of eight years.

While this may be a welcome move if it leads to an upward extension of the early years into the first few years of primary schooling, it can be counterproductive if it leads to excessive focus on formal teaching including reading and writing to early childhood education, as one witnesses often in private pre-schools. The Government of Karnataka's decision to co-locate and consolidate Anganwadis with government schools, as per a circular brought in May 2019 to convert Anganwadis into KG classes within the schools, needs to be examined in this context of this move being a double-edged sword. A large number of Anganwadis (more than 4000) were to be merged with government schools and a beginning was made by attaching pre-schools to KPSs. Anganwadi workers associations have been protesting and on warpath against this decision and some of their arguments against this move merit attention.⁴⁸

The Government of Karnataka's decision to co-locate Anganwadis with the school is perhaps guided by several concerns and rationale – some justifiable and some not. The co-location has been prescribed to allow the benefits of being next to highly educated and trained teachers and an academic environment in pushing the quality of early childhood education (ECE). The recent reports about children not being 'ready' for primary school has also contributed to this argument.⁴⁹ This argument takes the objective of ECE being pre-schooling and making children ready for 'schooling' rather than having age-appropriate activities and learning, which may not necessarily serve the purpose of making children ready for primary schools. As referred to earlier, private pre-schools were found to be practicing age-inappropriate activities with high

⁴⁶See <https://www.newindianexpress.com/states/karnataka/2017/mar/18/pre-schools-to-come-under-karnataka-education-act-1582698.html>

⁴⁷See <http://www.niepa.ac.in/download/NEP2016/ReportNEP.pdf>

⁴⁸<https://www.thehindu.com/news/national/karnataka/anganwadi-workers-oppose-pre-primary-classes-in-government-schools/article27190233.ece>

<https://thelogicalindian.com/news/anganwadi-workers-protest-karnataka/>

<https://timesofindia.indiatimes.com/city/bengaluru/karnataka-anganwadi-workers-protest-introduction-of-kindergarten-classes-in-govt-schools/articleshow/69584614.cms>

<https://www.deccanherald.com/state/mangaluru/introduce-pre-primary-education-in-anganwadis-781975.html>; <https://www.thehindu.com/news/national/karnataka/anganwadi-workers-take-out-rally/article33061966.ece>

⁴⁹<https://www.deccanherald.com/opinion/second-edit/focus-on-pre-school-learning-anganwadis-796906.html>

focus on reading and writing skills in Karnataka (true for the entire country). This may seem to be ‘better’ in terms of age-inappropriate learning outcomes based on reading-writing-memorisation skills are the only objectives but may be detrimental in the long run for not focusing on a number of critical age-appropriate behaviour and learning.

While it is important to work on enhancing the quality of ECE in anganwadis, the best solution may not be to co-locate it with schools. Apart from the very real fear of downward extension of reading-writing focus to early years, the issue of anganwadis being a comprehensive centre for the child’s care, nutrition and immunization (0-5 year age-group); young women’s nutrition and also their education on child’s care and early education; and also serving as a conveniently located (often within the village or vicinity) creche for working mothers.⁵⁰ The school may provide pre-schooling; but it cannot replace all other services that an anganwadi provides, and therefore closing this institution is indeed not a solution. It is also important to consider that it provides an earning opportunity close to home to lakhs of women who are the first level contact point for a number of government initiatives, and they played a major role even during the pandemic in the distribution of food, ration, sanitizer and essentials.

Box 5.12: Pros and cons of co-locating anganwadis with schools: avoiding hasty decision

While the state may choose to retain pre-school classes in KPS and other schools, it would be prudent not to do so by closing anganwadis. The state needs to invest on:

- Comprehensive training of both pre-school teachers and Anganwadi workers for ECE in order to avoid excessive focus on ‘pre-school’ elements and downward extension of reading/writing focus – this also needs greater and a mutually respectful coordination between the Department of Education and Department of Women and Child Development.
- Nurturing Anganwadis as a comprehensive early care, education and nutrition centre for young children and young women. It also has the potential to emerge as a key place for collectivisation of women through schemes such as Mathrupurna (hot nutritious meals served to pregnant and lactating mothers). It may mean developing long-term plan for training and certification of Anganwadi workers in a manner that they can strengthen their ECE skills while also upgrading the learning resources to help them implement it better and also reassure parents to have faith in the institution.
- While Karnataka spends a substantial portion of its public expenditure on children, especially on education that occupies 79-80% of its total expenditure on children, the expenditure on children in the age group of 0-6 years is low (10%) as compared to their population share in child population (30%).⁵¹ The state needs to spend more, and more judiciously, on this age group of children, ECE being an important component of that expenditure.

Having said that, it is also a reality that parents are withdrawing their children from Anganwadis and admitting them to budget private schools in pre-school classes as that is often the only way to secure admissions later in the school. This needs to be understood and addressed.

⁵⁰<https://www.thehindu.com/society/how-indias-anganwadi-system-is-getting-some-things-very-right-despite-its-many-flaws/article26470237.ece>

⁵¹<http://cbps.in/wp-content/uploads/Public-Finance-for-Children-PF4C-across-16-Indian-States.pdf>

Also, in the context of KPS, if it attracts middle-class children also along with those coming from low-income groups, as some reports are suggesting⁵², it may be a desirable sign. It is a proven fact that institutions that serve both poor and non-poor are better in quality of service delivery as compared to those that serve only the poor due to inadequate information and lack of power (Keefer and Khemani, 2004). This may help in making KPS a good quality institution, but it would still not serve all the objectives including ECE for all children of that age located in all parts of the state. The investments in Anganwadis have been negligible as compared to KPS and it is also not fair to compare the two without upgrading the facilities, training and remuneration of Anganwadi workers.

5.5. Priority areas in need of greater attention: A recap

As we saw earlier in our analysis, Karnataka performs and ranks better than the national average in many indicators, but it still has a long way to go to reach its own goals and also the national goals in education. In that context, and considering both long and short term goals including the impact of Covid-19 on the education of children, we propose the following steps to strengthen the education delivery in the state:

5.5.1. Convergence

Convergence between departments is one of the best ways for ensuring greater efficiency in terms of resource availability, and also for cross fertilization of ideas/knowledge to strengthen education in various forms. Five kinds of convergence are being suggested to be either initiated or strengthened, if it already exists.

- a. **Convergence with MGNREGA and also with the Department of Rural Development and Panchayati Raj (RDPR)** for effective pooling of resources for the development of school infrastructure. It would be prudent to link the MGNREGA allocations with filling the existing gaps in school infrastructure, and to convert all panchayats into child-friendly panchayats by also pooling in additional resources from FC funds and including school infrastructure as a component of GPDP.
- b. **Convergence between school education and social welfare departments** to enable hostels and to a lesser extent the residential schools also into spaces for cooperative and collective learning, taking advantage of the fact that these students are living with their peers, and therefore offer a unique opportunity. Considering the impact of Covid on learning and the mental health of children, this can be also be used for therapeutic and supportive purposes.
- c. **Convergence between WCD and Department of School Education** to strengthen Anganwadis and pre-school classes for delivery of ECE. This assumes importance because Anganwadis, despite their limitations and poor resources, are engaged in more age-appropriate activities as compared to pre-schools, and hence can play a role in helping recently opened pre-school classes in government schools to avoid the downward extension of reading-writing focus. Similarly, institutions like DSERT can help Anganwadi teachers to develop a better understanding and perspective of ECE.
- d. **Convergence with premier science institutions** for strengthening science and mathematics education. The state is fortunate to be housing a number of science institutions and that can be a leverage to access a major resource in developing suitable approaches and training programmes/materials for teachers teaching science and mathematics – two subjects where students tend to have a poor score in the

⁵²<https://www.deccanherald.com/state/govt-to-double-kindergarten-schools-across-the-state-786440.html>

state. For second language, another subject with poor average scores, a collaboration with the Regional College of Education, Mysuru, may be a helpful exercise, realizing that teaching methods for second language need to be very different from those for the first language as this may not be part of the child's spoken and written environment at all.

- e. **Convergence with existing NGOs and private sector**, that already exist for skills education, need to be relooked and reassessed from the perspective of their role and contributions, and recalibrated to make those more relevant and useful. The entire skill education needs a rethinking to make these much more rigorous and comprehensive, rather than remaining rhetorical and irrelevant.

5.5.2. KPS: Consolidating the gains without causing pain

It is important that KPS must not evolve out of closing schools leading to dropouts among students who are more vulnerable – girls, dalits, adivasis, those living in remote areas, minorities, etc. It is important to retain schools at all costs from where children are not able to go anywhere else irrespective of the number of children studying there to ensure their schooling, as ensured under the RTE. Children whose schools are being closed should be enrolled first in KPS and all arrangements to enable their attendance should also be made. Considering that there could be greater number of children who could be opting for government schools due to the closure of private schools or unaffordability of tuition fees by their parents (post-Covid impact), any decision to close or consolidate should be aware of these possibilities.

Considering that Anganwadis serve multiple purposes, and also deliver ECE, they need to be strengthened rather than closed. Any hasty decision to close the centres or co-locate the two could be counterproductive to a state that is fighting to enhance the nutritional indicators along with educational standards.

5.5.3. Supporting and training teachers to handle new challenges

Teachers are going to face multiple challenges: On the one hand, they face fear of a high dropout while there may be an influx of new students coming from other locations and from private schools. Children may also be facing mental health issues in addition to widely reported learning loss. Teachers may also be expected to continue hybrid or distance teaching-learning for a long time to come. They indeed need enhanced support and training to deal with these challenges.

5.5.4. Teaching English at primary level: Caution needed in the choice of approach

Introduction of English in primary classes as a subject using the Nali-Kali approach is a sensitive step that can be strengthened through continuous reflections and improvement in initial years. However, adopting English as a medium of instruction can lead to undesirable consequences as evident in neighbouring states and is better avoided unless adequate safeguards are already in practice.

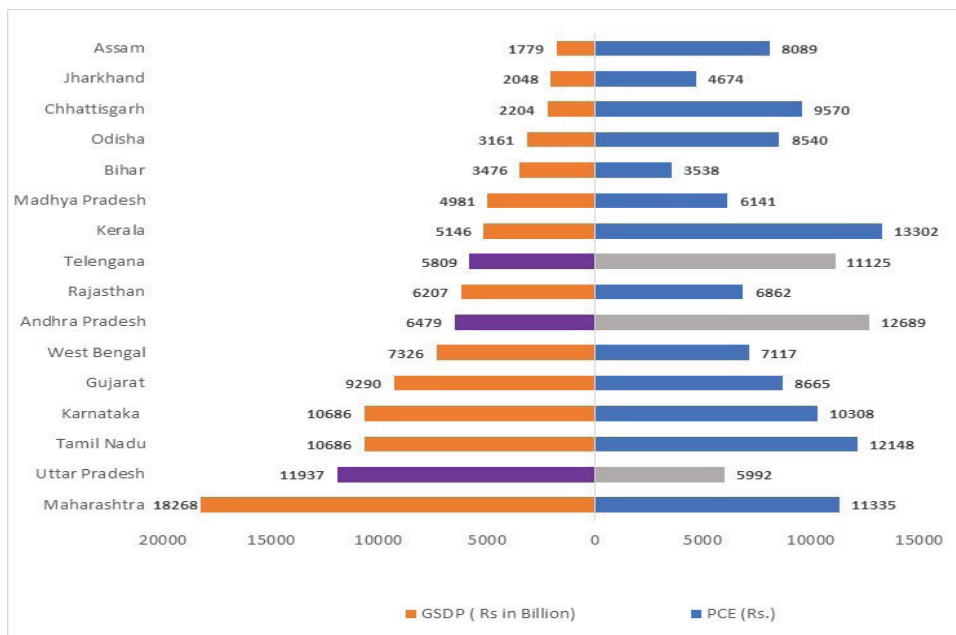
5.5.5. Develop a PUC level skills education course with clear forward linkages to both higher education and the labour market

Considering Karnataka's institutional arrangements where classes 11th and 12th are not part of School Education, it makes much more sense to develop two-year PUC level rigorous skill-based courses (as against a four-year course embedded in general secondary and senior-secondary education) that are self-contained while also enabling the choice of either joining the labour market or higher education upon completion. This implies having course components that allow students to move to general courses in higher education while

also building elements that lead to credible certification for joining the labour market.

In the end, let us examine if Karnataka is in a position to maintain or augment its public spending on children, especially taking the post-Covid economic downturn into account. Although Karnataka has a higher Per Child Expenditure (PCE) (of which about four-fifth – say about Rs.8000 per child per annum, is on education), it is much less than states with better Child Development and Education and Empower Index, such as Kerala and Tamil Nadu. What is important to note is that the state has a higher capacity in terms of GSDP as compared to Kerala, which spends almost twice as much as Karnataka (Figure 5.1). This means the state indeed has a capacity to augment its expenditure on children. A lot more resources can be ‘generated’ also through convergence and cooperation, and by making existing spending more efficient.

Figure 5.1: Gross State Domestic Product (GSDP) and Per annum Per Child Expenditure (PCE) of the 16 states (Average of seven years: 2011-18)



Source: Reproduced from <http://cbps.in/wp-content/uploads/Public-Finance-for-Children-PF4C-across-16-Indian-States.pdf>

While the state may face a decline in GSDP in 2020-21 by about 10-15 percent, it also has the inherent strength of recovery due to a high presence of IT industry that has not been adversely affected by the pandemic. Also, a recent study has shown that high public spending on education has a potential for a high income and multiplier effect, implying that it can contribute to the revival of the economy by pushing the aggregate demand, something that is being recommended by all economists. So, it is wise to ensure enough public spending on education and do so in right directions to be able to recover from post-Covid losses and be able to reap long-term benefits as well.

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Annexure 5.1

District Level Education Data (2016-17), Karnataka (latest available from UDISE website)

Table A.1: Representation of female and social

District	Ratio of girls to boys (I-V)	Female literacy rate	% SC population (source: Census 2011)	SC % in enrolment (Primary)	SC % in enrolment (Upper Primary)	% ST population (source: Census 2011)	ST % in enrolment (Primary)	ST % in enrolment (Upper Primary)
Bagalkot	0.92	58.6	16.9	19.5	19.3	5.1	5.4	5.2
Bangalore Rural	0.93	70.7	21.6	23.0	24.2	5.3	5.8	5.6
Bangalore U North	0.91	84.8	21.6	15.5	15.5	5.3	2.2	2.0
Bangalore U South	0.92	-	-	14.6	15.2	-	2.0	1.9
Belgaum	0.92	64.7	12.1	9.7	9.6	6.2	8.4	8.4
Belgaum Chikkodi		-	-	14.9	15.3	-	6.1	5.7
Bellary	0.94	58.3	21.1	24.1	23.2	18.4	19.9	19.6
Bidar	0.91	61.7	23.5	26.9	26.7	13.9	14.6	14.9
Bijapur	0.91	56.5	20.3	23.2	22.7	1.8	48.2	46.4
Chamarajanagara	0.94	54.3	25.4	24.9	26.7	11.8	12.6	12.1
Chikkaballapura	0.94	61.6	24.9	26.9	27.4	12.5	13.5	13.5
Chikkamagalore	0.94	72.9	22.3	26.0	25.4	4.0	4.9	4.8
Chitradurga	0.94	66.1	23.5	25.7	26.6	18.2	19.9	19.3
Dakshina Kannada	0.94	84.0	7.1	7.4	8.0	3.9	3.9	4.0
Davanagere	0.94	69.4	20.2	23.6	22.8	12.0	12.5	12.5
Dharwad	0.93	73.6	9.6	10.6	11.2	4.7	5.1	5.0
Gadag	0.94	65.3	16.4	19.0	18.7	5.8	5.8	5.7
Gulbarga	0.93	55.9	25.3	26.5	25.8	2.5	1.8	1.9
Hassan	0.96	68.3	19.4	23.0	22.7	1.8	50.0	49.3
Haveri	0.94	70.7	13.8	15.6	15.0	8.9	8.6	8.6
Kodagu	0.97	77.9	13.3	14.2	15.1	10.5	16.1	12.7
Kolar	0.94	66.6	30.3	31.4	32.0	5.1	6.0	6.0
Koppal	0.94	56.2	18.6	20.9	20.4	11.8	12.8	12.2
Mandya	0.92	62.1	14.7	15.0	15.3	1.2	2.0	1.7
Mysore	0.95	66.6	17.9	18.0	18.4	11.2	12.4	12.1
Raichur	0.94	49.6	20.8	22.7	22.3	19.0	20.6	19.3
Ramanagara	0.95	61.3	18.8	19.7	20.0	2.1	3.5	2.9
Shimoga	0.95	74.9	17.6	20.2	19.4	3.7	4.4	4.3
Tumkur	0.94	66.5	18.9	16.9	17.4	7.8	5.5	5.3
Tumkur Madhugiri	0.94	-	-	24.8	26.2	-	12.9	13.1
Udupi	0.94	81.4	6.4	7.2	7.5	4.5	5.3	5.2
Uttara Kannada	0.97	78.2	8.1	6.8	7.6	2.4	1.9	1.7

District	Ratio of girls to boys (I-V)	Female literacy rate	% SC population (source: Census 2011)	SC % in enrolment (Primary)	SC % in enrolment (Upper Primary)	% ST population (source: Census 2011)	ST % in enrolment (Primary)	ST % in enrolment (Upper Primary)
Uttara Kannada	0.94	-	-	10.6	11.4	-	4.3	4.1
Sirsi								
Yadagiri	0.90	41.3	23.3	24.6	24.0	12.5	12.0	11.8

Source: District Report Cards (2016-17), Volume 1, National I

Notes: (a) Period: All data refer to the year 2016-17, unless otherwise mentioned

(b) Missing data is shown as (-)

A.2: Dropout ratios and transition rates, Elementary level

District	Drop out ratio (I-V)	Drop out ratio (VI-VIII)	Transition ratio (primary to upper primary)
Bagalkot	2.61	4.84	96.8
Bangalore Rural	1.07	0.92	97.8
Bangalore U North	-	-	99.6
Bangalore U South	-	0.40	99.3
Belgaum	-	4.04	98.8
Belgaum Chikkodi	1.97	3.90	97.0
Bellary	2.83	7.19	95.5
Bidar	4.70	8.13	92.0
Bijapur	0.93	5.74	94.5
Chamarajanagara	1.57	5.19	97.3
Chikkaballapura	1.67	2.62	98.0
Chikkamagalore	1.48	1.84	99.2
Chitradurga	0.72	2.71	98.0
Dakshina Kannada	-	-	-
Davanagere	2.04	4.65	98.0
Dharwad	0.65	3.16	97.7
Gadag	3.03	4.61	96.2
Gulbarga	4.81	10.45	89.8
Hassan	0.72	0.94	99.8
Haveri	1.06	3.57	97.5
Kodagu	0.67	2.19	-
Kolar	2.67	3.09	94.4
Koppal	1.85	7.80	96.3
Mandya	0.55	0.42	99.0
Mysore	0.12	1.33	98.8
Raichur	4.06	11.62	92.2

District	Drop out ratio (I-V)	Drop out ratio (VI-VIII)	Transition ratio (primary to upper primary)
Ramanagara	-	3.25	99.6
Shimoga	1.14	4.29	96.8
Tumkur	0.57	0.12	98.2
Tumkur Madhugiri	2.18	1.11	96.4
Udupi	-	-	-
Uttara Kannada	-	-	-
Uttara Kannada Sirsi	0.05	2.24	98.8
Yadagiri	7.60	13.97	86.5

Source: Same as Table A.1

A.3: Gross Enrolment ratio and Net Enrolment Ratio at Primary and Upper Primary levels

District	GER (I-V - primary)	NER (I-V - primary)	GER (VI-VIII - upper primary)	NER (VI-VIII - upper primary)
Bagalkot	103.78	97.72	94.57	86.76
Bangalore Rural	103.07	95.95	98.79	93.20
Bangalore U North	-	-	-	-
Bangalore U South	-	-	-	-
Belgaum	-	-	-	-
Belgaum Chikkodi	-	-	-	-
Bellary	102.79	95.89	91.25	82.49
Bidar	118.75	-	91.69	82.30
Bijapur	118.32	-	92.00	85.27
Chamarajanagara	94.26	88.06	88.15	84.29
Chikkaballapura	98.18	90.34	91.71	86.15
Chikkamagalore	98.90	94.11	94.22	89.57
Chitradurga	99.15	93.40	94.34	90.14
Dakshina Kannada	103.98	99.10	106.49	-
Davanagere	104.24	96.97	96.61	90.26
Dharwad	106.48	99.39	100.07	91.28
Gadag	101.75	94.43	95.07	85.19
Gulbarga	113.16	-	91.23	82.08
Hassan	96.15	83.19	90.58	81.22
Haveri	100.36	93.67	95.74	86.67
Kodagu	101.13	94.62	94.90	89.29
Kolar	97.10	89.86	89.12	84.17
Koppal	103.06	97.30	91.04	83.32
Mandya	91.08	85.47	88.27	85.23
Mysore	102.22	95.87	97.35	93.06
Raichur	102.68	96.59	84.12	77.16
Ramanagara	94.36	88.70	89.00	84.73
Shimoga	102.30	96.31	94.53	88.72

District	GER (I-V - primary)	NER (I-V - primary)	GER (VI-VIII – upper primary)	NER (VI-VIII – upper primary)
Tumkur	-	-	-	-
Tumkur Madhugiri	-	-	-	-
Udupi	105.04	-	106.14	-
Uttara Kannada	-	-	-	-
Uttara Kannada Sirsi	-	-	-	-
Yadagiri	105.91	99.76	76.94	69.53

Source: Same as Table A.1

A.4: Ratio of Upper primary to primary, single-teacher schools and schools with enrolment less than 50

District	Ratio of primary to upper primary school	Single teacher schools	Schools with enrolment less than 50
Bagalkot	1.54	5.1	25.6
Bangalore Rural	2.13	14.1	64.4
Bangalore U North	1.29	2.2	24.5
Bangalore U South	1.29	5.1	23.1
Belgaum	1.59	4.9	32.0
Belgaum Chikkodi	1.58	9.6	30.1
Bellary	1.54	6.0	22.8
Bidar	1.68	5.2	34.9
Bijapur	1.88	3.7	33.4
Chamarajanagara	1.69	12.4	43.8
Chikkaballapura	2.25	14.2	63.1
Chikkamagalore	1.86	9.8	62.5
Chitradurga	1.78	6.0	43.7
Dakshina Kannada	1.26	8.9	29.7
Davanagere	1.66	3.7	35.8
Dharwad	1.38	2.5	18.7
Gadag	1.42	3.3	19.7
Gulbarga	1.69	5.5	29.1
Hassan	2.07	11.1	70.0
Haveri	1.59	3.5	28.8
Kodagu	1.40	10.4	43.3
Kolar	2.33	12.4	64.9
Koppal	1.66	5.5	22.8
Mandya	1.76	14.1	57.5
Mysore	1.68	7.1	41.0
Raichur	1.79	8.8	27.5
Ramanagara	2.29	16.5	65.8
Shimoga	1.74	10.6	53.5

District	Ratio of primary to upper primary school	Single teacher schools	Schools with enrolment less than 50
Tumkur	2.32	11.4	66.9
Tumkur Madhugiri	2.18	13.2	57.1
Udupi	1.38	9.5	43.3
Uttara Kannada	1.83	4.7	63.4
Uttara Kannada Sirsi	2.09	19.5	65.5
Yadagiri	1.96	8.8	24.7

Source: Same as Table A.1

A.5: School Classroom Ratio (SCR) and Pupil Teacher Ratio (PTR)

District	% schools with SCR more than 30 at primary level	% schools with SCR more than 35 at primary level	% schools with PTR more than 30 at primary level	% schools with PTR more than 35 at upper primary level
Bagalkot	23.24	22.65	18.49	3.94
Bangalore Rural	8.17	12.11	4.45	0.47
Bangalore U North	24.97	21.70	17.62	4.54
Bangalore U South	24.90	20.83	22.16	5.43
Belgaum	22.26	21.24	14.25	2.65
Belgaum Chikkodi	25.96	24.63	23.29	3.52
Bellary	28.79	30.86	24.34	5.32
Bidar	15.92	14.42	13.93	2.85
Bijapur	22.99	21.12	16.32	2.50
Chamarajanagara	10.83	10.43	11.46	3.78
Chikkaballapura	6.14	8.23	4.45	2.66
Chikkamagalore	4.53	7.85	3.19	2.28
Chitradurga	10.55	11.76	8.41	2.17
Dakshina Kannada	16.18	16.28	14.67	1.99
Davanagere	11.56	12.16	8.17	1.64
Dharwad	24.55	21.84	14.83	4.21
Gadag	16.90	15.46	14.07	3.19
Gulbarga	21.18	20.01	18.99	4.15
Hassan	4.43	8.33	3.80	1.83
Haveri	17.28	14.89	10.65	2.45
Kodagu	10.73	10.55	10.55	1.85
Kolar	6.06	8.58	5.28	2.54
Koppal	34.07	27.72	20.55	2.66
Mandya	7.00	9.68	5.86	1.92
Mysore	13.50	15.37	8.93	2.77
Raichur	27.47	25.58	21.64	3.31
Ramanagara	6.16	9.68	5.09	2.61
Shimoga	7.76	8.33	6.01	2.20

District	% schools with SCR more than 30 at primary level	% schools with SCR more than 35 at primary level	% schools with PTR more than 30 at primary level	% schools with PTR more than 35 at upper primary level
Tumkur	5.83	9.14	3.82	1.07
Tumkur Madhugiri	6.15	8.42	6.00	2.50
Udupi	10.76	11.19	10.65	1.89
Uttara Kannada	4.46	6.09	3.98	2.09
Uttara Kannada Sirsi	7.13	8.33	8.87	2.78
Yadagiri	35.14	39.40	38.53	7.59

Source: Same as Table A.1

Chapter-6

National Education Policy 2020 and its Budgetary Implications for Child Development Programmes in Karnataka

Mona Khare¹

6.1. Introduction

Among the principles adopted both for child budgeting and child well-being, education is a dominant dimension, since it has a direct as well as indirect bearing on the child. The vicious cycle between poor education and low income is well evident in literature. As per The United Nations' Convention on the Rights of the Child (UNCRC) 1989, there are four universally accepted broad pillars of Child Rights - Survival, Development, Protection, and Participation (SDPP). The Sustainable Development Goals (SDGs) 2015 have integrated as many as 44 child-related indicators throughout the 17 SDGs under different goals on education, health, hunger, sanitation, poverty, reducing inequality, and justice for children. The global commitment is further substantiated in the UNICEF report on Progress of Every Child in the SDG Era (2018). It states that, "our greatest responsibility as a global community is to provide children and young people today with the services, skills, and opportunities they need tomorrow to build better futures for themselves, their families, and their societies." The importance of education and skill development is clearly reflected in the above statement. As per a UNESCO report, if all children completed primary and secondary school, more than 420 million people could lift themselves out of poverty, thereby reducing the number of poor people worldwide by more than half. It further states that "A quality education provides knowledge, skills and self confidence that increase children's future productivity and wage earnings and makes them less vulnerable to risks." (UNESCO, 2016). Education thus becomes the center stage to the development process.

Today, both well being and education are multidimensional, cutting across health and nutrition, knowledge and skill building. The newly announced NEP 2020 captures the spirit of this multidimensionality at different stages of education of children between 3 and 18 years of age. The implementation of such a broad spectrum of child rights necessitates well planned budgetary provisions in addition to other measures. Making suitable legislations, child-friendly policies, and programmes and allocating for children in its budget document are accepted as the responsibilities of the state (UNCRC, Article 4).

Education in India is a joint responsibility between the union and the state governments. A major proportion of public spending on education for children are in the Concurrent or State Lists, and are incurred largely by the states. Since the 14th Finance Commission recommendations, the responsibility for allocating for children is now largely with the states. Several states are now implementing child budgeting, with Kerala being the first state followed by Assam, Bihar and Karnataka. The focus of this chapter is on analysing the financial implications towards government commitments in the recently announced National Education Policy (NEP 2020) by the Government of India (GOI) and assessing the budgetary implications for the same in the Child Budget of the state of Karnataka. The chapter analyses education sector CB (child budget) for the state and suggests priority areas for budgetary support. The methodologies adopted for analyzing

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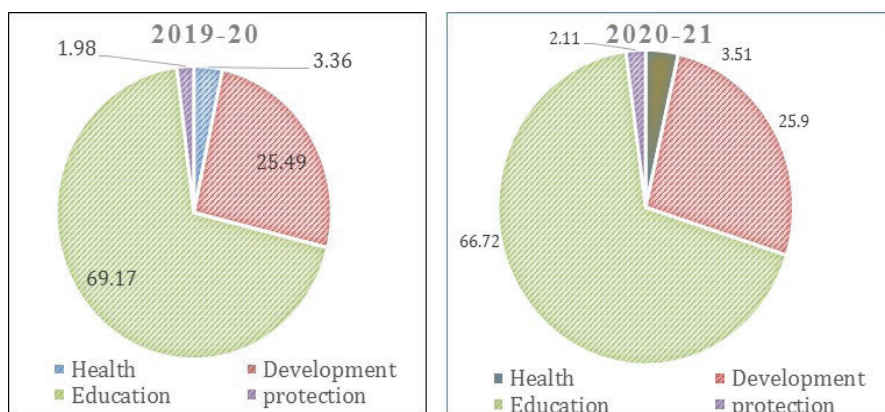
CB include looking at total allocations for children in the public budgeting, sector-specific budgeting for children within the CB, scheme specific analysis in terms of allocation, utilization and impacts.

6.2. Child Budgeting and Education in India

India had constitutionally committed itself way back in 1950 to ensure that “children are given opportunities and facilities to develop in a healthy manner and in conditions of freedom and dignity. The Directive Principles of State Policy guaranteed education to all children between 6 and 14 years of age right from 1951, but it was only much later in 2009 that the passage of the Right to Education Act added legal sanctity to the constitutional provision. It was in 1992 that India adopted UNCRC, but it took another 9 long years for the Government of India to initiate for the preparation of a separate Child and Gender Budget document in 2001 and another 8 years for GOI to formally start child budgeting in 2008-09.

India is said to be one of the ‘youngest’ countries in the world with around 40 percent of its population being children. Despite such a huge proportion of child population, merely 4 percent of the nation’s Gross Domestic Product (GDP) goes to children. Also, India’s education budget has remained stagnant at around 4 per cent of its GDP over the last 5 years. Adequacy of resources, including sufficient budgetary investments for 333 million children (6 to 18 years), assumes greater importance under such circumstances. Unfortunately, this commitment appears to have been diluted over the years, as the percentage of child budget decreased from 5.71 per cent in 2008–09 to 3.32 percent in 2016–17. Recent years have seen a further decline from 3.29 per cent in 2019-20 to 3.16 per cent in 2020-21. This decline has brought it to even lower than the recommended level of at least 5 percent of the Union Budget to be spent on schemes and programmes directly related to children (National Plan of Action for Children 2016). Also, between 2012-13 and 2020-21, the number of schemes for children as reflected in erstwhile Statement No. 22 and present Statement No. 12 remains the same at 96. This shows that on the one hand, no more schemes are being added and on the other, the allocations per scheme on an average are also going down. The share of education in the CB of the union government was as high as 66.72 percent in 2019-20 and has increased marginally to 69.17 percent in 2020-21 (Figure 6.1). However, this is almost 10 percentage points lower than in 2015-16 (78.95 percent). The decline in Child Budget per se and that of the education sector share in it is not justified for various reasons.

Figure 6.1: Sectoral Share (%) of allocations for children in Union Budgets 2019-20 & 2020-21



Source: Author’s construct based on Union Budget Statement 12 <https://www.indiabudget.gov.in/doc/eb/stat12.pdf>

It is a matter of concern that still, lakhs of children are out of school. This comes to 20 percent of them (aged 8-16) being out of school. One in every five children in India is reported to be out of school. As per the National Sample Survey Organisation's 2017-18 household survey, the number of out-of-school children in India (6-17 years) was 3.22 crore. This number is expected to go up due to increased economic insecurity of several families due to Covid-19, causing many children to leave studies. The effect is envisaged to be more adverse on the girl child. Also, it is a hard fact that only 33 children out of every 100 children enrolled tend to complete Class 12. Data reveal that there are serious issues in retaining children in the schooling system in higher grades. The GER for Grades 6-8 was 90.9 percent, while for Grades 9-10 and 11-12 it was only 79.3 percent and 56.5 percent respectively - indicating a high dropout rate, especially after elementary level i.e. grade 8. The figures are more alarming when it comes to education and learning outcomes of children, more so for those from socio-economically disadvantaged communities. The NEP 2020 points at the current learning crisis, stating that over 5 crore elementary school students have not attained foundational literacy and numeracy.

With such glaring inadequacies, the drop in child budget education allocation demands a relook. It is now not only less in percentage terms, but also insufficient in the light of several new recommendations in the NEP 2020 .

6.3. National commitments to children through National Education Policy (NEP) 2020

The recently announced NEP 2020 is deemed to be a landmark policy for not just being announced after a gap of 35 long years, but for being more holistic, emphasising on integration of knowledge and skill development – both cognitive as well as non-cognitive. The former emphasizes vocational skills i.e. skills to work with hands and the latter emphasizes attitudinal and aptitude building skills with the aim to enhance creativity, sensitivity, innovation, honesty, discipline etc. as well as “life skills such as communication, cooperation, teamwork, and resilience“. (GOI, 2020). Among the fundamental principles enshrined in the NEP 2020, the following may deserve specific mention.

- recognizing, identifying, and fostering the unique capabilities of each student,
- according the highest priority to achieving Foundational Literacy and Numeracy: by all students by Grade 3;
- multidisciplinary and a holistic education : with emphasis on conceptual understanding, creativity and critical thinking, ethics and human and constitutional values
- extensive use of technology and
- respect for diversity and local context: by bringing local language, local art and craft as compulsory elements of schooling.

In this light, the NEP 2020 expands its coverage to formally bring pre-school age children within its fold by making early childhood care and education (ECCE) a part of the education sector. Thus, holding itself accountable for children from 3 to 18 years of age, the curricular and pedagogical structure has been changed from the earlier 10+2 to 5+3+3+4 . The new structure corresponds to ages 3-8, 8-11, 11-14, and 14-18 years. The NEP 2020 also draws extensively from the UNCRC's four broad pillars of Child Rights - Survival, Development, Protection, and Participation (SDPP) in the context of education. Increased Participation via universalization of education preschool to secondary level by 2030, and bringing 2 crore out-of-school children back into the mainstream by expanding the open schooling system. Targeting inclusion of children

from Socio Economically Disadvantageous Groups (SEDG)² and the children with special needs (CWSN) by creating awareness, providing inclusive school environment etc. Additional special educators with specialist requirements including subject teaching for CWSN/Divyang children more particularly at the Middle and Secondary school level and emphasising on ECCE-qualified teacher. Increased Survival by curtailing dropout rates, repetition rates as well as providing a safe enriched learning environment for all children in schools. Teaching up to at least Grade 5 to be imparted in mother tongue/regional language and providing for counsellors or well-trained social workers for children's needs and guidance in schools are additional elements. Better development by targeting universal foundational literacy and numeracy in primary school and identifying stage-wise targets and goals to be achieved by 2025. Adopting a more integrated education with no rigid separation between academic streames, extra-curricular, vocational streams. "Bal Bhavans" to be established in all states as centers of art and crafts learning and special daytime boarding schools. Increased protection and technology support: via 100% immunization in schools with health cards for monitoring the health and nutritional progress of children in the ECCE, extending the existing Mid Day Meal (MDM) programme to the preparatory classes and adding breakfast till elementary as well secondary schools. Careful attention to safety and rights- particularly for girl children in schools by creating a good school campus with proper boundary walls, school counsellors, efficient mechanisms for reporting and proper action against errants; Enhanced use of digital technology in education through smart classrooms, digital boards and technology enabled classrooms, DTH channels and ICT infrastructure in schools from upper primary to higher secondary level.

6.3.1. Exclusive funds and Additional support: In addition to expanding financial support for SEDG students through the existing means of scholarships and fee waivers, the policy for the first time recommends funds creation of three specific natures:

- i. Additional provisions for Gifted Students/Students with Special Talents in the area of sports, dance, dramatics, music, yoga, science, maths etc. through scholarships, promotional activities, trainings etc.
- ii. 'Gender-Inclusion Fund' for equitable quality education to all girls as well as transgender students.
- iii. 'Inclusion Fund' schemes to address local/regional access issues for other SEDGs.

The policy places the onus on the 'State' to implement the propositions with help from the private sector and civil society by recognizing that "education is a public service". with a triple approach, these being :

6.3.2. Regional focus: Special interventions for promoting the educational development in aspirational districts and regions of the country with large populations from educationally-disadvantaged SEDGs to be declared Special Education Zones (SEZs).

6.3.3. Personal focus on all children: Monetary as well as non-monetary support and enabling school environment for all children including the SEDGs.

6.3.4. Technology and teacher focus: Each state to undertake a technology-based comprehensive teacher-requirement planning forecasting exercise, fill all vacancies with qualified teachers, including local

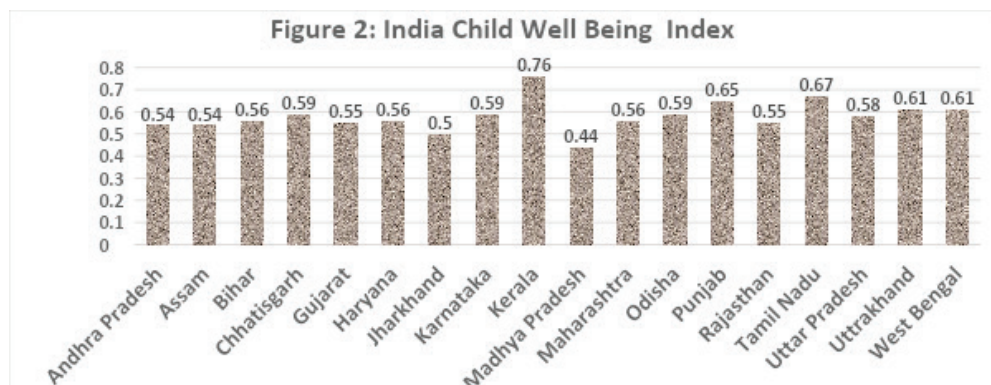
²SEDGs :These are categorized to include children based on gender identities (particularly female and transgender individuals), socio-cultural identities (such as Scheduled Castes, Scheduled Tribes, OBCs, and minorities), geographical identities (such as students from villages, small towns, and aspirational districts), disabilities (including learning disabilities), and socio-economic conditions (such as migrant communities, low income households, children in vulnerable situations, victims of or children of victims of trafficking, orphans including child beggars in urban areas, and the urban poor); Children With Special Needs (CWSN) or Divyang.

teachers, provide suitable incentives for career management and progression; ensure digital infrastructure in schools and wide ranging teacher training activities. Most importantly, the policy reiterates the government’s commitment to increase public investment in education to 6 per cent of the GDP at the earliest. It calls for “substantial investment in a strong, vibrant public education system”. As such, the education sector child budgeting assumes greater importance.

6.4. Child Development and Education Indicators in Karnataka

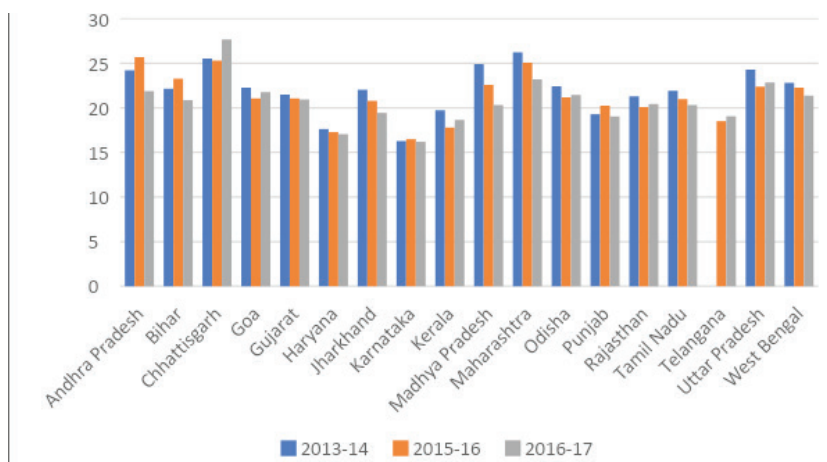
Karnataka has historically been a state with a good rate of economic growth and fiscal prudence. It has managed to meet the fiscal parameters as per the GOI’s FRBM norms, maintaining a zero revenue deficit and a fiscal deficit to GDP ratio at 3 per cent. Despite being termed as one of the developed states of the country, it lags behind many states in the Child Wellbeing Index (CWI) (Figure 6.2) comprising three dimensions of child well-being relevant to UNCRC framework and used by the World Vision i.e. Healthy Individual Development, Positive Relationships and Protective Contexts. The three together comprise 24 indicators related to education, health, nutrition, safety and protection.

Figure 6.2: India Child Well Being Index



Source: India Child well Being Report 2019

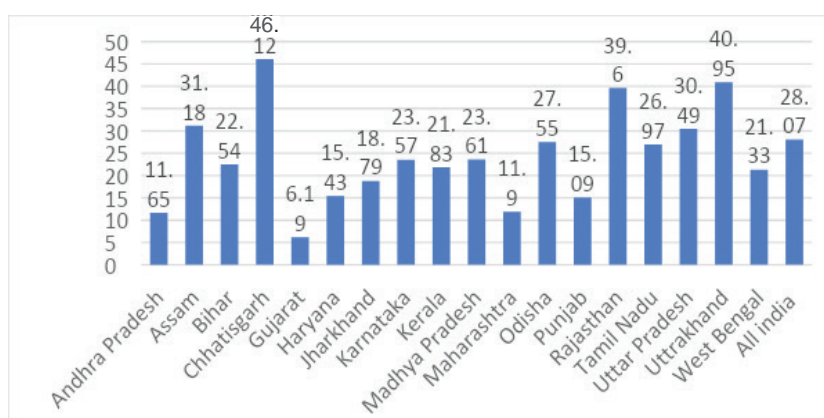
In 2020, not a single district from Karnataka figures in the top 5 districts in Southern India in CWI, but three figure in the bottom 5 – Raichur, Chikkaballapura, Bijapur (India Child well Being Report 2020). There is poor focus on child centric expenditure in the state and budget allocation for the social sector. With 5.43 percent of the gross state domestic product (GSDP) spent on social sector and 2.29 on children, the state stood at 13th and 17th rank respectively among the 18 major states of the country. Also, it can be seen that there has hardly been any increase in its child expenditure to GSDP ratios over the past few years, nor has its low relative ranking altered (Figure 6.3). The allocation for public education, health and nutrition was much lower at around 1 percent of its GSDP.

Figure 6.3: Ratio of Expenditure on Children to Total Govt Expenditure

Source: Spending Priorities on Social Sectors and Children in India (2018)

This is despite some critical children's education related indicators calling for focused attention. Some such broad ones are outlined below.

Out of School Children: In 2019, out of the estimated 14.4 million children in the country who were out of the formal education system, Karnataka had around 70,016 (Union Human Resource Development Ministry survey released on February 6, 2019). Also, this was a five-fold increase over the year 2017-18 for children in the 6-13 years of age group in the state. Now that the upper age limit for identifying out of school children has been increased to 16 years, the new survey is likely to reveal a much higher number of such children.

Figure 6.4: Disabled children Out of School (in %)

Source: National Sample Survey of Estimation of out of School Children in the Age 6-13 in India Sarva Shiksha Abhiyan, Government of India, New Delhi, 2014 available at https://www.education.gov.in/en/sites/upload_files/mhrd/files/upload_document/National-Survey-Estimation-School-Children-Draft-Report.pdf

The percentage of disabled children in Karnataka who are out of school have been reported to be 23.57 (Fig. 6.4) which, although slightly lower than the All India average of 28.07, is far higher than the best performing state Gujarat with 6.19 such children out of school.

GERs at Higher levels of Schooling: While the Gross Enrolment Ratio (GER) at the elementary level is more than 100 as the trend is in most other Indian states, it drops drastically at later stages, specially at the higher secondary stage (Table 6.1).

Table 6.1: Gross Enrolment Ratio (GER) by Gender and Level of School Education (2019-20)

	Primary (I-V)			Upper Primary (VI-VIII)		
ALL	Girls	Boys	Overall	Girls	Boys	Overall
Karnataka	106.85	107.94	107.43	100.91	101.22	101.05
INDIA	103.69	101.87	102.74	90.46	88.93	89.67
SC	SC Primary (I-V)			SC Upper Primary (VI-VIII)		
	Girls	Boys	Overall	Girls	Boys	Overall
Karnataka	104.9	105.58	105.25	101.65	101.56	101.61
INDIA	114.45	111.88	113.11	98.11	96.1	97.07
ST	ST Primary (I-V)			ST Upper Primary (VI-VIII)		
	Girls	Boys	Overall	Girls	Boys	Overall
Karnataka	105.63	108.23	106.96	99.79	100.26	100.03
INDIA	106.57	107.63	107.11	93.01	93.93	93.48
ALL	Secondary (IX-X)			Higher Secondary (XI-XII)		
	Girls	Boys	Overall	Girls	Boys	Overall
Karnataka	85.27	87.38	86.35	56.53	48.01	52.12
INDIA	77.83	77.97	77.9	52.4	50.52	51.42
SC	SC Secondary (IX-X)			SC Higher Secondary (XI-XII)		
	Girls	Boys	Overall	Girls	Boys	Overall
Karnataka	83.8	86.46	85.18	52.18	44.31	48.07
INDIA	83.75	82.36	83.02	55.14	50.87	52.89
ST	ST Secondary (IX-X)			ST Higher Secondary (XI-XII)		
	Girls	Boys	Overall	Girls	Boys	Overall
Karnataka	77.65	81.4	79.58	45.62	39.73	42.53
INDIA	77.24	76.22	76.72	43.9	41.92	42.89

Source: UDISE +reports, Ministry of education, GOI

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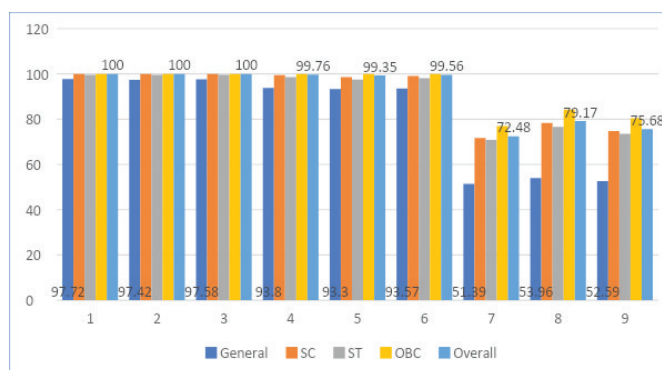
It is also to be noted that although the GER for the state at all other levels is higher than that of the All India average, at the higher secondary level, the GER is even lower than All India, particularly for boys under all categories.

Age specific attendance Ratio: Another important indicator reflecting the actual participation of children in schooling is the age specific attendance ratio (ASAR). This ratio for children in the age-group of 6-13 years has been reported at almost 95 percent and above for all the states across the country including Karnataka. But, the sore spot is the attendance rate in the early childhood education. Karnataka reports the lowest attendance rate in this age-group of 3-5 years (i.e. early childhood education) of 18.3 percent against the highest 61.6 percent recorded by Punjab (Eco Survey 2021). The ECCE is one of the highly emphasized areas in the NEP 2020.

Promotion Rates: While the promotion rates at lower levels of schooling are good, it is not the same at higher levels (Fig. 6.5). Such high promotion rates at primary and upper primary levels are likely to be the result of the ‘no detention’ policy of GOI at this level.

At secondary level, the figures clearly reveal that only three quarter of the students are in a position to get promoted from the secondary level. This figure too is much lower for the general category students. It is a barely above 50 percent for both boys and girls.

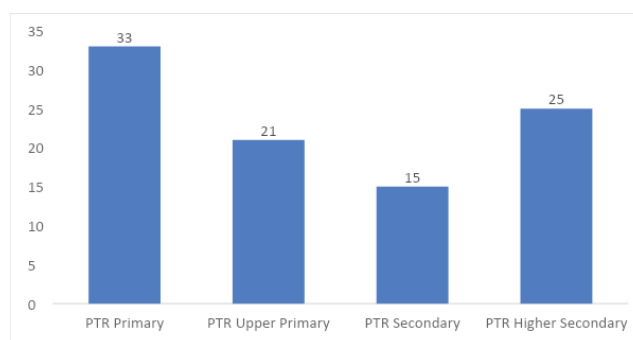
Figure 6.5: Promotion Rate by Gender, Level of School Education and Social Category (2018-19)



Source: Self generated from UDISE +reports , Ministry of education, GOI <http://dashboard.seshagun.gov.in/mhrreports/#/reportDashboard/sReport>

Pupil Teacher Ratio (PTR) : PTR for not just the state as a whole is above the recommended norm of 1:30 for primary level of education, but it is so in maximum districts in the state . PTR at primary level goes as high as 50: 1 for Bengaluru Urban.

Figure 6.6: Pupil Teacher Ratio (PTR)



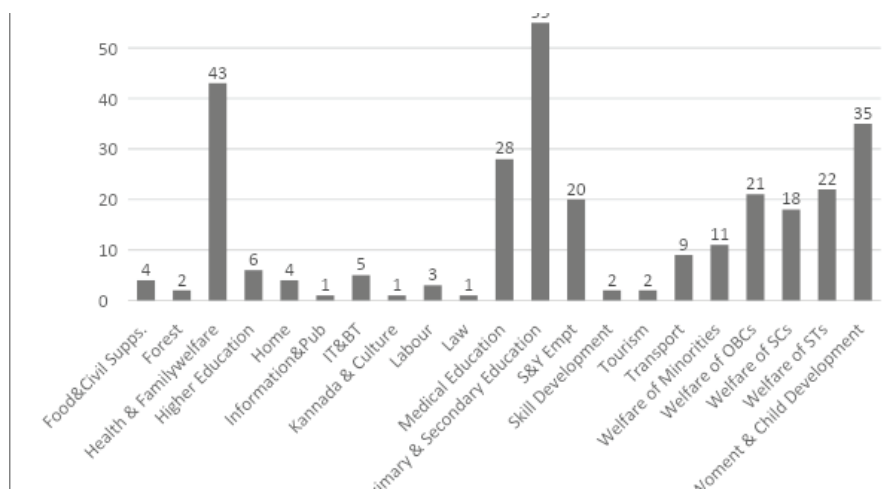
Although the PTR at secondary and higher secondary level are within the norms as stated by the NEP 2020, it may be because of lower GER at these levels (Figure 6.6). If universalisation at the secondary level becomes a reality as stipulated in the NEP 2020, then certainly more teachers will be needed to be recruited. Also, simple PTRs camouflage the availability of subject-specific teachers at the secondary and higher secondary levels of schooling.

6.5. Education Sector in Child Budget in Karnataka

It is thus heartening to note that the Government of Karnataka introduced child budgeting for the first time in March 2020. Covering 279 programmes for children below 18 years, the proposed total child budget amounted to Rs. 363.4 billion. This accounts for 15.28 percent of its annual budget. Also, a major chunk of the child centric allocation – specifically targeted programmes for children is devoted to education (67 percent) followed by health (16 percent). But, even then, the child centric allocation for education as a per cent of GSDP is only 1.36 percent.

The number of schemes in the 2020-21 budget proposal has gone up marginally to stand at 293 across 21 departments. A department wise classification of the number of schemes (Figure 6.7) reveals that it is the primary and secondary education department (PSED) that leads the race with 55 schemes followed by health and family welfare (HFW) .

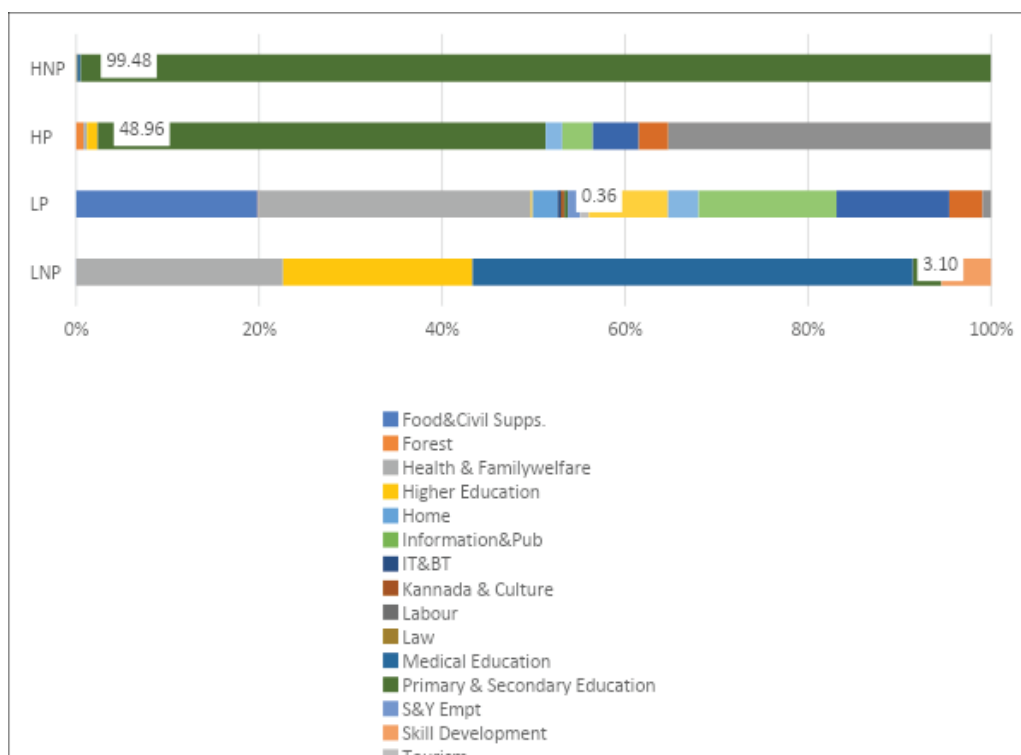
Figure 6.7: Number of Child Centric Schemes in Child Budget 2020-21 of Government of Karnataka



Source: Child Budget GoK , Mar 2020. Child Centric schemes for Annual Plans, GoK

Putting higher education, medical education and school education together, this becomes a mammoth figure of 91.

These schemes are categorized into four types LP, LNP, HP and HNP. LP=less than 100% to child budget which includes beneficiaries; LNP= less than 100% allocation to child budget which also includes infrastructure, adults; HP= 100% allocation to child budget and HNP=100% allocation to child budget which also includes adults and infrastructure. It is the LP schemes that are the major proportion of CB in most departments. Of those that have a major share of HP and HNP are Primary and Secondary Education (PSE), law and women and child development with PSE leading with more than 50 percent in each. It is only the education sector that has child centric allocations under all the four categories of the order of 99.48 in HNP, 48.96 in HP, 0.36 in LP and 3.10 in LNP (Fig 6.8).

Figure 6.8: Share of education in Child Centric Schemes - Type wise 2020-21 BE (%)

Source: Child Budget GoK , Mar 2020. Child Centric schemes for Annual Plans, GoK

The huge difference in the percentage share of HP and HNP is because they include infrastructure and adults (Table 6.2).

Table 6.2: Primary & Secondary Education by types of CB classification

Classification of child centric programmes	2020-21(BE) (Rs. in lakh)
Category/type	
LP	1546.5
LNP	4946.3
HP	570851.5
HNP	1863520.6
Total (P & Sec edu)	2440864.91
Grand Total (all schemes)	3634044.74
	(Share in percent)
Category/type	
LP	0.06
LNP	0.20

Classification of child centric programmes	2020-21(BE) (Rs. in lakh)
HP	23.39
HNP	76.35
Total (P & Sec edu)	100.00
% of P & Sec edu in Total CB	67.17

LP=less than 100% child centric programmes

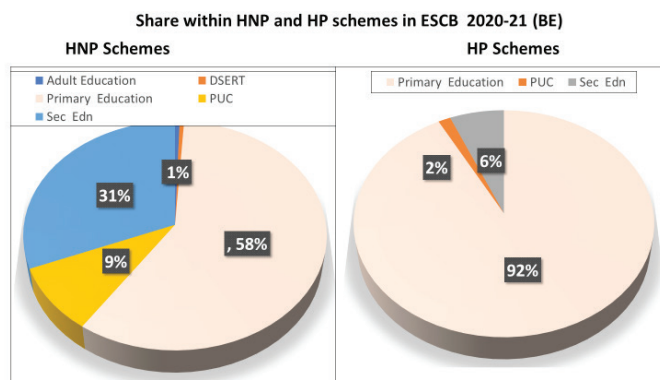
LNP= less than 100% child centric non-programmes

HP= 100% child centric programmes

HNP= less than 100% child centric non-programmes

A scheme wise analysis further substantiates the above statement. Most of the schemes are for development and maintenance of school infrastructure, particularly residential units/hostels for secondary and higher secondary students, SSA, RMSA, school leadership and teacher training, inspections and head offices, DSERT. Others are by way of scholarships/fee reimbursements and financial assistance/ freebies at the secondary level. Also, there is overlap with other line departments over some such schemes although with different objectives. These include the Departments of WCD, Minority Affairs, Sports and Youth Employment. The focus of WCD is more towards special education and ECCE. The WCD has specific schemes for scholarships, development of special schools, Aid and appliances to the disabled, Anganwadi buildings. All of these are now also the focus areas of the NEP 2020. In fact, it is the Anganwadis that will be used for integrating ECCE in the formal schooling process as per the NEP 2020. Similarly, the Department of Sports and Youth Empowerment has provisions for incentives/scholarships/financial assistance to sports persons, students, particularly high school students for sport, construction and maintenance of sports hostels, schools, training centres, play grounds, stadia, sports material etc. The NEP 2020 in its vision of promoting the holistic development of children makes specific recommendations towards integrating sports and yoga and other physical fitness activities in the schools on a priority basis. Also, now that ECCE is an integrated component of the education sector, it would be important to see that the department of education does not create parallel schemes, rather the other department schemes focusing on children in schools/ students may be accounted for separately in addition to similar schemes needed to be launched for all children in the light of various extra-curricular activities to become a mandatory part of schooling as per the NEP 2020.

The share by broad segments within the HNP and HP schemes that are deemed to be 100 per cent child centric are predominantly for the primary education (PE) sector (Figure 6.9). The share of PE in the HNP schemes is as high as 58% while for HP schemes almost the entire allocation (92 percent) is for PE only. The other two sub sectors that find space in both the categories of allocation are Secondary Education (SE) and Pre-University Colleges (PUC). Secondary education that gets about 31 percent in HNP and a mere 6 percent in the HP schemes also gets spent majorly on high school buildings and infrastructure.

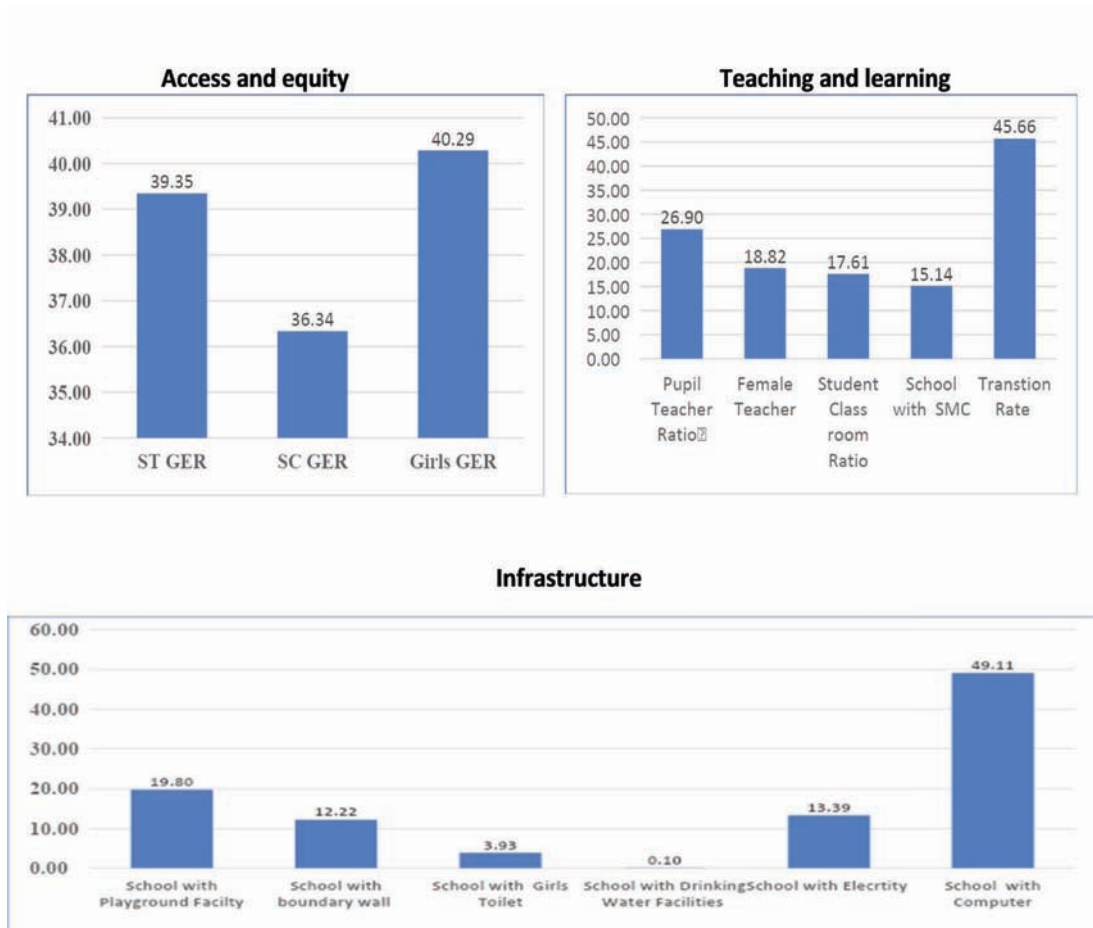
Figure 6.9: Share within HNP and HP schemes in ESCB 2020-21 (BE)

Quality improvement has an allocation of around 2 percent. Computer literacy and awareness in secondary education that had a share of less than 1 percent in 2019-20 (RE) has 0 share in the 2020-21 (BE). Even specific scholarships are not any substantive amount. In fact, fee reimbursement to private primary schools under RTE has almost 10 percent share in the HP schemes, next only to 35 percent for universalization of primary education and 26 percent for SSA. Other than SSA, RMSA and now Samagra Shiksha Abhiyaan, there are hardly any specific provisions towards skill building or vocational education, special education, student support services like counselling or career guidance, pre-primary schools, ECCE, quality improvement, teaching material and digital infrastructure development, all of which are the thrust areas of the NEP 2020. Under the LP and LNP categories, the major component is for teacher education and public libraries. Some allocations for administrative and training purposes like directorates, commissionerates, school education boards, teacher training centres, Institute of School Leadership etc. It thus, becomes absolutely clear that the focus of the education sector child budget continues to remain on primary education despite achieving universalization as per the GER figures. Also, a major share goes on the creation and maintenance of infrastructure, school buildings and the GOI's centrally sponsored schemes of SSA, RMSA and SSA.

6.6. District Specific Education Status on Select Indicators

6.6.1. Inter district disparities in school education in Karnataka

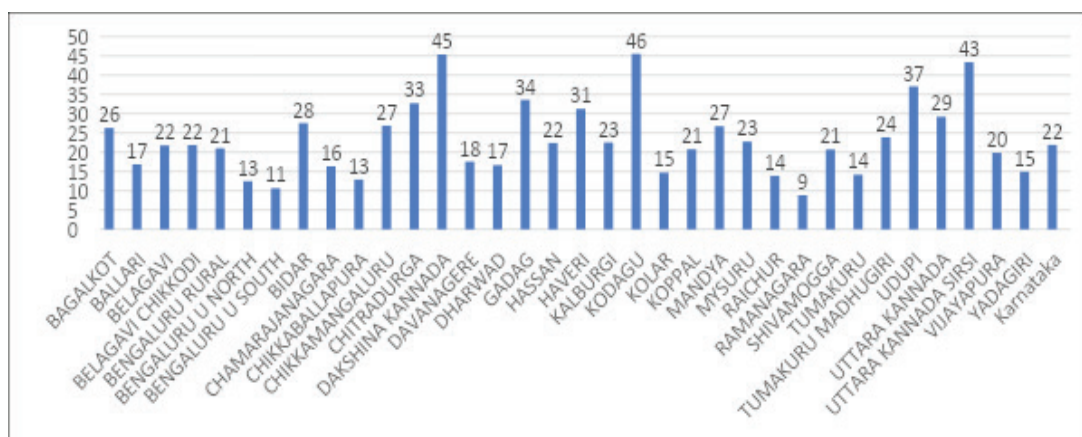
The NEP 2020 realises the existence of large scale disparities even within the states with need for focused attention at the district level. This is clearly evident from its recommendation for special interventions in those districts that are declared as Special Education Zones. The inter-district disparities in enrolment at lower levels of schooling may not be very high, but they are distinct at secondary level, especially for the disadvantaged social categories. Pupil-teacher ratios and transition rates even from primary to upper primary levels call for attention as is evident from moderately high values of CV (Fig.6.10). It is a proven fact that the state of school infrastructure and facilities not only help capture drop-out, low attendance but promote learning. Studies have shown that good infrastructure, in particular type of school building, condition of boundary wall, availability of electricity, availability of functional toilet seats etc. have a positive impact on student attendance.

Figure 6.10: Inter district disparities in school education indicators (coefficient of variation)

Source: Author's calculations based on UDISE data (2015-16)

Even at the elementary level of schooling, the Infrastructure Index based on the nine infrastructure facilities as mandated by RTE for elementary schools ranges widely from 9 and 11 for Ramanagara and Begaluru South to 46 for Kodagu (Figure 6.11). While the infrastructural disparities when it comes to some basic infrastructure at the school level is not worrisome, its existence cannot be ignored for facilities like schools with play grounds or schools with electricity, both of which are important from the purpose of child security and regularity of school activities.

In fact, the disparities are distinctly high for the percentage of schools with computers. As per a recent survey in Karnataka, 97 percent of the schools require support in the form of accessible digital learning solutions and training sessions for teachers (Dream a Dream, 2020). This assumes even greater importance in the light of two undeniable facts. One, that technology supported alternative methods of teaching, online, blended etc. are becoming an unconditional need arising out of the global digital revolution and two, that digital proficiency is becoming imperative for all students in future. The current pandemic has further taught

Figure 6.11: Elementary School Infrastructure Index

Source: Author's construct based on Sarva Shikshana Abhiyan, Karnataka 2017-18.

us the need for a more diverse set of teaching media to be incorporated as a regular teaching practice in schools. The NEP 2020 has also laid great emphasis on the integration of technology in general and in particular to improve access for the unreachable regions and communities. Similarly, the disparities are distinctly high for transition rates. It is as high as 84% plus for transition rate from secondary to higher secondary level.

Given the budgetary constraints, it is thus important to identify poor performing districts on specific indicators for additional provisions. The NEP 2020 has also emphasized upon the need to focus on a regional basis. The policy recognizes that special education zones can be identified from among the "Aspirational Districts" as well as other districts for additional concerted efforts to improve the educational status of such districts. A differential approach at the district level will be helpful for focused funding.

With the recent survey pointing at the increasing number of OOSC children in the State, the fear of the situation getting aggravated looms large as a fallout of the current pandemic. Also, that several parents have lost their jobs or migrated back to their rural native residences, children's enrolment as well as attendance is likely to be threatened, at least in the near future. Focusing on not just those districts that have the highest number of OOSC but also combining with those with a larger proportion of migrant workers and SEDG population may be a good starting point.

6.6.2. District Rankings in select indicators

It is also to be noted that at times, the same districts continue to emerge on the top and bottom rungs of the ranking ladder. Table 6.3 highlights the top five and bottom five districts of the state in a few critical indicators in 2015-16. Of the top five districts in percentage of underweight children under 5 years of age, Kalaburagi, Yadgiri and Ballari were also identified among top five ones on OOSC. The gap in the GER of students from SC, ST and girls particularly at secondary and higher secondary levels is extremely alarming.

Table 6.3: Top Five and Bottom Five Districts on Select Education Indicators

Children under 5 Years Who are Underweight (weight- for -age)%			
Highest District		Lowest District	
KALABURAGI	56.7	MANDYA	20.3
BALLARI	53.3	DAKSHINA KANNADA	21.7
YADGIRI	50.3	UDUPI	22.3
KOPPAL	49.9	RAMANAGARA	22.9
BAGALKOT	44.6	CHIKKAMAGALURU	24.6

Total GER			
Highest District		Lowest District	
KALABURAGI	113.6	KOLAR	52.67
DHARAWAD	106.48	KOPPAL	4.77
YADGIRI	105.91	BAGALKOT	90.01
UDUPI	105.04	MANDYA	91.08
DAVANAGERE	104.24	BIDAR	92.01
Girls GER			
Highest District		Lowest District	
BIDAR	85.59	YADGIRI	71.29
DAKSHINA KANNADA	82.21	MANDYA	70.57
KALABURAGI	82.01	RAMANAGARA	71.99
UDUPI	81.98	CHAMARAJANAGAR	72.34
DHARWAD	81.75	RAICHUR	73.01
ST GER			
Highest District		Lowest District	
DAKSHINA KANNADA	121.22	CHITRADURGA	15.82
CHIKKAMAGALURU	113.35	UTTARA KANNADA	29.16
HASSAN	112.78	BELAGAVI	32.53
BENGALURU(R)	108.57	RAICHUR	34.33
RAMANAGARA	93.93	YADGIRI	37.28
SC GER			
Highest District		Lowest District	
CHIKKAMAGALURU	139.91	BELAGAVI	22.83
DAKSHINA KANNADA	95.43	UTTARA KANNADA	29.98
UDUPI	90.93	BENGALURU	35.81
KODAGU	86.68	YADGIRI	36.76
HASSAN	86.60	KOPPAL	39.37

Transition Rate (Primary to Upper Primary)			
Highest District		Lowest District	
HASSAN	98.9	YADGIRI	85.4
MANDYA	98	BIDAR	86.9
BENGALURU	97.6	KALABURAGI	89.8
MYSURU	97.3	BENGALURU(R)	90.08
SHIVAMOGGA	96.8	DAKSHINA KANNADA	90.09
Transition Rate (Upper Primary to Secondary)			
Highest District		Lowest District	
DAVANAGERE	98.00	MANDYA	80.34
SHIVAMOGGA	96.50	HASSAN	82.87
MYSURU	96.26	RAMANAGARA	84.93
KALABURAGI	96.23	KODAGU	85.75
UTTARA KANNADA	96.14	CHAMARAJANAGAR	86.47
Transition Rate (Secondary to Higher Secondary)			
Highest District		Lowest District	
DAVANAGERE	75.68	BALLARI	0.85
UTTARA KANNADA	73.82	RAICHUR	0.96
KALABURAGI	63.76	TUMAKURU	0.18
KOLAR	60.58	DHARWAD	10.31
MYSURU	50.89	CHITRADURGA	10.44

Infrastructure Index 2015-16				Schools with Computers 2015-16 (%)			
Highest District		Lowest District		Highest District		Lowest District	
KODAGU	1.05	YADGIRI	0.57	CHAMARAJANAGAR	93.60	SHIVAMOGGA	18.40
DAKSHINA KANNADA	1.04	KALABURAGI	0.64	BENGALURU	75.10	CHITRADURGA	19.50
BENGALURU	1.04	UTTARA KANNADA	0.67	HAVERI	69.70	YADGIRI	19.90
GADAG	0.99	RAMANAGARA	0.71	DHARWAD	55.20	HASSAN	20.00
HAVERI	0.94	TUMAKURU	0.73	KODAGU	54.00	TUMAKURU	21.30

Source: Author's calculations based on UDISE data (MHRD, GOI) 2015-16

As expected, a pattern seems to be emerging with respect to lower ranked districts in GER being low on infrastructure index, computer availability as well as transition rates. Some such districts that consistently get identified as low ranking districts on multiple indicators are Yadgiri, Tumakuru, Kalaburagi, Chitradurga, Hassan and Ballari. Such intense disparities demand a very data sensitive, informed and focused budgeting on multiple fronts.

6.6.3. Classifying Education Sector Child Centric Schemes in Karnataka

Given the mixed nature of schemes, it becomes extremely difficult to classify the allocations under the four categories of CB. For example, the Quality Assurance scheme of the state government includes the distribution of laptops to meritorious students; assistance to conduct science conferences/ seminars; establishment of science committee and laboratories; Karnataka School Quality Assessment and Accreditation Council (KSQAAC) programmes and also repayment of fees to children of farmers who have committed suicide. However, a broad classification of a total of twenty seven 100 percent Child Centric Schemes by allocation in the CB of the State for the year 2019-20 reveals eight heads under which these allocations may be clubbed. These in their order of magnitude include:

- a) Reimbursements/scholarships/incentives (like free books, uniforms, shoes, bicycles etc.);
- b) SSA & RMSA which largely includes salaries of teachers and staff);
- c) Maintenance and Infrastructure Development under various schemes;
- d) Food & Nutrition under MDM and State sector Ksheera Bhagya Scheme that provides for MDM and hot milk on 3 days to students from Classes 1 to 10 in all Govt. and aided schools.

The remaining four heads that have a comparatively smaller share include Residential Schools (specific purpose like for girls, sainik schools); Quality Improvement; Computer & IT related and Examinations. These too largely have components of infrastructure creation and specific purpose scholarships and incentives.

Several areas that require devoted attention or substantive allocation under the education sector CB. These include quality improvement, skill building and vocational integration, technology integration and digital infrastructure, computer awareness and training, special funds creation like gender inclusion, SEDG inclusion funds, gifted/talented children promotion funds in addition to ECCE. Also, it is not to be forgotten that even when the state as a whole may be performing well on certain indicators of education development, there exist wide inter -district disparities and the poor performing districts need focused allocations to be made in specific areas.

6.7. Specific Areas with Financial Implications as per NEP 2020

It can be seen that apart from some ongoing schemes and programmes in the education sector that have been aiming majorly at access, there are some new areas that have been emphasized in the NEP 2020 that would entail large budgetary requirements (Khare, 2021). These are

ECCE: Creation, Upgradation, maintenance of Anganwadis or primary school buildings, Ashramshalas in tribal-dominated areas, training of teachers/Anganwadi workers, development of books, play way methods and teaching equipment, nutrition and health monitoring.

SEDGs: Expanding the scope and coverage of direct cash transfers, scholarships, freebies (like books, uniforms, stationary etc), promotional incentives (like cycles, laptops etc). SEDGs and in particular for girls within these categories.

Gifted and students with special talents: Supplementary enrichment through topic-centered and project-based clubs and circles in curricular as well as extra-curricular areas and organization of high-quality national residential summer programmes for secondary school students along these lines.

Children with Special Needs (divyaang) including transgender: Special facilities in all schools in addition to special schools with all required infrastructure, specially trained staff and special equipment.

Health and nutrition: Extending the MDM to secondary schools, pre-primary, provision for healthy breakfast, health tracking and monitoring (including mental health) of children will add to an important component of ECB. Recognising the inter-departmental nature of this responsibility, the policy endorses joint provisioning by departments like WCD, Tribal Welfare, Health and Family Welfare.

Advanced, digital and Technology friendly Infrastructure creation: Developing smart classrooms in all schools, however in a phased manner. Development of online apps with quizzes, competitions, assessments, enrichment materials to be shared with other departments like Science and Technology, IT etc.

Child safety and security: Provision of basic functional infrastructure like good quality school buildings, boundary walls, toilets, electricity etc. to be a mandatory requirement. In addition, provision for school counsellors, doctors, community workers. Honorarium/remuneration to such specialized staff would entail additional expenditure.

Holistic, integrated, vocational and skill development: Financial provisions would be needed for different types of proposed activities, particularly between classes 6 and 12. These include fun courses, internships with local artisans/craftsmen and vocational experts, hands-on experience, tours and travel expenses on visits, strengthening “Bal Bhavans”.

Teacher development and special trainings: Continuous professional development of teachers through regular workshops, group activities, leadership development programmes, incentives and awards, special trainings for technology enabled teaching, skill oriented training and special educators, language teachers are all on the cards. A key incentive for teaching in rural schools will be the provision of local housing near or on the school premises or increased housing allowances.

Books, reading material, libraries: The policy categorically talks about developing high quality books and teaching material in local and regional languages. Play-way teaching material, online teaching material, assistive teaching material for CWSN, all entail financial implications. States are required to prepare their own curricula textbooks incorporating a state flavour. Public and school libraries are also proposed to be significantly expanded along with digital libraries.

Creation/expansion of state level governing bodies: The policy encapsulates many state level bodies in conjunction with the existing/new national level bodies for standard setting and quality monitoring, state boards of examination, standard setting, curriculum development. States/UTs will set up an independent, state-wide, body called the State School Standards Authority (SSSA). and conduct their own the State Assessment Survey (SAS).

6.8. Conclusion and Policy Recommendations

Within its visionary framework of holistic and inclusive education, the NEP 2020 entails specific provisions for wide ranging fundamental and advanced needs of a futuristic quality education system. The purpose is to ensure adequate

1. Human resources
2. Physical resources

3. Digital resources

Even a fiscally prudent state like Karnataka needs to enhance its education centric child budget in order to meet the targets specified by the NEP 2020. Needless to say, the economic crisis emerging out of the current pandemic will create a tough situation to meet all the enhanced financial requirements. Given the budgetary limitations, a 3-point formula may be adopted by the state to focus on :

- More vulnerable groups: OOSC, transgender, CWSN (Divyaang), SEDGs
- More vulnerable regions: Aspirational and SEZs
- More vulnerable facilities/activities: Skill-based vocational curricular integration, Digitisation and Teacher development.

Although Karnataka has a relatively better position in comparison to many other states in education development, particularly at the elementary level of schooling, there are several gray areas when it comes to higher levels of schooling. Also, education which is the biggest portion in the budget for children does not seem to be adequate to deliver the aims as envisaged in such vastly diverse targeted norms in the NEP 2020. It should be ensured that what is allocated gets released and utilized in a timely and efficient manner. Efficient formulation as well as implementation and result based management will remain the key to successful Child Budgeting for the education sector (ECB).

On a careful examination of the ECB against the recommendations of the NEP 2020, following are the specific recommendations for the state of Karnataka to be incorporated on priority basis in a phased manner.

- Increase the proportion of CB to GSDP of the state from the current level.
- Re-orient the ECB towards ECCE and secondary education.
- Provision for health, nutrition, personality development through MDMs, immunization drives, health cards, clubs and centres etc.
- Focused attention to quality upgradation.
- Create provisions for skill building and vocational education, sports, art and cultural activities.
- School equipment, tours and travels, books and play way material development.
- Special provisions for disabled children, transgender children, OOSC, SEDGs, gifted and talented children with special focus on the girl child.
- Additional allocation for the creation of digital infrastructure and teachers training in using it for online, blended and virtual modes of teaching.
- Provisions for educationally backward districts/blocks in identified specific areas.

Some innovative ways to address these through limited resources are suggested. The state may consider creating four types of special funds, these being,

Horizontal equalisation Funds: In order to reduce inter-district disparities prioritising the investment needs in a decentralized manner in special education zones.

Special inclusion Funds: for various groups of children that require special attention and those that require incentives to nurture their innate talents by way of direct cash support , indirect in kind support,

enabling environment support. This would include additional financial requirements to meet the ECCE targets.

Technology Integration Funds: Recent reports point at (National Sample Survey Office's (NSSO's) 75th round on Social Consumption – Education 2017-18) a glaring digital divide among school children in Karnataka. A mere six per cent of total school aged children from class I to XII have been reported to have access to computers. This figure comes down to 4.6 per cent for students' access to internet facility. The rural – urban divide, too is more than 11 % . In the light of the increasing need for technology enabled education that became all the more evident during the recent pandemic and has been rightly promoted by NEP 2020, concerted efforts to enhance the use of digital means for sustained, uninterrupted, equitable, quality education in general and in particular for the relatively disadvantaged groups is the need of the hour.

Performance based incentivization Funds: As suggested by the 15th Finance Commission to introduce financial incentives for best performing states on the basis of Performance Grading Index on select education outcome indicators. The purpose is to incentivize states for incremental change in these indicators against the targets set by individual states. It is thus suggested that the government of Karnataka may take up a similar exercise at the district level in order to reward performance and also avail incentives from the Union government from 2021-22 onwards. The incentive funds may be used to support poorer/ non performing districts for incremental change.

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Chapter-7

Social Issues and Challenges of Child Development in Karnataka

*Lekha Subaiya*¹

7.1. Introduction

Childhood is a period of rapid growth in an individual's life, wherein the transformations during, and from childhood to adulthood, involve many important transitions in physical, sexual, psychological and social development. According to the 2011 Census, about forty per cent of India's population amounting to about 495 million in number are children. This group, much like the rest of the country, is heterogeneous in nature, and as such have diverse needs and requirements during the developing years. Childhood development is embedded within structures of societal institutions such as gender, class, social group and government. At the micro level, childhood is situated within intergenerational relations which are influenced by macro factors such as the stage of demographic transition of the country, the levels of socio economic development, culture and globalisation.

A country that has reduced its fertility and mortality rates and achieved a stable population growth will have more equitable distribution of population across the age groups. On the other hand, in a country with a young population, such as India, there is continuous demand for resources to be devoted towards children and youth, such as for education and employment. The lack thereof has social implications such as high levels of suicide among youth, as well as other socio-psychological impacts. A large population of the youth competing for jobs increases the pressure on children to perform in school. Similarly, in a country with higher levels of social and economic development, there is less pressure on children to provide old age security for their parents. Social and cultural norms determine the roles and expectations for children. The patriarchal culture in India coupled with the decrease in the average number of children preferred by families has meant that the bias against girls has become more pronounced. This is reflected in the imbalanced sex ratios of children in the country, the social implications of which are already stark in certain regions where there are not enough girls for marriage. Globalisation has a direct impact on the younger generation by affecting their aspirations, school and career choice, as well as indirectly through the impact on their families.

What is most apparent is that children and youth are a diverse group, as well as transient in their very nature. Governments have to identify the challenges that they face and create policy which is well targeted and appropriate. As the group is heterogeneous in nature with a continually changing demographic and social profile, these have to be constantly updated. It is imperative for countries to rise up to this challenge as this group is a critical component of societal change. The next sections of this chapter lays out various demographic and social indicators of child development in Karnataka, as well as the social processes which have an impact on children's lives with the aim of identifying some of these challenges for research and policy.

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7.2. Demography of children in Karnataka

7.2.1. Falling child mortality rates

About thirty two per cent of the population in Karnataka was below the age of 18 years at the last census count in 2011, amounting in number to about 10 million boys and 9.4 million girls. The proportion in this age group is projected to fall to about twenty one per cent by 2036 (National Commission on Population, 2020), an outcome of the demographic and health transition which has taken place in the state, resulting in falling fertility levels and improved health status.

The social and economic development of the state has resulted in a decrease in the mortality rate of children. The infant mortality rate (IMR) in Karnataka was 35 deaths among infants beunder the age of one year per 1000 live births in 2011. The IMR is projected to fall to 24 deaths to infants per 1000 live births by 2031-35. There has been significant progress in the state on this front, with the infant mortality rate currently more than half that of the IMR in 2001 (SRS Bulletin, 2019). The improvements in child health can be seen in the reduced mortality rates among the population beyond age one. The probability of a child dying before reaching the age of five was 44 deaths per 1000 live births, and is projected to drop to 31 deaths by 2031-35 (National Commission on Population, 2019).

Data from the National Family Health Survey conducted in 2015-16 indicate that boys have a slightly higher mortality rate than girls in the period from the first month of life to the eleventh month, which follows the usual pattern of mortality across the life span. However, girls have slightly higher mortality rates than boys between the ages of 1 and 5 years which is counter to the demographic patterns found in the high income regions of the world. An important factor associated with the reduced child mortality rates is higher education among mothers. The survey found that the infant mortality rate in the state was almost double for the group of mothers who had no schooling compared to those mothers who had completed 10 or more years of schooling (40 per 1000 live births compared to 22 per 1,000 live births) (IIPS and ICF, 2017).

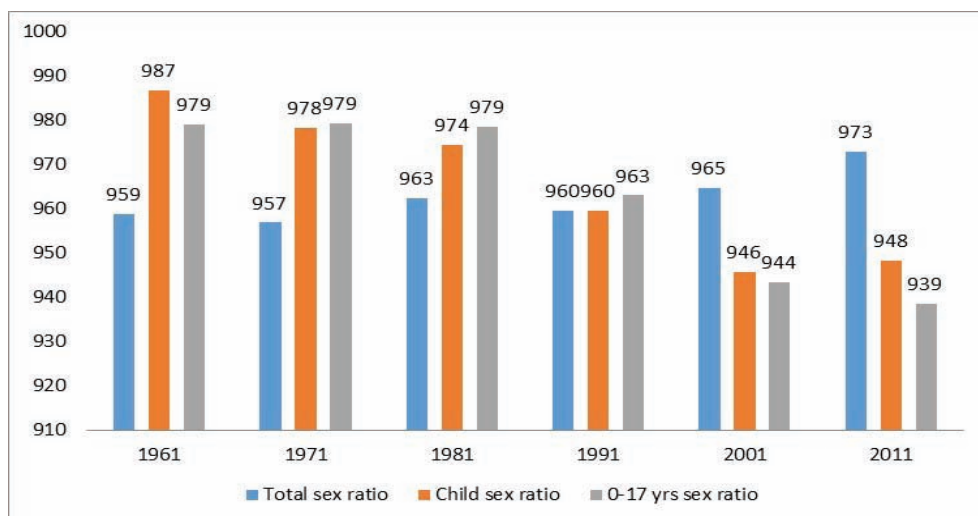
7.2.2. Imbalanced distribution by sex

Although on average under natural conditions more boys are born than girls, boys have higher rates of mortality than girls in infancy and childhood. Further, in more developed regions, due to both biological and social reasons, women have longer life expectancies than men. As a result, populations should have more women than men, particularly in the older ages. The ratio of females to males in India is imbalanced reflecting extant bias against females in Indian society. According to the 2011 Census, there were 940 females for every 1000 males in the country.

At 973 females for every 1000 males, the total sex ratio in Karnataka is higher than that of the average for the country, and has increased steadily from 959 in 1961, reflecting the improvements in women's health, in particular during childbearing (refer Figure-7.1). However, the number of girls under six years of age to that of every 1000 boys of the same age has been declining markedly over time, from 987 in 1991 to 948 in 2011. That is, in 2011, for every 1000 boys aged 0-5 years there were only 948 girls in the same age group in India. It is apparent that the trend will continue as in 2011 only 945 girls were born for every 1000 boys. In fact, as per NFHS, in 2015-16 the sex ratio at birth for children born in the last five years was 910 girls per 1,000 boys, with a sex ratio at birth of 874 in urban areas and 934 in rural areas (IIPS & ICF, 2017).

A continued decline in child sex ratios is likely to result in more girls getting married at younger ages, more maternal mortality as a result of child bearing at younger ages, and an increase in acts of violence against girls and women such as rape, trafficking and forced polyandry.

Figure 7.1: Total sex ratio and child sex ratio, Karnataka, 1961 - 2011



Source: Calculated from Census Data

7.2.3. Reduced but persisting adolescent marriage and childbearing

With the demographic transition, marriage patterns have changed over time in most countries including India. In particular, the age at marriage and age at childbearing of women has increased in recent years. However, there is still a substantial proportion of women who are getting married and bearing children at younger ages. In 2015-16, the mean age at marriage for women aged 15 to 49 years in Karnataka was 20.4 years (IIPS & ICF, 2017). About twenty-one per cent of women in the age group 20-24 years had gotten married before the legal minimum age of 18 years. While this figure is half that found in the previous round of the survey conducted in 2005-06 (42 per cent in NFHS-3), it is still a figure that raises concern for the well-being of women and their children. Early marriage is linked to early childbearing. Among young women aged 15-19 in Karnataka, 8 per cent have already begun childbearing, that is, they have already had a live birth or are pregnant with their first child. The percentage of adolescent girls bearing children had reduced by half from 17 per cent in 2005-06. However, a large proportion of women aged 18 and 19 years are still bearing children. While less than 1 per cent of girls aged 15 years have started childbearing, the proportion increases sharply to 10 per cent among women who are 18 years old and to 21 per cent among women who are 19 years old. The data indicate that adolescent child bearing is higher among those women who are less educated and slightly higher in rural areas compared to urban areas. Young women who have had no schooling are four times as likely to have begun childbearing as young women with 12 or more years of schooling. Young women residing in rural areas are twice as likely to have begun childbearing compared to young women residing in urban areas.

7.3. Healthcare and nutrition of children

7.3.1. Increased healthcare utilisation

Investments in health infrastructure development and the increased level of public health services being provided has resulted in an increase in the utilisation of health services in the state. This is shown in Table 7.1 by select maternal and child health indicators. With the advent of the National Health Mission (2005) the number of births taking place at institutions, and therefore, supported by skilled staff, has increased in the country and the state, and currently is almost universal in Karnataka. Data from the three rounds of the NFHS show that only 65 percent of births in Karnataka were taking place in health facilities in 2005-06. However, ten years later that figure was 94 percent and had increased still further to 97 per cent in 2019-20.

The proportion of children age of 12 to 23 months who were vaccinated with BCG, measles containing vaccine, three doses of polio and DPT or penta has also increased across the three survey periods. In 2005-06, slightly more than half the children in the age group had received all the vaccines, but by 2019-20, eighty-four per cent of the children had been vaccinated. Similarly, the proportion of children with diarrhoea in the 2 weeks prior to the survey who received ORS treatment increased from 32 percent in 2005-06 to 71 per cent in 2019-20. Now, the focus has to be directed to the 15 to 30 percent of the child population which is still being missed by the healthcare system in the state.

Table 7.1: Trends in maternal and child healthcare

Maternal and Child Health Indicators		2005-06	2015-16	2019-20
Mothers who had at least 4 antenatal care visits (%)	Karnataka	68	70	71
	India	37	51	58
Institutional births in the past 5 years	Karnataka	65	94	97
	India	39	79	89
Proportion of children age 12 to 23 months who are fully immunised (%)	Karnataka	55	63	84
	India	44	62	76
Children with diarrhoea in the last 2 weeks who received oral rehydration salts (ORS) (%)	Karnataka	32	53	71
	India	26	51	61

Sources: 3rd, 4th and 5th rounds of the National Family Health Surveys

Table 7.2 shows that the immunisation coverage in the state has increased markedly over time, but there is scope for improvement. Data from the National Family Health Survey indicate that in 2019-20, eighty four per cent of children aged 12 to 23 months had received the full course of basic vaccinations, an increase in 21 percentage points from the previous round of the survey. The shortfall is found in the vaccinations which require more than one dose. Ninety-seven per cent of children aged 12 to 23 months had received the BCG vaccination. On the other hand, fewer children had received all the other basic vaccinations. Eighty eight per cent had received the recommended three doses of polio vaccine, 92 percent had received the three recommended doses of DPT vaccine, and while 91 percent had received the first dose of vaccination for measles, only 33 percent had received the second dose. It is a mark of the success of the National Rural Health Mission that the coverage of immunisation with all basic vaccinations was higher in rural areas than in urban areas (86.5 percent versus 80 percent). Coverage of the full course of basic vaccinations was lowest among scheduled tribe children (53 percent in 2015-16).

Table 7.2: Trends in child vaccinations

Child vaccinations' indicators		2005-06	2015-16	2019-20
Children aged 12 to 23 months who have received BCG (%)	Karnataka	87.8	92.5	97.2
	India	78.2	91.9	95.2
Children aged 12 to 23 months who have received 3 doses of polio vaccine (%)	Karnataka	74.6	74.6	87.6
	India	78.2	72.8	80.5
Children aged 12 to 23 months who have received 3 doses of DPT vaccine (%)	Karnataka	74.0	77.9	92.1
	India	55.3	78.4	86.7
Children aged 12 to 23 months who have received 3 doses of Hepatitis B vaccine (%)	Karnataka	NA	58.9	88.8
	India	NA	62.8	83.9
Children aged 12 to 23 months who have received measles vaccine (%)	Karnataka	72.0	82.4	91.2
	India	58.8	81.1	87.9
Children aged 12 to 23 months who have received second dose of measles vaccine (%)	Karnataka	NA	NA	33.4
	India	NA	NA	31.9

Sources: 3rd, 4th and 5th rounds of the National Family Health Surveys

The vast investments in health by the government under the umbrella of the National Health Mission have succeeded in improving the health of the population by providing free and accessible health services through the increasing of physical infrastructure and human resource. The national health programme was first targeted towards the vulnerable sections of the population in rural areas and with particular emphasis on mother and child health. In this, the programme has been spectacularly successful in improving the health situation of rural Karnataka. The rates of maternal and child deaths have decreased markedly in the state with the prioritisation of reproductive health within the public health system. However, there is still a percentage of children who do not receive the full course of basic vaccinations.

7.3.2. High levels of undernourishment

Proper nutrition and healthy weight during childhood, which is a period of rapid physical and mental development, will have a direct bearing on desirable healthy outcomes during adulthood and subsequently on the health and disease burden during later life. In 2019-20, NFHS found that thirty five per cent of children under five years were too short for their age (stunted), and nineteen per cent were too thin for their height with eight per cent being severely wasted (see Table 7.3). Stunting and wasting are indicators of long term undernourishment and/or illness. About a third of the children under five years of age were found to be underweight, an indicator which takes into account both chronic and acute undernutrition.

Table 7.3: Trends in nutritional status of children

Indicators of nutritional status of children		2005-06	2015-16	2019-20
Children under 5 years who are stunted (height-for-age) %	Karnataka	43.7	36.2	35.4
	India	48.0	38.4	35.5
Children under 5 years who are wasted (weight-for-height) %	Karnataka	17.6	26.1	19.5
	India	19.8	21.0	19.3
Children under 5 years who are underweight (weight-for-age) %	Karnataka	37.6	35.2	32.9
	India	42.5	35.8	32.1
Children age 6-59 months who are anaemic (<11.0 g/dl) %	Karnataka	70.3	60.9	65.5
		69.4	58.6	67.1

Sources: 3rd, 4th and 5th rounds of the National Family Health Surveys

Undernourishment is apparent even during the first six months of life, when almost all babies are breastfed, with 25 per cent found to be stunted, 28 per cent underweight, and 33 per cent wasted in 2015-16 (IIPS & ICF, 2017). Children's nutritional status in Karnataka has improved slightly in recent years by few measures, but not by all, and there is still much scope for improvement on this aspect of children's development. Stunting decreased from 44 per cent to 35 per cent in the years between NFHS-3 and NFHS-5, and the percentage of children who are underweight decreased by five percentage points. However, child undernutrition is still a major problem in Karnataka. In 2015-16, the survey found only minor differences in the level of undernutrition by the sex of the child, but the effect of other background characteristics such as mother's schooling and weight as well as birth order and interval were pronounced (IIPS & ICF, 2017).

Table 7.4: Trends in child feeding practices

Indicators of child feeding practices		2005-06	2015-16	2019-20
Children under 3 years breastfed within one hour of birth (%)	Karnataka	35.6	56.3	49.1
	India	23.4	41.6	41.8
Children under 6 months exclusively breastfed (%)	Karnataka	58.6	54.2	61.0
	India	46.4	54.9	63.7
Breastfeeding children age 6 to 8 months receiving an adequate diet (%)	Karnataka	NA	5.8	11.0
	India	NA	8.7	11.1
Total children age 6-23 receiving an adequate diet (%)	Karnataka	NA	14.4	19.5
	India	NA	9.6	11.3

Sources: 3rd, 4th and 5th rounds of the National Family Health Surveys

7.4. Regional variations in social development

7.4.1. Human development

The state of Karnataka is made up of a diverse group of communities which vary by historical antecedents, cultures and languages. There has been uneven social and economic development across the regions of the state resulting in variations in the level of achievements in children's wellbeing. It is important for

researchers and policy makers to understand and address the shortfall in children's development according to sub-regions within the state. Regional variations in social and economic development across regions has been illustrated with the use of indices of multiple dimensions of wellbeing which allows us to compare various specific contexts.

A recent report on the human development in Karnataka presented multiple indices reflecting the achievements in human development across districts taking into account inequalities arising from gender processes and poverty (GoK, 2018). The ranking of districts according to human development, gender equality and child development is presented in Annexure 7.1. The Human Development Index, calculated based on UNDP methodology, measures development based on the levels of achievement in education, health and per capita income, and facilitates comparison across regions. The index is calculated by weighing achievements in health (life expectancy), education (years of schooling) and income and ranking districts in the state according to their aggregate score. The report identifies Bangalore Urban as holding the first rank in human development across all districts in 2012, followed by Kodagu. Among the districts, Gulbarga, Haveri, Raichur and Yadgir are found to be rank among the lowest districts. Across the three dimensions of human development, all districts have achieved high to medium levels in the health dimension as measured by life expectancy. It is notable that districts rank lower in the index because they have lower levels of achievement relative to the other districts in all three dimensions, but particularly low achievements in the dimension of education as measured by mean years of schooling.

The report presented information on the Gender Inequality Index across districts in 2012, taking into account inequality arising from the unequal status women occupy measured as higher levels of maternal mortality and adolescent fertility and lower levels of political empowerment and labour force participation. Districts are ranked from low to high inequality. Here, Bangalore Urban received a lower rank (9) largely due to significantly lower levels of female labour force participation and significantly higher levels of male labour force participation relative to other districts. Udupi, Dakshina Kannada and Kodagu rank the highest, with less inequality between women and men in the district, and Gulbarga, Ballari and Bagalkot rank the lowest.

The ranking of districts according to the Child Development Index, calculated using the methodology developed by Save the Children, UK is presented in Annexure 7.1. The index measures the achievements in health (lower under 5 mortality rate), nutrition (lower percentage of children under five years who are underweight) and education (lower percentage not enrolled in school) as indicative of child wellbeing. Gulbarga, Tumkur and Chitradurga and Raichur are the districts with the lowest relative achievements in Karnataka. Across districts, the neglect of child health and nutrition dimensions contribute more to reducing the development score in comparison to school enrollment.

These comparisons show that there are patterns in the socio-economic development of the regions of the state which are consistent across various indicators of well-being. Data on the demographic profile of the districts are also presented in Annexure 7.1. A sex ratio close to 1000 indicates an equal distribution of the population according to sex. Many of the districts from the Mysuru division such as Kodagu, Dakshina Kannada, Udupi and Hassan have more equitable female to male ratios than other districts in the state. Across the districts, Bangalore, Dakshina Kannada, Dharwad, Uttara Kannada, Mysore, Gadag, Bagalkot, Bellary and Gulbarga had higher levels of population living in urban areas. Chitradurga, Bellary and Raichur had the highest levels of population belonging to tribal groups.

7.4.2. Demography and health

Data on child sex ratios, adolescent marriage and adolescent childbearing is presented across districts in Annexure 7.2 in comparison with the Gender Inequality Index. It is apparent that there are variations across these demographic aspects for children across districts in the state. The number of girls under age 6 for every 1000 boys based on the two censuses in 2001 and 2011 show that across districts, the ratio is not equitable, and in fact, has dropped further in nine districts in the most recent census period. Kodagu district has the highest child sex ratio at 977 girls under age 6 years to every 1000 boys of the same age, and Hassan, Shimoga, Ramanagara are in the 960 or above range. Many districts including Mandya, Davanagere, Chitradurga, Bidar, Bijapur, Belgaum, Bagalkot and Gulbarga have child sex ratios close to 930 which is a serious cause for concern. A declining trend does not bode well for the future of the state.

Adolescence is a period of continuity between childhood and adulthood when many transitions take place, but during which time children are also extremely vulnerable to external pressures and challenges. Data from two rounds of the NFHS on adolescent marriage and childbearing are presented in Annexure 7.2. In Karnataka, about one in five women in the 20 to 24 age group were married before attaining majority in 2019-2020. This figure has remained the same over the four years between the two rounds of the NFHS. Across the districts, Dakshina Kannada and Udupi have the lowest percentage of adolescent girls who are married. The phenomenon is the highest in Bagalkot and Bijapur with about 39 per cent of girls getting married before the legal age of 18 years. The percentage of adolescent girls who have started childbearing has reduced from 7.8 per cent in 2015-16 to 5.4 per cent in 2019-20. However, about 12 per cent of adolescent girls in Bagalkot district were already mothers or had started childbearing. In the districts of Belgaum, Koppal, Kolar, Raichur and Chitradurga, about 8 to 9 per cent of adolescents had begun childbearing. All these districts are in the lower spectrum of gender equality according to the Gender Inequality Index discussed earlier which measures inequality between men and women with regard to health, empowerment and labour force participation. Thus, higher levels of gender inequality exist in the same settings where fewer girls are being born and girls are getting married and starting childbearing in the later years of their own childhood.

Indicators of children's health from two rounds of the NFHS are presented in Annexure 7.3. The data show high levels of under-nutrition and anaemia among children in the state. With regard to physical development, on average, in 2019-20, 35.4 per cent of children under 5 years of age in Karnataka were stunted according to WHO standards with regard to their height for age. This figure has reduced marginally compared to 43.7 per cent in 2015-16. Yadgir has the highest levels of stunting among children, with 57.6 per cent of children under 5 being too short for their age. In Bagalkot and Koppal, about half of children under 5 years of age were stunted in 2019-20. Even districts such as Dakshina Kannada and Udupi have about 23 to 25 per cent of children who are too short for their age. With regard to another measure of physical development, wasting, on average, 19.5 per cent of children under 5 years in Karnataka had an unhealthy weight for their height according to WHO standards. The percentage of children who were wasted has decreased from 26.1 per cent in 2015-16. Another marker of child development is weight for age, which recognizes the ranges for healthy weight according to age. In Karnataka, 32.9 per cent of children were underweight in 2019-2020, a decrease of about 5 percentage points from the four years previous. The districts with the highest levels of under-nutrition among children are Bagalkot, Bijapur, Dharwad, Koppal, Raichur and Yadgir where 40 to 45 per cent of children under 5 years of age were underweight in 2019-20. One indicator of children's health shows even more serious cause for concern. A large percentage of children under 5 were anaemic in the state in 2019-20. About 65.5 per cent of children were anaemic on average, about 5 percentage points higher than in 2015-16. The levels range from 51 per cent in Dakshina Kannada to 76 per cent of children in Yadgir.

7.5. Social aspects of child development in Karnataka

Within the discipline of sociology there are two frameworks which have relevance for the understanding of children's lives in the context of development. These are *intersectionality* coined by Kimberle Crenshaw in 1989 and the *life course perspective* formalized by Glenn Elder (1998). The former refers to the overlapping social and political identities due to which people may experience multiple layers of advantage or disadvantage. It is a framework which was developed to understand how systems of power affect those who are most marginalized in society. Intersectionality is relevant for research and planning which aims to promote social equity. The life course perspective is also relevant in addressing disparities across social and political groups. The life course perspective focuses on understanding how experiences over the life span shape physical and material outcomes over time. It takes into account the role of social and physical context, time, as well as relationships which underlie socioeconomic and ethnic disparities in health and financial wellbeing. The application of a life course perspective to understand disparities across groups provides a powerful rationale for the need to understand childhood experiences and disadvantage, and to prioritise investments in children's development given its impact on adult outcomes. Both these frameworks together highlight the importance of political and social contexts and transitions across the life span in understanding disparities in wellbeing within and across groups.

The demographic indicators discussed above have links to socio-cultural factors. In the classic paper, Dyson and Moore (1983) identified two demographic regimes which have existed in the country for several decades with relatively lower sex ratios, fertility and sex differentials in mortality in southern (including Karnataka) and eastern states, compared to northern states, and argued that the differences were due to the variations in socio-cultural factors between the two regions. Social structure has a significant bearing on the lives of all individuals, including that of children in the country. Institutions such as family and kinship systems, as well as gender and social norms have a direct impact on children's lives. Some of these aspects with particular relevance to Karnataka are discussed below.

7.5.1. Family and kinship systems

Across societies, family is the basic unit of the larger social system. The family plays the role of developing the human capital of children through the acts of nurturing, rearing, protecting, socialising and educating. Family may be broadly defined as a unit of two or more persons linked by marriage, blood, adoption, or consensual union (Desai, 1994). In India, as in other parts of Asia, the family is the most important organizing unit of society. Family provides support and stability, and is the first line of defence against challenges arising from social and economic change. The literature identifies three types of families. The joint family is one where sons on reaching adulthood remain with or near the family and work together on the family farm or business. In a stem family, one son remains and works the farm or business, and all other sons leave on reaching adulthood. A nuclear family is one where all the sons leave and form families of their own.

The significance of the relationships within families are determined by kinship systems, or the set of rules determining the importance of relationships, which vary across societies and cultures. The two 'ideal types' of kinship systems that are usually described are the North Indian type and the South Indian type (Dyson and Moore, 1983). In the former, marriages are exogamic, and relationships of descent (blood) have prime importance. In the latter, endogamic marriages are preferred, and relationships of affinity (marriage) are as important as relationships of descent.

Most communities in India follow the patrilineal family system. In patrilineal family systems, the lineage is passed down from father to son. Family systems are also patriarchal (Kapadia, 1982), wherein male members, and more usually fathers, make decisions for the rest of the family and are responsible for the distribution of resources within the family. However, within patriarchal value systems, the kinship rules of the South Indian family systems have resulted in women having relatively higher levels of autonomy than women from the North Indian family system (Dyson and Moore, 1983). Since cross-cousin marriages are preferred, resources invested on daughters benefit the bride's natal family as well. Thus, girls are more likely to get educated, thereby having later ages at marriage and better health outcomes than girls from communities where marriage exogamy is practiced.

Children's physical, emotional and mental development depend to a large extent on the structure and well-being of their families. Family structure is determined by the age and sex composition of its members. The most direct way in which children's lives are affected is by the composition of the members present in the household on a regular basis. The household may be made up of more than one generation as in the case of the joint or extended family, or only two generations as in the case of the nuclear family. In households consisting of a nuclear family, divorce or the death or migration of a parent will result in the child living with only one parent or caretaker. There may be older siblings present which is also likely to impact a child's life. Family structure provides a protective buffer to meet basic challenges which children will not have in the case of a parent not being present in the household due to death, divorce or migration. Multiple generations present in the household provide the possibility of more caretakers for children. Family or households are also diverse in that poverty, disability and other vulnerabilities may challenge the ability of adults to provide care and support to children. Violence within families is another challenge for the children. The full realization of children's potential depends directly on the ability of their families to provide stable, consistent and effective care.

In recent decades, the demographic transition experienced by the country, combined with social and economic development and change has meant that the average size of the Indian household has decreased. Whereas before, households were made up of parents and more than one married son, now a majority of households contain parents, children and one or both parents of the father. An analysis of data from the Census indicates that while the number of households in the country has increased, the average household size decreased between 2001 and 2011 (Nayak and Behera, 2014). In Karnataka, the average household size decreased from 5 members in 2001 to 4.64 in 2011 (ibid). More recent data from the NFHS 2015-16 finds that the average household size in Karnataka is 4.3 members. Among households in the state, about 18 percent are headed by women. From the perspective of children, while 87 percent of children under the age of 18 years lived with both parents, about 10 per cent of children lived with a single parent, mostly mothers. About 5 per cent had experienced the loss of one or both parents (IIPS, 2017). This diversity in family structure needs to be kept in mind during policy and research discussions on children's welfare.

7.5.2. Transfer of resources and the intergenerational contract

Indian kinship systems place a high value on the obligation of members towards each other, the core of which is filial piety or duty. According to Hindu, Muslim and Buddhist religious scriptures, children have a moral obligation to respect their parents and provide for them, particularly during old age. The scriptures also state that parents have to provide for and support their children. Thus, family obligation is such that both generations have a mutual responsibility to each other. In family studies, this relationship is called the intergenerational contract, similar in concept to that of the social contract between the state and its citizens. Age hierarchies in India accord precedence to seniority, so that respect and support of older parents come

before all other types of care within families, including care of children. The ideal situation for a parent during old age is being surrounded by multiple generations of children and grandchildren.

In recent times, there is much concern in the literature about the changing nature of the intergenerational contract. It is argued that economic and social forces such as globalisation, urbanisation and migration have reduced the strength of ties within families by emphasising individual interests over that of the group. These social trends along with the reducing fertility levels and changing family structure were thought to be related to the breakdown of the joint family system, with more households made up of parents and unmarried children rather than those of multiple generations such as with the joint family system (Jamuna, 1995; Kumar, 1995). In this event, the intergenerational contract would be weakened. Further, the increase in life expectancies mean that more years are spent in old age, which have implications based on the ability of children to care for their parents.

In Indian families, the roles, responsibilities and control and distribution of resources are determined by age, gender and generation. The reductions in fertility have indeed resulted in smaller family structures, as well as an intensification of resource flows from parents to young children. However, ethnographic research across the countries of Asia indicates that rather than eroding filial obligations between the older and the younger generation, the intergenerational contract has been re-negotiated by both generations (Croll, 2006). At the same time, patterns of intra household (within household) transfers in India indicate that a significant amount of economic resources is directed towards children from working age group adults as well as elders (Ladusingh and Narayana, 2011).

7.5.3. Gender norms and son preference in Karnataka

Social institutions such as family, gender and caste determine the roles and expectations of children in Indian society. A social norm is a shared belief on what typical and appropriate behaviour is for members of the group. Norms may or may not be spoken, but the expectations of behaviour is passed on to children in families through socialisation. Norms determine how people should or should not behave in social situations. Given the patriarchal nature of Indian society, the norms for members within a family differ by age and sex. Most of the important and crucial decisions are made by men in the family, and usually the head of the family, even if other adult males are present. Values are more general guidelines of what is good or bad, what is ethical, what is moral, in a society. Respect for elders is an important value in Indian society. On the other hand, the expectation of sons to look after their parents is a norm.

Given that the decision-making power mostly lies with men leads to the assumption that women and girls have less value than men and boys in families and communities and in society at large. This devaluing of women and girls has an impact on customary practices across society. For example, families may discriminate between sons and daughters when it comes to nutritional practices, or limit girls' access to education; families with boys may demand dowry from prospective brides; more educated families are more away of the technology available to practice sex selective abortion. Normative practices also result in the curtailing of girls' physical movements prior to and during the onset of puberty, thereby limiting their physical and intellectual development. Body-centric consciousness and active denial of intellect are crucial aspects of the socialisation of girls in the family. Customs and rituals impact girls' lives during childhood in ways that they do not in the childhood of boys. In spite of the decrease in child marriages, girls are still being brought up to have marriage and motherhood as the ultimate goals.

For many decades now, the Indian census has shown an imbalance between the number of boys and girls, and the number of men and women in the country. This imbalance is based on decisions made at the level of the family, but it has implications for society at large. Many factors which contribute to the preference for sons are discussed in the literature including economic, religious, social and emotional desires and norms that favour boys and make girls less desirable. Sons are expected to perform religious and customary rituals, it is normative that sons provide financial support in old age, dowries have to be provided for daughters, sons continue the family name, daughters have to be protected. In all, sons add to the family's wealth and honour and daughters are a perceived means of taking away from the same.

In India, there is some evidence of the prevalence of preference for sons. Data from NFHS 4 show that in 2015-16, about 19 percent of men and women report that they want more sons than daughters, while only about 4 per cent want more daughters than sons. However, a majority would like to have one son and one daughter each. The level of son preference is marginally lower in Karnataka compared to the average for the country. Eleven per cent of women and 13 percent of men want more sons than daughters, but only 6 percent of women and 5 percent of men want more daughters than sons. The percentage of men and women who report that they have no preference between sons or daughters is marginal. As shown in an earlier section, one stark consequence of this preference, along with the desire for social mobility combined with the availability of pre-natal diagnostic techniques, is an increasingly imbalanced child sex ratio.

The consequences of imbalanced sex ratios are not well understood, as causality is difficult to establish, given the time lag in which the effects may be felt. Some of the implications which are discussed in the literature are the increase in crime as a result of an excess number of young males at the time of entering adulthood, marriage migration as a result of fewer females in local marriage markets where there are more men than women, increase in savings as men are more likely to contribute to savings than women, sustaining of patriarchal norms and values as the larger number of men than women are likely to keep the gender imbalance in power in society, problems for unmarried men in old age, etc.

7.5.4. Third gender

For the first time, in 2011, the Census of India captured information on persons who did not identify either as male or as female, by giving a third option for the question on sex. A total of 4,97,803 Indians answered 'other' to the question, among which 54,854 were children under six years of age. In Karnataka, the total figure amounted to 2,02,66 persons with 1,771 of them children below the age of six years. This group is often referred to as the third gender. India has a long history of persons identified as belonging to the third gender playing important roles. Hindu texts such as the Ramayana and Mahabharata identify protagonists of the story as being of the third gender, such as Arjuna (at a particular time in his life journey). Persons belonging to the third gender played high profile roles in the courts of Hindu and Mughal kings in India. Among the best known in the group of third gender is the Hijra community who are born male and dress as female. They consider themselves as neither male nor female, but a different gender. Traditionally, in Hinduism, Hijras had status and performed the role of blessing events such as births and marriages, and danced and sang at the events. However, during the colonial period, the status of the group underwent a change as their behaviour was considered to be a transgression of accepted gender behavior. In recent years, laws have been enacted in the country to recognise the rights of persons of the third gender.

Research into non-binary genders has increased in recent years. In general, a person who is transgender is one who identifies differently from the sex they were at birth. That is, a child born as a boy may have a preference to be a girl, and vice versa. In social science, there is a distinction made between the concepts

of sex and gender. Sex is determined biologically, based on whether the child is born with a male or female reproductive system. On the other hand, gender is a social construction of the roles that males and females enact, based on the norms and expectations that society has for persons of each sex. These roles and expectations may vary from culture to culture. For example, for young children, gender norms spell out which toys to play with, how to dress, whether to play with children of the same sex, etc. This process of gender identity formation takes place at early ages. Studies have found that similar to children who have gender typical identity, transgender children who have socially transitioned as a different gender from that of their natal gender also identify their gender by the age of three (Olson and Gülgöz, 2018). In other words, transgender children are able to identify their non-conformity with their natal gender at an early age. From then on, children undergo the process of realizing through their social interactions with individuals and institutions that they are different, which has implications for their feelings about themselves as well as the decisions they make on how to act (Kennedy and Hellen, 2010). There is a dearth of studies on transgender children in India. Research from western countries has found that children who present as non-conforming according to gender norms are bullied in school, and end up under-performing and leaving school earlier than their counterparts who are consistent in behaviour with the gender they are born (Whittle et al, 2007).

7.5.5. Devadasi system in Karnataka

A social practice with significance for children and particularly girls in Karnataka is the devadasi system, that of hereditary female temple dancers. The Devadasi system prevails to this day in South India, including in the northern part of the state, and parts of Maharashtra, Tamil Nadu, Andhra Pradesh and Telangana. The exact number of devadasis in Karnataka is not established. An official survey undertaken in 1993-94 identified 22,873 devadasis, and a later survey in 2007-08 identified 23,783 more devadasis, totalling to 46,556 in Karnataka state (Sampark, 2015). NGOs and ethnographers indicate that this is likely to be an undercount (Sampark, 2015) as the practice was abolished in the state in 1982, and there is likely to be a penalty to identifying as a devadasi.

The practice has a long history in the region. At the advent of the devadasi system centuries ago, women who were devadasis had high rank in society and were quite often more affluent and well-read than non-devadasi women. Devadasis were young girls and women associated formally with temples wherein they were responsible for certain rituals, including cleaning the temple and devotional items, and participating in the worship of the deity through dance and music. Devadasis, meaning servant of god in Sanskrit, were dedicated by marriage to the temple deity, usually at a young age by a practice which originated in South India around the 6th century of the common era (Tarachand, 1991). Devadasis were considered auspicious as they would never be stigmatized through widowhood (Marglin, 1985). They were conversant with the arts as they were trained in music and dance, and performed publicly in temples to entertain royalty and the priestly caste. One aspect of the practice that developed subsequently was the system of patronage wherein royal or wealthy donors gained status by gifting land, property or jewellery to devadasis. In time, the power of the patrons and clients increased over that of the women, and the agency and ritual significance of the work of devadasis diminished to one of provision of 'divinely sanctioned' sexual services to patrons or clients, and even temple attendants and priests. During the colonial period, the temple economy and royal patronage lost ground, resulting in a change in the status of devadasis. The association with religious worship was ignored by the authorities and the status of devadasis was further reduced as they were treated the same as non-devadasi prostitutes.

Today, devadasis have lost their socio-religious significance, and most practice sex work in their homes or in brothels in rural areas (Blanchard et al., 2005). One ethnographic study in Dharwad, Belgaum, Bagalkot,

and Bijapur found that devadasis in the region lived in the communities they were born into, and were defined by their low-caste status and profession (Rae Orchard, 2007). Only a few of the original customs remain, such as initiation at a young age by marriage to the temple deity and association with a patron (Sampark, 2015). Currently, girls dedicated to village temples are predominantly from scheduled caste and scheduled tribe communities (Sampark, 2016). In Karnataka, they are mostly dalits and Bahujans, from the Madiga and Valmiki castes which are marginalised groups, and among the most vulnerable in society.

Recent studies on devadasis in the state have identified various reasons for dedicating young girls to the temple, including poverty and economic dependency, the absence of sons to provide for the family, the need to appease deities in times of sickness or drought, influence brought to bear by local persons of importance, custom and tradition, and in the case of a single child, the necessity of having an heir to look after the property (Sampark, 2015; Rae Orchard, 2007). The onset of puberty for girls dedicated to the temple deity is seen as an occasion to celebrate by the community, and the connection with a client or patron begins soon after attaining menarche. In some cases, women dedicate themselves as devadasis after engaging in sex work, as identifying as devadasis removes some of the stigma of sex work due to the better recognition and dignity awarded to devadasis (Sampark, 2015). The major problem with the eradication of the practice is the fact that the family and the entire community is involved in initiating girls as devadasis. Another problem is that identifying devadasis is difficult as the practice is illegal.

7.6. Conclusions and Policy Recommendations

Data from the national censuses and sample surveys indicate that there are disparities in demographic, health and nutrition outcomes of children in Karnataka. While there has been improvement over time in indicators of child wellbeing, there is still much scope for addressing disparities across groups and regions. Poverty, illiteracy, and social group disadvantage are some of the factors identified as being associated with lower health and nutrition outcomes for children.

A major aspect is the role of family in children's welfare. For example, where children's healthcare is concerned, the mother's level of schooling has been found to play an important role in ensuring that children receive appropriate care. The same is true of children's nutrition. Data from the National Family Health Surveys show that a smaller percentage of children of more educated mothers were likely to be undernourished compared to children of mothers with little or no schooling. Children's health and nutritional status is also directly related to mother's health and nutritional status. As children's lives are integrated with that of their families, interventions need to take into account the intergenerational relations which impact their development.

One dimension of improving health and nutrition for proper physical and mental development of children is knowledge and awareness of healthy habits and good practices. Thus, if families are not properly aware of the need for children to undergo the full course of basic vaccinations to prevent childhood diseases, then the onus of following up for treatment falls on the health system, with staff at the facility and village level having to ensure that children are brought to the facility over the course of the treatment. If families are properly aware of the need for vaccinations, then the burden on health personnel can be reduced. In this regard, the National Quality Assurance Standards programme (NQAS) which requires that patients as well as their attendants at public health facilities have been fully informed of the course of treatment is likely to have a positive impact on the healthcare and health outcomes of children.

The imbalanced ratio of girls to boys across the districts of the state is of serious and pressing concern. The indicators of healthcare and nutrition for children show minor variations by sex. Further, literacy levels of girls show that at least elementary level of schooling is almost universal. In 2011, about 95 percent of girls aged 10 to 15 years were literate. At the same time, adolescent marriage and childbearing has decreased in the state, albeit a significant proportion still exists for 18-year-olds and 19-year-olds. In spite of a lesser apparent bias against girls in Karnataka compared to other regions of the country, families are still showing a preference for sons as evident in the sex ratio at birth of only 910 girls to every 1000 boys being born in the five years prior to the survey conducted in 2015-16 (NFHS 4). An outcome of the demographic transition in the state, the desire for smaller families, has come at the cost of girls being born. The implications of skewed child sex ratios are being experienced with increased trafficking and violence toward women in regions which have practiced son preference for longer. There are long term implications for society and the economy which are yet to be worked out. Given the cultural norms and expectations of children for families, son preference has become entrenched in Karnataka and will be difficult to overturn unless there is social change to the extent that the burdens that society places on women are reduced and women can share some of the privileges of men. In other words, the roles and expectations for boys and girls should be more similar than different.

Given the above discussion, the following aspects can be considered for interventions for change.

(a) Childhood is the ideal time to intervene

It is obvious that childhood is the ideal time to intervene. Interventions during pregnancy, childbirth and infancy not only improve the health and wellbeing of the mother and child, it has long-term benefits for both. Proper nutrition and care for the mother will result in a healthy mother, a desirable outcome in itself. As well, a healthy mother results in benefits for the child's healthy growth and development throughout their life course. Investments in children have life-long and low-cost benefits. Children's health and socio-economic development has benefits for generations to come.

(b) Challenging social norms that discriminate

The roles and behaviours that are expected of girls and boys have resulted in women being financially dependent on their fathers, husbands or brothers. Knowing how to earn and save money is a good life skill to learn for both boys and girls. Another route to expand girls' lives is physical activity and sports. Again, cultural expectations limit girls' involvement in games and sports, resulting in poorer health outcomes across the lifespan. Further, sports is likely to help women become more confident of their bodies and more able to defend themselves against crime and violence. To reduce the intensity of preference for sons, the value of girls to their families has to be increased.

(c) Families play a prominent role in children realising their potential

The family plays the role of developing the human capital of children through the acts of nurturing, rearing, protecting, socialising and educating. A stable environment is necessary for children to achieve good health and nutrition, and benefit from opportunities at school and beyond.

(d) Need for more data

Finally, there is a need for more research and more information collected systematically on all aspects of children's lives. There is a paucity of data being collected on this important generation which is at the heart

of societal change. As such, many important challenges that children face remain invisible. Information on children with non-conforming gender identification is severely lacking.

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Annexure 7.1: Social and demographic characteristics of districts in Karnataka

District	Socio-demographic characteristics				Indexes		
	Total sex ratio (females per 1000 males) (2011)	% of total population living in urban areas	% SC population to total population (2011)	% ST population to total population (2011)	Human Dev Index	Gender Inequality Index	Child Dev Index
Bangalore	916	90.9	12.5	2.0	1	9	1
Bangalore Rural	933	27.1	21.6	5.3	2	5	10
Belgaum	973	25.3	12.1	6.2	15	24	20
Bellary	983	37.5	21.1	18.4	25	29	19
Bidar	956	25.0	23.5	13.9	21	17	14
Bijapur	960	23.1	20.3	1.8	19	18	16
Chamarajanagar	993	17.1	25.4	11.8	26	21	18
Chikkaballapura	950	22.4	24.9	12.5	14	8	7
Chikmagalur	1008	21.1	22.3	4.0	5	10	2
Chitradurga	974	19.9	23.5	18.2	23	14	29
Dakshina Kannada	1020	47.7	7.1	3.9	4	2	5
Davanagere	972	32.3	20.2	12.0	18	13	21
Dharwad	971	56.8	9.6	4.7	7	19	22
Gadag	982	35.6	16.4	5.8	20	27	17
Gulbarga	971	32.6	25.3	2.5	28	30	27
Hassan	1010	21.2	19.4	1.8	10	4	3
Haveri	950	22.3	13.8	8.9	27	20	15
Kodagu	1019	14.6	13.3	10.5	3	3	8
Kolar	979	31.3	30.3	5.1	11	16	12
Koppal	986	16.8	18.6	11.8	24	25	26
Mandya	995	17.1	14.7	1.2	16	11	13
Mysore	985	41.5	17.9	11.2	8	22	24
Raichur	1000	25.4	20.8	19.0	29	26	30
Ramanagara	976	24.7	18.8	2.1	13	12	9
Shimoga	998	35.6	17.6	3.7	9	7	4
Tumkur	984	22.4	18.9	7.8	17	15	28
Udupi	1094	28.4	6.4	4.5	6	1	6
Uttara Kannada	979	47.7	8.1	2.4	12	6	11
Yadgir	989	18.8	25.3	12.5	30	23	23

Sources: Census Reports; NFHS 4 and NFHS 5; Human Development Report – Karnataka 2018

Annexure 7.2: Skewed child sex ratios and indicators of adolescent family formation across districts in Karnataka

District	Child sex ratios (Girls under ages 6 years per 1000 boys)		Women age 20-24 years married before age 18 years (%)		Women age 15-19 years who were already mothers or pregnant at the time of the survey (%)		Gender Inequality Index
	2001	2011	2015 - 16	2019-20	2015 - 16	2019-20	
Udupi	958	955	6.3	4.4	1.8	0.7	1
Dakshina Kannada	952	946	7.7	4.9	2.4	1.0	2
Kodagu	977	977	10.6	12.8	4.8	3.2	3
Hassan	958	964	13.2	16.2	6.6	6.4	4
Bangalore Rural	939	947	21.0	14.1	12.0	6.4	5
Uttara Kannada	946	947	15.2	11.6	6.9	1.3	6
Shimoga	956	960	8.0	11.1	7.6	2.4	7
Chikkaballapura	952	945	20.1	27.1	7.2	5.3	8
Bangalore	943	941	11.6	14.5	4.6	2.0	9
Chikmagalur	959	963	19.3	19.5	7.4	5.5	10
Mandya	934	934	22.2	13.1	8.5	5.9	11
Ramanagara	945	960	21.0	11.8	8.3	5.7	12
Davanagere	946	931	23.6	19.1	8.7	4.9	13
Chitradurga	946	933	20.2	20.7	8.3	7.8	14
Tumkur	949	952	17.1	24.8	5.2	4.7	15
Kolar	965	955	19.4	26.7	6.8	9.0	16
Bidar	941	935	22.3	19.2	7.6	4.0	17
Bijapur	928	930	31.9	39.2	10.6	11.8	18
Dharwad	943	942	23.7	17.8	7.6	3.3	19
Haveri	957	945	20.2	16.5	12.3	4.2	20
Chamarajanagar	964	942	29.0	19.3	8.5	6.1	21
Mysore	962	956	22.2	17.5	17.0	22.2	22
Yadgir	952	942	29.6	33.2	8.6	6.9	23
Belgaum	921	931	35.7	32.8	9.5	9.1	24
Koppal	953	953	35.9	27.1	9.7	8.5	25
Raichur	964	949	26.3	21.9	3.0	26.3	26
Gadag	952	944	25.1	27.7	4.6	2.0	27
Bagalkot	940	929	32.2	38.7	12.3	6.9	28
Bellary	947	954	29.2	22.2	13.3	3.2	29
Gulbarga	931	935	27.0	29.8	3.4	4.9	30
KARNATAKA	946	943	21.4	21.6	17.0	5.4	

Sources: Census Reports; NFHS 4 and NFHS 5; Human Development Report – Karnataka 2018

Annexure 7.3: Child nutrition indicators across districts in Karnataka, NFHS (4) 2015-16 and NFHS (5) 2019-20

District	Children under 5 years who are stunted (height-for-age)%		Children under 5 years who are wasted (weight-for-height)%		Children under 5 years who are severely wasted (weight-for-height)%		Children under 5 years who are underweight (weight-for-age)%		Children age 6-59 months who are anaemic (<11.0 g/dl) %	
	2015 - 16	2019-20	2015 - 16	2019-20	2015 - 16	2019-20	2015 - 16	2019-20	2015 - 16	2019-20
Bagalkot	47.3	48.3	24.6	16.9	8.1	4.4	44.6	42.3	62.6	63.8
Bangalore	28.1	31.3	28.9	19.2	11.7	11.4	26.8	28.1	57.7	58.9
Bangalore Rural	28.7	36.6	22.8	16.2	6.7	9.4	26.5	23.8	68.8	60.8
Belgaum	36.7	32.8	31.7	23.6	16.0	10.2	38.5	36.9	66.3	72.7
Bellary	49.5	36.1	26.9	22.9	10.7	13.6	53.3	36.5	72.3	67.5
Bidar	42.8	36.8	23.6	22.1	11.4	11.1	39.4	36.1	69.1	69.3
Bijapur	44.9	45.9	29.1	15.0	10.1	4.3	38.9	39.0	68.0	65.2
Chamarajanagar	30.5	32.2	19.1	18.0	8.8	6.8	31.1	28.7	53.2	68.7
Chikkaballapura	37.7	31.3	17.2	16.1	5.9	6.1	28.5	25.2	62.9	59.0
Chikmagalur	21.1	27.3	22.3	24.9	5.4	11.5	24.6	25.4	57.9	53.2
Chitradurga	28.6	36.0	31.8	17.9	16.1	8.3	29.9	32.4	64.4	61.1
Dakshina Kannada	23.9	25.1	17.1	30.5	4.0	15.7	21.7	26.4	54.3	51.1
Davanagere	46.4	38.4	22.4	18.8	5.5	3.9	41.9	32.8	65.9	70.2
Dharwad	37.4	45.2	33.8	16.5	17.7	4.6	41.1	40.4	50.7	67.2
Gadag	34.8	45.2	43.1	18.2	27.5	4.5	38.1	39.8	70.7	70.3
Gulbarga	52.2	34.5	34.0	25.0	13.2	12.2	56.7	36.2	72.4	75.1
Hassan	27.0	27.1	19.1	15.2	6.4	5.2	26.4	23.8	53.1	63.6
Haveri	43.8	29.9	20.4	17.7	7.3	3.9	36.9	35.0	63.9	66.9
Kodagu	29.8	30.4	16.4	21.7	4.1	9.3	25.7	22.6	46.6	54.4
Kolar	32.0	31.1	18.4	15.5	4.6	5.8	27.7	15.7	57.3	57.9
Koppal	55.8	49.1	26.4	23.1	10.8	3.8	49.9	45.8	68.1	70.7
Mandya	18.6	24.3	23.2	11.8	9.5	5.3	20.3	16.7	55.2	58.2
Mysore	25.1	27.5	17.3	15.6	7.5	7.2	24.9	28.2	60.1	57.2
Raichur	37.2	39.8	34.9	23.2	18.1	11.7	41.2	40.7	70.6	73.6
Ramanagara	22.0	15.6	20.3	20.0	5.1	7.7	22.9	19.8	53.4	60.2
Shimoga	35.3	29.0	14.3	23.2	2.7	13.5	30.6	34.4	57.8	68.9
Tumkur	28.6	40.3	26.2	10.9	10.2	3.1	26.0	26.7	53.8	67.6
Udupi	21.1	23.1	20.9	17.6	4.0	6.0	22.3	21.0	56.2	58.3
Uttara Kannada	37.9	29.6	18.3	21.9	4.2	13.1	30.1	33.3	47.7	69.0
Yadgir	55.5	57.6	31.3	17.7	12.5	7.2	50.3	45.2	74.0	76.0
KARNATAKA	43.7	35.4	26.1	19.5	5.9	8.4	37.6	32.9	60.9	65.5

Source: NFHS-4 & NFHS-5

Chapter-8

Legal Aspects of Child Rights & Protection in Karnataka

Sarasu Esther Thomas¹

8.1. Introduction

Child marriage continues to be an important concern for India in general and for the state of Karnataka in particular. Despite multiple legislations through law reforms and implementing mechanisms budgeted for, it continues to affect a significant percentage of children in general and girl children in particular as is borne out by statistics.

A district level study on child marriage in India looked at the prevalence, trends and patterns of child marriage². The data (See Annexure 8.1) shows that a significant number of girls in Karnataka get married and may go through pregnancies in childhood. There are also indications that in urban areas, there seems to be an upturn and this is definitely a cause for concern as the general perception is that child marriage happens because of poverty and by illiterate people and that it is predominantly a rural phenomenon. The study also shows that child marriage is more common in rural areas than urban areas, is linked to household wealth and reduces with increasing wealth and also the education of the girl child. Key findings also show that although child marriage is declining, the decline is not uniform and the change is slow, possibly because of cultural factors. It reiterates that socio economic characteristics such as place of residence, education, household wealth, religion and caste are important determinants in statistics relating to child marriage³.

UN Sustainable Development Goals 2030 (SDGs) also point towards achieving gender equality and empowering all women and girls (SDG5). Target 5.3 seeks to eliminate all harmful practices such as early and forced child marriage, among others. Indicator 5.3.1 is about the proportion of women aged 20-24 years who are married or in a union before age 15 and before age 18⁴.

In India, law reform has been used as the main vehicle to prevent child marriages and most approaches to eliminating the problem of child marriage have been in the realm of law right from colonial times until the present day.

This paper focuses on the intersection between child marriage and related laws. This is especially relevant for Karnataka which is the only State which has an amendment to the child marriage law declaring such marriages void. It therefore becomes important to gauge what impact the amendment could potentially have on in the context of broader child rights and protection in Karnataka. In view of the ongoing pandemic and the limited time, the study was a desk review with no field work components.

This review looks at some approaches to child marriage and its relationship with POCSO, JJA and related

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²District-Level Study on Child Marriage in India: What do we know about the prevalence, trends and patterns?, ICRW and UNICEF (2015)

³ibid at p. 37

⁴United Nations Children's Fund, 'Ending Child Marriage: A Profile of Child Marriage in India', UNICEF, New York, 2019 at p. 3 available at <https://www.unicef.org/india/media/1176/file/Ending-Child-Marriage.pdf>

laws, identifies a few gaps and makes broad recommendations. The paper uses a child rights approach, along with a life cycle approach. It is felt that a child rights approach best addresses the issue at hand as it avoids taking a paternalistic approach and looks at matters of child law from the perspective of the best interests, autonomy and participation of the child.

8.1.1. Tracing the Law Reform Process on Child Marriage Laws

While examples of child marriage existed in customary practices in India since pre-colonial times,⁵ early legislation came into being in colonial times.

Child marriage law today has its genesis in an incident in 1890 involving Phulmonee who was an 11-year-old girl who was married to a much older husband. On the night of the marriage, the husband had sexual intercourse with her which caused internal bleeding and death. This led to the Age of Consent Bill being pushed, which sought to have a minimum age for child marriage. This became the Child Marriage Restraint Act, 1929. This Bill fixed a minimum age for marriage as 14 for girls and 18 for boys and prescribed punishments including up to one month imprisonment and fine up to Rs. 1,000. Through an amendment in 1978, the age was raised to 18 years for girls and 21 years for boys.

The Prohibition of Child Marriage Act, 2006⁶ combined criminal law provisions by encouraging increased punishment and also allowed children to annul their marriages and have them declared void. Thus child marriages were voidable at the option of the child. Some child marriages e.g. for trafficking were declared void. The maintenance of a minor girl was protected even in cases where the marriage was declared void. However other rights were not. Section 3 of the Act says that the child marriages would be voidable at the option of the child which means if a child was married, the child could file a petition within two years of attaining majority in order to have the marriage declared null and void. This conflicts with the Karnataka position of having all marriages declared void. In the Central statute the child has the power, under the Karnataka statute anyone has the power to have the marriage declared void including the adult man who is marrying the girl child.

8.1.2. Valid/Voidable and Void Marriages in Personal Law⁷

Personal laws predated colonial times and continue in force even today with modifications. Personal laws vary widely from community to community based on religion, tribe, caste and geography among other indicators. Many of them recognise child marriages as valid.

Valid marriages are marriages where all conditions - both substantive and procedural - are met and continue until death/divorce/annulment.

Voidable marriages are marriages which can be annulled by the wronged party and these fall into categories where the consent has been vitiated because of force, fraud or undue influence among others. As soon as the person is made aware of the fraud, or the force/ undue influence is ended, the person must file for

⁵See for instance *Manusmriti*. While the age of marriage has varied widely in different communities ranging from Adult (or pubertal) marriages to marriages of infants, it was governed by customary practices of each community. Law reform on a large scale to deal with this issue began with the British.

⁶Which came into effect from 1st November, 2007

⁷Mayne, J. D., & Kuppaswami, A., *Mayne's Treatise on Hindu Law & Usage*, Bharat Law House, New Delhi (2000) M.Hidayatullah, and A.Hidayatullah (eds), *Mulla's Principles of Mahomedan Law*, N.M. Tripathi Private Ltd, Mumbai, 19th edn (1990)

annulment. There is a limited time period during which the marriage may be annulled by the innocent party. If the innocent party does not complain after the force/ undue influence has ended or the fraud has come to light, after a reasonable time, the marriage becomes a valid one.

Void marriages are those which, while all procedural formalities are complied with, are marriages undesirable by society for several reasons such as bigamy and marriage between close relatives which are prohibited by law. Such marriages can be annulled at any time by any of the parties.

The difference between annulment and divorce is that the wife has a status of wife till divorce, has rights to maintenance and children are legitimate. In the case of an annulment, children born after the annulment are illegitimate, the parties are considered never married and the wife has no rights to the husband's property. Either party can seek an annulment, not just (in this case) a child bride. And there is no time limit, it can be declared void at any time.

Child marriages are usually considered voidable as it gives the option to the child to get out of the marriage. It does not allow the wrongdoer husband to annul the marriage several years down the line, or for relatives to contest the claim of a child bride to property.

Until the PCMA 2006, child marriage was voidable only at the option of the wife but now it is available to both male and female children. In the case of Lajja Devi⁸, the court held it was voidable⁹ but said the court will have to decide on custody based on the circumstances of the case¹⁰. (It must be noted that this was before the POCSO). The court stated that if the girl is below 16, consent does not matter and it would be statutory rape¹¹ and if she is more than 16 years old and she makes a statement that it was a consensual act on her part, no straight jacket formula can be applied¹² and the court must decide on the circumstances that the child has gone with full consent.

8.2. Changes in Karnataka

For a long time, Karnataka followed the Law (Act) in the rest of India. Eventually, the Karnataka State Rules, 2008 provided powers to the child marriage protection officers (CMPOs) to prevent child marriages and take appropriate measures to help victims. No clear rehabilitation measures or information sharing and networking are mentioned there¹³.

The state sector schemes and programmes of Karnataka now include the Bhagyalakshmi scheme as also the Adarsha Vivaha scheme, which can be used to provide financial assistance to girl children and protect them from marrying before the minimum age.

A big push for change came in with the Writ Petition M S Muthanna Devaya and Budeappa vs. Union of India, Writ Petition No. 11154/ 2006 (PIL). In this case, a writ petition was filed in the Karnataka High Court by two petitioners against eight respondents including government departments both at the Central and state levels. This was on behalf of an NGO and the petition pleaded for the effective implementation of the provisions of the Child Marriage Restraint Act, 1929. A division bench of the Karnataka High Court comprising Justice J S Kehar and Justice A S Bopanna issued orders, including requiring the government to

⁸Court on its own motion (*Lajja Devi*) vs. State W.P. (Crl.) No.338/2008

⁹*ibid* at para 40

¹⁰*ibid* at para 46

¹¹*ibid* at Para 49 and para 50

¹²Section 51

¹³Report on Prevention of Child Marriage in the State of Karnataka, 2011 at p. 107-108

set up a core committee to suggest ways and means of rooting out child marriage from society. A committee was constituted, headed by Shivraj V Patil, former Supreme Court judge. The committee correctly pointed out¹⁴ that the PCMA, 2006 does not invalidate any marriage performed between underaged individuals. The committee noted the lack of readiness among adults to recognise the rights of children as human rights and the treatment of children as commodities or objects under their control. Interestingly, the committee report also mentions a term called Adultism which it defined as “the attitude of adult towards children that considers them as incompetent to take decisions¹⁵.” This is nothing but paternalism as understood with regard to the child¹⁶. Despite using the term adultism/ paternalism, the Karnataka Amendment seems to be extremely paternalistic by making child marriages void. While it is clear that child marriages needs to be discouraged, taking away the legal validity of a child marriage and considering the young couple to not be husband and wife has serious consequences upon children as well as their families.

Prior to the Amendment to the PCMA in Karnataka, the Rules under the PCMA had been revised in Karnataka in 2014¹⁷. These revisions were made following recommendations made by the Shivraj Patil Committee. These were incorporated into established procedure to produce married children before the Child Welfare Committee. It indirectly protected a child’s constitutional right to privacy by emphasising confidentiality¹⁸, protecting whistleblowers¹⁹ and clamping down on mass marriages. Proof of age continues to be an elusive target, although the Rules provide for the same, as very often they are unimplementable.

The Karnataka Amendment was brought in after and in consequence to the core committee report which suggested amendments to the Prohibition of Child Marriage Act, 2006. The state government accepted this report and made certain changes²⁰. The main changes brought in were as follows:

- a. all child marriages would henceforth be declared void ab initio
- b. penalties for child marriages would be enhanced
- c. police officers would be enabled to take notice of the offence Suomoto²¹

The Prohibition of Child Marriage (Karnataka Amendment) Act, 2016 came into force on 17th April, 2017 and made all underage marriages void. The main change in the Karnataka amendment reads as follows:

“(1A) Notwithstanding anything contained in sub-section (1) [of Section of the PCMA] every child marriage solemnized on or after the date of coming into force of the Prohibition of Child Marriage (Karnataka Amendment) Act, 2016 shall be void ab initio”. (Emphasis supplied)

Although this is a recent legislation, there is an obvious clash between this legislation and family laws, particularly Hindu law and Muslim law which declares such marriages to be voidable. In *Independent thought vs. Union of India*²² the Supreme Court has actually commended Karnataka for making child marriages void and observed that this is the way that we must proceed. The court stated “it would be wise for all the State

¹⁴*ibid* at p. 115

¹⁵*ibid* at p. 39

¹⁶See the chapter on making sense of the child rights convention in the context of child marriage

¹⁷*The Prohibition of Child Marriage (Karnataka) Rules, 2014*

¹⁸However, cases still use the names of children even at the level of the Supreme Court, so it is not clear what the implementation status of this would be.

¹⁹Protection to persons who complained is seen as important in order to ensure that there would not be any community backlash against such an individual

²⁰Statement of objects and reasons, *The Prohibition of Child Marriage (Karnataka Amendment), Act, 2016*. Karnataka Act No. 26 of 2017.

²¹*ibid*

²²*Writ Petition (Civil) No. 382 of 2013*

Legislatures to adopt the route taken between a girl child and her husband is a punishable offence under the POCSO act and the IPC²³. Justice Lokur in Independent Thought said, “It would be wise for all the State Legislatures to adopt the route taken by Karnataka to void child marriages and thereby ensure that sexual intercourse between a girl child and her husband is a punishable offence under the POCSO Act and the IPC²⁴.”

8.3. Recent Law Reform Proposals

A. The 205th Law Commission Report

In 2008, the 205th Law Commission Report suggested a few amendments to the child marriage law. The Law Commission made recommendations under four heads.

1. *Age of consent*

The commission pointed out that the age of consent for both boys and girls must be 18. This is a welcome step as it removes the artificial difference between the boys and girls and protects childhood. Although the commission looked at this in terms of the age of marriage, the question on whether the age of consent for sexual relations should be the same has been dealt with in by a different legislation that is the POCSO.

The Law Commission suggested that the legal age for a girl to give sexual consent should be 16 years.

2. *Marital rape*

The commission held that it should be made a punishable offence under the Indian Penal Code and that this would protect child brides

3. *Effect of a child marriage*

The Law Commission stated that child marriage below 16 should be void and between 16 and 18 must be voidable.

4. *Protection of child brides and their children*

The commission suggested that the child bride be maintained until her remarriage and that all children be deemed to be legitimate.

B. NCPCR Draft Bill

The Draft Bill proposed by the National Commission for Child Protection and Child Rights (NCPCR)²⁵ also suggested that the age of consent should be 16. However, the Parliament Standing Committee raised it to 18, on the basis that the definition of a child should be uniform²⁶.

C. Increasing Minimum Age of marriage to 21

In 2020, the Union Government set up a task force to examine whether the legal age should be increased to 21 and although the task force has submitted its report, during a budget speech for 2020-21, the Union Finance Minister, Nirmala Sitaraman in parliament stated that the woman’s age for marriage was increased

²³*ibid* at para 76

²⁴See paras 75 & 76 *Independent Thought Writ Petition (Civil) No. 382 of 2013*

²⁵<https://frontline.thehindu.com/social-issues/article30165842.ece#:~:text=The%20Bill%20was%20originally%20drafted,Sabha%20on%20March%202023%2C%202011>

²⁶See Asha Bajpai’s critique on this, Asha Bajpai, *CHILD RIGHTS IN INDIA: LAW, POLICY, AND PRACTICE*. 3rd Edition Oxford University Press (2017) at 429

from 15 to 18 in 1978 by amending the Sarda Act of 1929. She said that as opportunities increase for women to access higher education, the issue of a girl entering motherhood early needs to be seen. The terms of reference of the task force include examining whether the marriage and the motherhood should be increased. As of now, there is no clear report on this²⁷. There seems to be also a move to increase the age of marriage to 21 in order to ensure that girls' education etc., is not disrupted²⁸. Such a move would be a fetter on adults to marry and moves beyond child protection and has therefore come in for criticism.

8.4. A Better Legal Framework

On the ground, there are many aspects on which we fall short while examining legal frameworks on child rights. Identifying gaps include two levels of understanding by

A. What approach the law must take in order to be able to deliver on the twin objectives of discouraging child marriage

The current legal approach to this problem is largely criminalisation of child marriage. Child marriage is seen in the format of crime-punishment. It is often linked to other traditional crimes like kidnapping and to modern laws like the POCSO which penalises sexual intercourse with minors. In this format, those who enter into child marriages are penalised based on a complaint to the police. Such cases see an overrepresentation of child marriages where the child runs away from home in order to marry. Cases where parents get their children married are much fewer as nobody complains.

For matters involving girl children especially, it would be more useful to examine other approaches:

1. *The life cycle approach:* Many materials which consider child marriage from a socio-economic angle rather than through a legal lens tend to look at this from a life cycle approach. The impact of child marriage on a child's life choices, the impact of early pregnancy on health, the impact of marriage on education and employability are all strong factors that impact a woman's life from childhood to adulthood. It repeats itself with child brides tending to have larger families and whose daughters may become child brides themselves. This is more likely in communities, regions and cultures where child marriage is common.
2. *The child rights approach:* This would view the problem from the perspective of child rights and more particularly from the standards laid down in the UN Convention on the Rights of the Child. These would include taking all decisions keeping in mind the best interest principle, ensuring child participation in decision making as well respecting the autonomy of children.

This is the ideal approach to use and has been largely used in this paper. However, it is difficult to use this approach in terms of child marriage as there is clear opinion in the law and judicial decisions that the law and courts are acting in the best interests of children. The best interests of children would be protected if they are free from sexual exploitation, did not have to give up their education, and be free to marry if they wished, according to their choice as adults. Ensuring child participation and autonomy would mean that the child gets to choose whether to stay in a child marriage or to leave it and may exercise this choice on attaining

²⁷Available at <https://pib.gov.in/PressReleasePage.aspx?PRID=1629832>

²⁸<https://pib.gov.in/PressReleasePage.aspx?PRID=1629832>

adulthood. Sexuality of children is rarely spoken of and²⁹ ‘romantic cases’ as they are called are considered to be as much of a crime as child sexual abuse. Children between the ages of 16 to 18 who run away together may find themselves as offenders in the Juvenile Justice System. Regardless of who has taken the initiative, young boys/young men may find themselves being charged with kidnapping from lawful guardianship in the Indian Penal Code or sexual offences under POCSO. The young man’s defence used in some other parts of the world is not available here.

Keeping in mind the fact that exercise of agency by the child in the Indian context is difficult as the law does not permit a child to be in a sexual relationship even between the ages of 16 to just before 18. Although there are a few cases of children taking the initiative to get out of or prevent a child marriage, largely child marriages are conducted by parents or other relatives and children rarely exercise agency in either getting married or refusing to. Where parents conduct marriages, no one usually complains. However, when the child runs away from home and gets married, parents often do. Studies have shown that consensual underage sex practices are of significant proportions, varying from 5-20% in states.

Even considering child marriage a crime, the United Nations Guidelines on Justice in matters involving Child Victims and Witnesses of Crime, 2005 recognize the vulnerability of children and the need to offer support to them that is age and maturity appropriate and takes into account their unique needs, especially that of vulnerable girl children.

Experts in the realm of child rights have pointed out the uneasy relationship between the law that penalises sexual activity involving a child and consensual sexual activity among children³⁰.

B. What the content of the law must be to meet its stated objectives as well as objectives of other laws in the legal system

The current legal framework relating to child rights and child protection is a vast one³¹. All of them are important when one looks at child rights through a life cycle approach right from nutrition and care in infancy, to protection from violence and care in terms of families or State. Laws also deal with intersectionalities such as gender, or children accused of crimes, or children with disabilities. For the purpose of this paper, the focus is on child marriage and its relationship with some key legislations.

²⁹CCL-NLSIU, *Study on the Working of Special Courts under the POCSO Act, 2012 in Karnataka (2017)* available at <https://ccl.nls.ac.in/wp-content/uploads/2017/01/Implementation-of-the-POCSO-Act-2012-by-speical-courts-challenges-and-issues-1.pdf>

³⁰<https://indianexpress.com/article/explained/what-madras-high-court-suggested-on-age-of-consent-age-gap-and-the-implications-pocso-act-5701591/> Accessed on 15 February 2021 where well known child rights activists including Advocates Vrind Grover, Ananth Kumar Asthana and Rebeca John, former National Commission (NCPCR) Chairperson Dr Shanta Sinha, and Professor Ved Kumari. Asha Bajpai opines, “When these laws were being drafted, several voices had demanded that the age of sexual consent be lowered to 16 years so that consensual sexual activity among young people does not get criminalized. Even the fact that a child marriage is per se valid but under the PCMA, and therefore sexual activity between young married couples should be not criminalized, went unheard. These confusions must be removed to ensure that protections required by young people are not denied because of confusion in existing laws.” in Asha Bajpai, *CHILD RIGHTS IN INDIA: LAW, POLICY, AND PRACTICE*. 3rd Edition Oxford University Press (2017) pp 428-429

³¹For a fairly comprehensive list, take a look at <https://www.haqcrc.org/child-rights/indian-laws-policies/> (accessed on 06 January 2021)

I. The Constitution of India

In issues dealing with child marriage, the Constitution of India is also referenced. The Constitution has an equality guarantee available to all including children³². Children are often referred to as the ‘future citizens of India’. This is wrong as they are citizens now and entitled to all rights available to citizens except for a few age related rights like the right to vote. The Constitution is a child rights document including several provisions specifically dealing with children. These include enabling protective legislation^{33,34}, free and compulsory primary education³⁵, ban on trafficking³⁶, exploitative conditions of work³⁷ and child labour in hazardous work³⁸. It speaks about protecting and not abusing children due to their young age³⁹ and giving the facilities and opportunities to develop free from such exploitation⁴⁰. The Constitution also directs protection of vulnerable groups⁴¹, tries to ensure a reasonable standard of living and nutrition,⁴² and exhorts compliance with treaties⁴³, thus ensuring compliance with both the UN Convention on the Rights of the Child and the Convention on the Elimination of All Forms of Discrimination Against Women - both relevant to the context of child marriage.

The main legislations which have a bearing upon the issue include the POCSO and the JJA⁴⁴. These two legislations constitute the backbone of child protection laws in India.

II. Making sense of the Child Rights Convention in the context of child marriage

According to the UNCRC, although a uniform definition of a child at 18 years exists, it is still subject to laws that may presume an earlier majority⁴⁵. The Convention exhorts parents and the State to keep in mind

³²Article 14, Constitution of India

³³Article 15(3) Constitution of India

³⁴14–17, 21, 23, and 24 of the Constitution. Article 15, which protects against discrimination

³⁵Article 21A, Constitution of India. See also Article 41 which also spoke of this right as a non justiciable Directive Principle of State Policy. Article 51A(k) also imposes a fundamental duty on parents- “That parents or guardians shall provide opportunities for education to his child or, as the case may be, ward between the age of six and fourteen years”. Article 21A elevated it to the status of a fundamental right.

³⁶Article 23, Constitution of India

³⁷Article 23, Constitution of India

³⁸Article 24, Constitution of India

³⁹Article 39(e), Constitution of India

⁴⁰Article 39(f), Constitution of India

⁴¹Article 46, The State shall promote with special care the educational and economic interests of the weaker sections of the people, and, in particular, of the Scheduled Castes and the Scheduled Tribes and shall protect them from social injustice and all forms of exploitation.

⁴²Article 47, The State shall endeavor to raise of the level of nutrition and the standard of living of its people and the improvement of public health

⁴³Article 51(c), The State shall endeavour to foster respect for international law and treaty obligations. This is important as it would ensure that international treaties on the rights of the child that the State has signed and ratified would be respected

⁴⁴For a broad overview see <https://www.loc.gov/law/help/child-protection-law/india.php> (Accessed on 12 January 2021)

⁴⁵Article 1, For the purposes of the present Convention, a child means every human being below the age of eighteen years unless under the law applicable to the child, majority is attained earlier.

the evolving capacities of the child⁴⁶. Children have an equal right to have their identity as well as family relations recognized by law without unlawful interference⁴⁷. An important question to ask here would be - does a law voiding child marriage constitute unlawful interference?

While the parents may give the child direction in accordance with the child's evolving capabilities, the question to be asked is, whether this would extend to prohibiting the child from having consensual sexual intercourse, or annulling a child's marriage⁴⁸. Would consensual sexual activity be within the child's right to privacy which is protected in the Convention?⁴⁹ There have been many decisions by courts respecting the rights of adults to privacy in acts earlier considered criminal, for instance homosexual acts⁵⁰. A moralistic view on sexual intercourse and the stand that it should be prohibited because the participants must not engage in such acts goes against the spirit of the Constitution. And of course while children should be protected from sexual abuse or forced child marriage, shutting our eyes to the fact that children are sexual beings leads to a lopsided law pushing children into being considered offenders and putting pressure on the juvenile justice system. It is also pertinent to note that while there are cases filed in 'romantic' cases, child marriage with the connivance of parents is underreported, although it is the norm. If Karnataka has seen 42% child brides, there are 42% young husband offenders and much more than 42% of parents (if we include the bride and groom's parents) who are offenders. The cases on the ground are nowhere near this figure. These offenders are seldom booked under the PCMA, 2006 (or even the earlier CMRA, 1929) which carry much lower punishment. They are even more rarely booked under the more stringent POCSO.

Has the law then failed? The response of the law when it has not worked has been to become more and more stringent on the issue of child marriage. There is no data or jurisprudence to show that increasing the penalty on a crime would improve the conviction rates.

Frances Olsen⁵¹ points out the dangers of examining the UNCRC through what she calls a 'Legal Reformist' approach. She points out that such an approach could include provisions that may actually end up controlling and constraining women which may include undermining child rights⁵². In particular, she mentions the issue of child marriage⁵³. She also critiques the Convention on perpetuating the public-private divide by incorporating notions of the conventional family and pointing out that other than the provisions

⁴⁶Article 5, States Parties shall respect the responsibilities, rights and duties of parents or, where applicable, the members of the extended family or community as provided for by local custom, legal guardians or other persons legally responsible for the child, to provide, in a manner consistent with the evolving capacities of the child, appropriate direction and guidance in the exercise by the child of the rights recognized in the present Convention

⁴⁷Article 8, States Parties undertake to respect the right of the child to preserve his or her identity, including nationality, name and family relations as recognized by law without unlawful interference

⁴⁸Article 14, States Parties shall respect the rights and duties of the parents and, when applicable, legal guardians, to provide direction to the child in the exercise of his or her right in a manner consistent with the evolving capacities of the child. Freedom to manifest one's religion or beliefs may be subject only to such limitations as are prescribed by law and are necessary to protect public safety, order, health or morals, or the fundamental rights and freedoms of others.

⁴⁹Article 16, No child shall be subjected to arbitrary or unlawful interference with his or her privacy, family, home or correspondence, nor to unlawful attacks on his or her honour and reputation. The child has the right to the protection of the law against such interference or attacks.

⁵⁰See for instance *Navej Singh Johar vs. Union of India* 2018 SCC Online SC1350, *Naz Foundation vs. Govt. of NCT of Delhi*, WP(C) No.7455/2001

⁵¹Frances Olsen, "Children's Rights: Some Feminist Approaches to the United Nations Convention on the Rights of the Child", in Philip Alston et. al. *CHILDREN, RIGHTS AND THE LAW*, Oxford University Press (1995) 192

⁵²*ibid* at 194

⁵³*ibid* at 194 pointing out its absence in the language of the CRC while on the other hand child military service has been specifically mentioned.

which require those who exercise power to keep in mind the age and maturity of children, the right to autonomy, formal equality and rights to freedom are not clearly dealt with⁵⁴.

The assumption that children are not sexual beings is misguided and has been debunked by the medical and behavioural sciences. Prohibiting consensual sexual behaviour on the part of the law reeks of paternalism. The main danger of paternalism is that it allows the exercise of power over children which can be oppressive to them⁵⁵, all the while using the language of doing what is supposedly in the best interest of the child.

Evaluating the choice of the child could also be problematic as very often if the child's choice is against the wishes of parents or authorities representing the state, the child will be considered to be too young or immature to make such a choice⁵⁶.

While in custody battles a child's opinion may be often considered,⁵⁷ this has not worked very well in the area of sexual choice. In child marriage cases, however, the child is often treated as an adult, or a 'married woman' which may be a better way of putting it. In such cases, courts as well as law enforcers may consider the child's wish to stay with her marital family or in a government women's home rather than with her parents. Here too, it is pertinent to note the child is often in a women's home rather than in a children's home due to her marital status⁵⁸.

The presumption in the Convention that parents will usually act in the best interests of their children⁵⁹ may be at odds with the statistics on child marriage. Parents who perform child marriages are acting on the basis of what is good for the family as a whole and not necessarily what is in the best interests of this particular child.

"Hearing what children say must lie at the elaboration of children's rights⁶⁰." What does this mean for the issue of child marriage? This means that the child's voice must be heard when at odds with the parents, which is often the case in child marriages at the instance of the parents⁶¹. It also means support for the child in order to follow up on such instances without which the child will not receive justice⁶².

⁵⁴*ibid* at pp194-195

⁵⁵Frances Olsen, "Children's Rights: Some Feminist Approaches to the United Nations Convention on the Rights of the Child", in Philip Alston et. al. *CHILDREN, RIGHTS AND THE LAW*, Oxford University Press (1995) 192 pp206-207

⁵⁶See Frances Olsen, "Children's Rights: Some Feminist Approaches to the United Nations Convention on the Rights of the Child", in Philip Alston et. al. *CHILDREN, RIGHTS AND THE LAW*, Oxford University Press (1995) 192 at 212 "From the point of view of the authorities evaluating the child's choice, it is easy to say that the child is too immature to exercise a proper choice"

⁵⁷Section 17 of the Guardians and Wards Act for example

⁵⁸Courts often send such children to a Nari Niketan

⁵⁹Article 18, States Parties shall use their best efforts to ensure recognition of the principle that both parents have common responsibilities for the upbringing and development of the child. Parents or, as the case may be, legal guardians, have the primary responsibility for the upbringing and development of the child. The best interests of the child will be their basic concern.

⁶⁰John Eekelaar, "The Importance of Thinking the Children Have Rights" in Philip Alston et. al. *CHILDREN, RIGHTS AND THE LAW*, Oxford University Press (1995) 221 at 228

⁶¹Article 19, States Parties shall take all appropriate legislative, administrative, social and educational measures to protect the child from all forms of physical or mental violence, injury or abuse, neglect or negligent treatment, maltreatment or exploitation, including sexual abuse, while in the care of parent(s), legal guardian(s) or any other person who has the care of the child.

⁶²Article 19, Such protective measures should, as appropriate, include effective procedures for the establishment of social programmes to provide necessary support for the child and for those who have the care of the child, as well as for other forms of prevention and for identification, reporting, referral, investigation, treatment and follow-up of instances of child maltreatment described heretofore, and, as appropriate

III. *The Juvenile Justice Act*

The Juvenile Justice (Care and Protection of Children) Act, 2015 replaced the earlier similar law⁶³. The Act defines “a child in need of care and protection” as including a child at imminent risk of a child marriage⁶⁴. It explicitly recognises that the parent or guardian may be the person responsible for the solemnisation of such a marriage⁶⁵. It recognises that returning such a child to such a space may be inimical to the child’s best interests⁶⁶. The Act also describes certain offenses against children, including cruelty. The JJ Act also lays down broad guidelines to be followed which implementing child centric laws⁶⁷. First and foremost, it lays down the best interest principle as the bedrock of the legislation⁶⁸. It considers a child to be equally entitled to human rights of dignity⁶⁹. It places the family as the main custodian in a sense of the child, and one can see how this can be problematic when considering child marriage⁷⁰. It however ensures procedural due process by preventing systemic violations of child rights⁷¹. One might argue that this would necessitate making sure the child is represented adequately and the child’s voice is heard and respected.

IV. *The Protection of Children from Sexual Offences Act, 2012*

This law contains provisions protecting children from sexual assault, sexual harassment, and pornography, and provides for the establishment of special courts for the trial of such offenses.

The POCSO is the single, all encompassing legislation to protect children from sexual abuse and sexual exploitation. A child under the POCSO is defined as a person below the age of 18 years⁷². POCSO defines penetrative sexual assault⁷³ and aggravated penetrative sexual assault⁷⁴ and punishes them accordingly⁷⁵.

⁶³*The Juvenile Justice Act, 2000*

⁶⁴*Juvenile Justice (Care and Protection of Children) Act, 2015, Section 2(xii) ...who is at imminent risk of marriage before attaining the age of marriage and whose parents, family members, guardian and any other persons are likely to be responsible for solemnisation of such marriage.*

⁶⁵*Juvenile Justice (Care and Protection of Children) Act, 2015, Section 2(xii) ...who is at imminent risk of marriage before attaining the age of marriage and whose parents, family members, guardian and any other persons are likely to be responsible for solemnisation of such marriage.*

⁶⁶*(xiii) Principle of repatriation and restoration: Every child in the juvenile justice system shall have the right to be reunited with his family at the earliest and to be restored to the same socio-economic and cultural status that he was in, before coming under the purview of this Act, unless such restoration and repatriation is not in his best interest*

⁶⁷*Section 3 lists sixteen general principles to be followed in the administration of the Act*

⁶⁸*Section 3(iv) Principle of best interest: All decisions regarding the child shall be based on the primary consideration that they are in the best interest of the child and to help the child to develop full potential.*

⁶⁹*Section 3(ii) Principle of dignity and worth: All human beings shall be treated with equal dignity and rights.*

⁷⁰*Section 3(v) Principle of family responsibility: The primary responsibility of care, nurture and protection of the child shall be that of the biological family or adoptive or foster parents, as the case may be.*

⁷¹*Section 3(vi) Principle of safety: All measures shall be taken to ensure that the child is safe and is not subjected to any harm, abuse or maltreatment while in contact with the care and protection system, and thereafter. Section 3(vii) Positive measures: All resources are to be mobilised including those of family and community, for promoting the well-being, facilitating development of identity and providing an inclusive and enabling environment, to reduce vulnerabilities of children and the need for intervention under this Act.*

⁷²*Sec 2(d)*

⁷³*Sec. 3*

⁷⁴*Sec. 5*

⁷⁵*Sec. 4 contains punishment for penetrative sexual assault and Sec.6 contains punishment for aggravated penetrative sexual assault.*

Other forms of sexual assault which do not involve penetration are also covered in POCSO⁷⁶. Sexual harassment has also been defined and punished⁷⁷. As also using children for pornographic purposes⁷⁸. On issues of whether sexual intercourse with the minor bride would amount to a punishable offence, on the face of it there seems to be a clash between the Indian Penal Code Exception to marital rape and the POCSO. Section 42a of the POCSO which was added by amendment⁷⁹ provides that the POCSO's would be an addition to and not in derogation of existing laws. The court in the Independent Thought case was absolutely clear that Sec. 42a would be the prevailing provision as there is a major inconsistency between the POCSO and the IPC. The court said that 42a clearly says that this would be in addition to laws and that POCSO would have overriding effect. In effect the court said that the Exception to Section 375 IPC should be read down as follows. "Sexual intercourse or sexual acts by a man with his own wife, the wife not being 18 years, is not rape⁸⁰" It must be pointed out that child sexual intercourse was in any case already punishable under POCSO. The question whether there would be an exception in the case of a child bride/wife is also settled.

In the Independent Thought case, the court noted that there was one single issue of considerable public importance – whether sexual intercourse between a man and his wife who is a girl between 15 to 18 years is rape. The court pointed out while the Section 375 of the Indian Penal Code, which defines rape prescribes the age of consent as 18 years⁸¹, Exception to Section 375 of the IPC. While the court did not deal with in detail the issue of marital rape, it did look at the issue of sexual intercourse with a child bride / wife who was below 18 years of age.

Though the Supreme Court has rejected marriage as a mitigating circumstance,⁸² the CCL-NLSIU studies reveal that several Special Courts offer near-impunity in such cases by acquitting or reducing sentences based on unsound legal theories that replace the "age of consent" with the "age of discretion"⁸³.

Under the Juvenile Justice (Care and Protection of Children), Rules, 2007 (JJ Model Rules, 2007), age determination is done by reviewing the evidence relating to the matriculation certificates and if this does not exist, the birth certificate from school first attended, and other than that the birth certificate given by a corporation or municipal authority. In the absence of all these three, medical opinion will be sought and benefit may be given to the child by considering the child to be a lower age. Several cases under the POCSO have ended in acquittal because of the lack of adequate documents to provide evidentiary proof of age⁸⁴.

Absence of birth certificates and poor maintenance of records is a big issue. NFHS 4 (2015-16) data shows that there has been an increase in the registration of births from 41.2% in 2005-06 to 79.7% at the stage⁸⁵.

⁷⁶Sec.7 defines Sexual assault and Sec. 8 provides a punishment for it. Sec. 9 defines aggravated sexual assault and Sec. 10 provides a punishment for it.

⁷⁷Sec. 11 has the definition and Sec. 12 is for punishment

⁷⁸Chapter III of the POCSO

⁷⁹The Criminal Law (Amendment) Act, 2013 No. 13 of 2013

⁸⁰Para 88

⁸¹Independent Thought vs. Union of India, para 1

⁸²State vs. Madanlal, MANU/SC/ 0689/ 2015

⁸³CCL Assam report

⁸⁴Swagata Raha, Challenges related to Age- Determination of Victims under the POCSO Act, 2012, Centre for Child and the Law, IMPLEMENTATION OF THE POCSO ACT, 2012 BY SPECIAL COURTS: CHALLENGES AND ISSUES Based on CCL-NLSIU's Studies on the Working of Special Courts in Five States, Centre for Child and the Law, National Law School of India University (2018) at p. 82

⁸⁵Ministry of Health and Family Welfare, National Family Health Survey- 4 (2015-16) India Fact Sheet, p.2, <http://rchiips.org/NFHS/pdf/NFHS4/India.pdf>.

The age factors also lacks in that in what have been termed romantic cases, courts leaned towards deeming the child a major⁸⁶.

In *State of Karnataka vs. Pantara Sudhakara*⁸⁷ the court said that because the doctor's evidence place the victims at 14 to 16, it does not mean that two more years needs to be added to the upper age limit and the person is treated as 16 years old.

Studies in different parts of the country, including Karnataka have shown that where there was a romantic relationship between the child and the accused, there was a family member who usually complained to the police⁸⁸. However, it was also shown that a child was rarely the complainant except when the accused refused to marry her⁸⁹.

These studies show that there seems to be a tolerant attitude to child marriages as courts tend to be sympathetic and lenient where the child and accused are married, especially if there was a pregnancy⁹⁰. This is also sometimes true at the appellate level in High Court and Supreme Court cases.

V. *The Convention on Elimination of all Forms of Discrimination Against Women (CEDAW)*

The Convention in Article 16 states that the child marriage should have no legal effect and all necessary action should be taken to specify a minimum age of marriage and make registration of marriages compulsory.

The Indian Government has a Declaration on this and states that though in principle it supports the practice of registration of marriages, it is difficult to implement this in India because of the diversity of customs, religions and levels of literacy. Some of the amendments proposed by the Shivraj Patil Committee included making marriages compulsory and stating that if marriages were not registered in 30 days, there would be punishment up to three months of imprisonment or fine up to Rs. 10000.

The court in *Seema vs. Ashwani Kumar*⁹¹ noted that compulsory registration would be a step in the right direction to avoid child marriage. A number of high courts have also held that those who perform marriages under different personal laws would be liable if they ended up performing a child marriage.

⁸⁶*Swagata Raha, Challenges related to Age- Determination of Victims under the POCSO Act, 2012, Centre for Child and the Law, IMPLEMENTATION OF THE POCSO ACT, 2012 BY SPECIAL COURTS: CHALLENGES AND ISSUES Based on CCL-NLSIU's Studies on the Working of Special Courts in Five States, Centre for Child and the Law, National Law School of India University (2018) at p. 91 . The writer also mentions three cases, the State of Delhi vs. Ajit Kumar SC No. 39/14 decided on 28/07/2015 where the mother initially claimed that the girl was 14 years old and at trial both of them turned hostile and testified she was 20 years old. In State of Andhra Pradesh vs. Jayanti Manikanta, Sessions case No. 48/2014 decided on 01/05/2005 (Vishakapatnam, Andhra Pradesh) the accused and victim had eloped and married and although the victims family said that there was a fake school leaving certificate later they turned hostile and the Principal denied issuing the certificate as to the age of the victim. The girl's minority was therefore not proven. In State of Assam vs. Md. Jakir Ali , Special(POCSO) Case No. 13 / 16 decided on 14/07/2016 , a fourteen year old was kidnapped by the accused and subjected to penetrative sexual assault, the victims father said that she 17 or 18 and later stated that since she had married the accused they wanted to be left alone and the matter had been resolved amicably.*

⁸⁷(2008) 11 SCC 38

⁸⁸*Shradha Chaudhary, " "Love", Consent and the POCSO". Centre for Child and the Law, IMPLEMENTATION OF THE POCSO ACT, 2012 BY SPECIAL COURTS: CHALLENGES AND ISSUES Based on CCL-NLSIU's Studies on the Working of Special Courts in Five States, Centre for Child and the Law, National Law School of India University (2018) 125 at 133*

⁸⁹*ibid at 133*

⁹⁰*ibid at 134. pointing out the low conviction rates in these cases.*

⁹¹2007 (12) SCALE 578

This may be burdensome for those with no easy access and a more people friendly mechanism should be used to identify and register marriages. This has, however, not been implemented and it is not my contention that it should be.

VI. *The National Policy for Children, 2013*

This encourages the promotion of child friendly jurisprudence. It requires the State to enact progressive laws and build a protection system that would both prevent child abuse and neglect as well as be able to respond quickly to instances of abuse or neglect⁹². It also follows the crime-punishment model by foreseeing better criminal justice administration on the punitive side⁹³.

8.5. Towards Effective Implementation

Three important studies which were focused on the law have been conducted over the last decade in Karnataka. All of them have followed different methodologies and are useful in trying to understand institutional arrangements that may be made for the recommended legal frameworks. These three studies include:

- A. The Core Committee headed by Justice Shivraj Patil which drew data from different stakeholders, mainly government and NGOs on many aspects of implementation of child marriage laws⁹⁴.
- B. The Centre for Child and the Law/NLSIU studies which looked at trial court data across five states including Karnataka. While these studies focused on POCSO, around 20% of POCSO cases were romantic cases, some involving child marriage and their suggestions on child protection are relevant here⁹⁵.
- C. The Centre for Law & Policy Research Study which was a short desk study focusing on Child Marriage⁹⁶.

The suggestions I would like to emphasise on may be broadly classified as:

Improving budgetary allocations

Child protection takes up about 1% of the Budget⁹⁷. This may explain the lack of resources available to tackle the issue of child marriage. The underreporting may also be coupled with the fact that there is insufficient infrastructure backing which needs to be strengthened, especially the CWCs where the child may be produced.

⁹²See Para 4.12 *The State shall promote child friendly jurisprudence, enact progressive legislation, build a preventive and responsive child protection system, including emergency outreach services, and promote effective enforcement of punitive legislative and administrative measures against all voices and views are heard in all matters and actions which impact their lives.*

⁹³See Para 4.12 *The State shall promote child friendly jurisprudence, enact progressive legislation, build a preventive and responsive child protection system, including emergency outreach services, and promote effective enforcement of punitive legislative and administrative measures against all voices and views are heard in all matters and actions which impact their lives.*

⁹⁴Report on Prevention of Child Marriage in the State of Karnataka, 2011 at p. 116

⁹⁵IMPLEMENTATION OF THE POCSO ACT, 2012 BY SPECIAL COURTS: CHALLENGES AND ISSUES Based on CCL-NLSIU's Studies on the Working of Special Courts in Five States, Centre for Child and the Law, National Law School of India University (2018)

⁹⁶<https://clpr.org.in/>

⁹⁷<https://fpibengaluru.karnataka.gov.in/storage/pdf-files/budget%20documents/Child%20Budget%202020-21.pdf> at page 25

Capacity Building and Training

Inadequate training and capacity building of functionaries and lack of consistent follow-up were things that left enforcement agencies sometimes helpless was pointed out by Shivraj Patil Committee⁹⁸.

Child Marriage Protection Officers (CMPOs) are the backbone of the implementation of the legislation and need to be better equipped through proper training and there has been no provision made towards regular training and capacity building⁹⁹.

Rehabilitation is essential for bringing a child back into the mainstream. This includes psychological health, financial assistance, and empowerment through education skill training and employment¹⁰⁰. All these are resource intensive, but if not done properly, would leave the child in a worse off situation.

Outreach programmes in schools for teachers and children are needed including incorporating anti child marriage in school syllabi, pre service and in service training programmes etc¹⁰¹.

Mapping of at-risk communities, seasons where mass marriages and child marriages take place and geographical locations must be done through studies¹⁰².

Legal support to child victims¹⁰³ is necessary; I would add that beyond the reporting and access to rehabilitation options, legal support is necessary so that the child's voice in this process is adequately heard.

Court Structures. There have already been studies to show how changes are needed to order to bring about structural compliance with the POCSO Act. This may be also relevant in child marriage cases where the child has faced sexual abuse. Modifications are needed to prevent exposure between the child and the accused including provision of partitions and appointment of public prosecutors who would be able to give time to POCSO cases¹⁰⁴.

The design of the court room should also be a child friendly and this requires structural alternations as well as attitudinal changes¹⁰⁵.

Special courts do require separate entrances, child friendly surroundings, toilets and use of audio-visual facilities and separate rooms for children. These seem not to be present in Karnataka courts as of now¹⁰⁶. There is a lack of a separate robust system and support persons who are appointed from different NGOs in Bangalore city were able to help only a few cases and childline representatives sometimes performed the task of such support persons¹⁰⁷.

⁹⁸Report on Prevention of Child Marriage in the State of Karnataka, 2011 at p. 116

⁹⁹ibid at p. 114

¹⁰⁰ibid at p. 117

¹⁰¹ibid at p. 119

¹⁰²ibid at p. 112

¹⁰³ibid at p. 128

¹⁰⁴Sonia Pereira and Swagata Raha, *Structural Compliance of Special Courts with the POCSO Act, 2012, Centre for Child and the Law, IMPLEMENTATION OF THE POCSO ACT, 2012 BY SPECIAL COURTS: CHALLENGES AND ISSUES Based on CCL-NLSIU's Studies on the Working of Special Courts in Five States, Centre for Child and the Law, National Law School of India University (2018) at pp.2-3*

¹⁰⁵ibid p. 4

¹⁰⁶ibid at p. 5

¹⁰⁷ibid at p. 26

Age proof

Proof of childhood is essential to establish a child marriage. Studies under POCSO show that in many cases, proof of age is not properly filed and this is more common in romantic cases¹⁰⁸. The age of consent needs to be revisited. The standard in India is an unrealistic one and we must learn from our mistakes as well as from other legal systems. Karnataka has institutions dealing with both law as well as child sexuality/mental health and a proposal for studying carefully the age of consent in line with the recommendations of the NCPCR is needed. In the absence of a law, there must be better interdisciplinarity with health systems to recognise this better.

Law Reform

No allocation seems to be clearly made on law reform suggestions. This is much needed. The Karnataka Amendment of the PCMA is conspicuously lacking enforcement. This may not be necessarily a bad thing as the effects of declaring a marriage to be void would in many cases have an adverse impact on girl children by casting an uncertainty over their marital status not just during their childhood but also at any point in their lives. This may have an impact of depriving them of the status of wife for the purpose of property, employment benefits and so on.

Therefore, there is an urgent need to study the impact and possible impact the Karnataka amendment would have. Especially if a marriage void ab initio could mean that women who were married off as children would in the future be denied the status of wife and access to rights to property.

I would further like to point out that many initiatives for law reform have been made by private individuals, funders and organisations. The use of Public Interest Litigation as a means of law reform for child marriages has been proposed¹⁰⁹ and followed¹¹⁰.

Government Schemes like Bhagyalakshmi are ongoing, but it is unclear how effective they have been in reducing the problem of child marriage. It is also unclear how budgetary allocations to this scheme are made.

The Healthcare System has an important role to play in the life of the child bride and perhaps young mother. There needs to be a budgeting for training on the health systems, as well as urgent legal reforms in order to avoid the side effects of the mandatory reporting provisions. Safe spaces for children to receive medical support and mental healthcare as well as protection of reproductive health rights¹¹¹ cannot be safeguarded if mandatory reporting continues to work in this way. Rules, SOPs and trainings which will allow for a non-adversarial approach, especially in cases of child marriage, must be followed. The Supreme Court has recognised the reproductive rights of women and girls irrespective of their marital status¹¹².

¹⁰⁸Advocate Michelle Mendonca, *Factors Affecting Acquittals in Special Courts*, Centre for Child and the Law, IMPLEMENTATION OF THE POCSO ACT, 2012 BY SPECIAL COURTS: CHALLENGES AND ISSUES Based on CCL-NLSIU's Studies on the Working of Special Courts in Five States, Centre for Child and the Law, National Law School of India University (2018) at p.34

¹⁰⁹Jaya Sagade, *CHILD MARRIAGE IN INDIA*, Oxford University Press (2005) at 92

¹¹⁰*Independent Thought v Union of India* (2013) and *Court on its Own Motion (Lajja Devi) v State* (2008) both raised by very different petitioners, but engaging with the Court in many ways

¹¹¹Aparna Bhat et. al. *CHILD MARRIAGES AND THE LAW IN INDIA*, Human Rights Law Network(2005) pp 42-43

¹¹²*Suchita Srivastava v Chandigarh Administration* (2009) 9 SCC 1

Diversion for children and young offenders

Adequate diversion is not being spoken of in the context of child marriage. Keeping in view the very large numbers, and the failure of criminal sanctions, it is suggested that diversion be used, especially in the cases of young offenders. A more sensitive system under JJA is necessary to ensure this. This is true especially with the amendment of the Juvenile Justice Act¹¹³ lowering the age of culpability to 16 from 18. This would mean that more children and young people would enter the criminal justice system. Where both are children, and it is a consensual act, it would be unclear about who the victim and who the perpetrator would be. There needs to be a more robust diversion system which does not involve incarceration.

Primary education and further

While the Education Budget is much better, it needs to cater to girls and have mechanisms to be put in place which ensure that girls are in school and to prevent drop-outs for marriage. Age documents have to be maintained better in order to ensure protection of childhood.

The aftershocks of the Covid-19 pandemic

There are signs that Covid-19 has led to early and forced marriage just for girl children in many parts of the world¹¹⁴.

The Women and Child Development Department of Maharashtra reported an increase in child marriage cases which may be because of a spike during the lockdown. Studies by different NGOs¹¹⁵ have also highlighted some Covid-19 instigated global trends. There is a fear which has been borne out by contemporary sources that the pandemic has set back efforts of ending such marriages and has seen increased child marriages¹¹⁶.

For the next few years, budgets will have to address the fallout of the Covid-19 pandemic on girls including dropouts and lack of access to education and life chances, early marriages and pregnancies. Covid-19 has by anecdotal accounts increased the trend of child marriages as well as the vulnerability of girls.

Registration of marriages needs to be encouraged as both an impediment to child marriage and an encouragement of proof of marriage. However, non-registration should not make a marriage void.

Demystifying laws is necessary in order to make it easy for officials to enforce them. There continues to be a lack of clarity in how to treat child marriages, runaway elopements and underage mothers. Such SOPs should be developed and appended to Rules so that children are effectively protected. This paper has not dwelt upon kidnapping from lawful guardianship cases¹¹⁷ under Section 361 of the Indian Penal Code, 1860 which is the oldest legislation used along with the earlier child marriage law. However, this is equally true

¹¹³Juvenile Justice Amendment Act, 2015 following the public outcry in the Nirbhaya case reduced the Juvenile age to 16 instead of 18. This has been widely held by child rights activists to be a regressive step.

¹¹⁴Available at <https://ams3.digitaloceanspaces.com/girlsnotbrides-org/www/documents/COVID-19-and-child-early-and-forced-marriage.pdf>

¹¹⁵Save the Children, World Vision, UNICEF, etc..

¹¹⁶Available at https://reliefweb.int/sites/reliefweb.int/files/resources/PressRelease_Child-marriage-webinar_October7.pdf

¹¹⁷See Ravi Kumar V State of Delhi II (2005) DMC 731. Here a 16 year old girl had insisted that she had left of her own volition as she was in love with the accused. She was unwilling to return to her parents and preferred to stay in the government women's home (Nari Niketan). The adult husband had been accused of kidnapping from lawful guardianship. The court held that allowing a minor to accompany him did not amount to kidnapping (Para 19)

when we look at intersections of child marriage with other laws such as the JJA or POCSO. Clarity on policy is a must to avoid working at cross purposes to the detriment of child rights.

Improving service delivery: It goes without saying that there is an urgent need to improve the quality of service delivery on the ground as far as the PCMA is concerned. The CMPOs play an essential role in preventing and following up on child marriages and they must not be overloaded with multiple responsibilities. They should be given clear targets and equipped with tools to be able to detect and prevent such events. Right now, most are spread too thin and therefore not as effective as they need to be.

Tackling the falling sex ratios: There must be better implementation of the Pre-Conception and Pre-Natal Diagnostic Techniques Act, 1994 (the PCPNDT Act). The falling sex ratio could mean that men look beyond their cohort to younger brides, exacerbating the problem of child marriage.

Typically, there is hype over implementation of the Act during census years when there are concerns about the sex ratio; however, this must be implemented now. Mechanisms to ensure this must be strengthened.

Free legal aid and support services

Children are going largely unrepresented in matters governing them. They need to be provided with free legal aid by linking with the District Legal Services Authority. Some work and budgeting needs to be done to ensure this happens. In cases of child marriage, it is imperative that a child's voice be heard as adults around the child may not be acting in the child's best interests. A guardian ad litem may be provided to the child to ensure the child's rights against her own parents if necessary.

Budget allocations for payment of services rendered by support persons and fees must be fixed¹¹⁸. There must be information regarding compensation schemes, materials on sex education must be prepared and disseminated in educational institutions. There must be regular inspections of child protection institutions by inspection committees under the JJ Act, 2015, JJBs, CWCs¹¹⁹.

8.6. Conclusion

“Childhood is not a natural state.... It is highly conditioned by culture and if this were more generally understood, it would encourage fundamental questions about children and citizenship to be asked in ways that do not currently occur in the wider community¹²⁰.”

The life cycle approach clearly indicates that early marriage has an adverse impact upon a girl child's life in general with after-effects stretching across her entire life in the form of disrupted education, early pregnancy, vulnerability to domestic violence and economic deprivation and life chances. There is no doubt that child marriages are a violation of the human rights of women.

¹¹⁸Centre for Child and the Law, *IMPLEMENTATION OF THE POCSO ACT, 2012 BY SPECIAL COURTS: CHALLENGES AND ISSUES* Based on CCL-NLSIU's Studies on the Working of Special Courts in Five States, Centre for Child and the Law, National Law School of India University (2018) at p. 211

¹¹⁹*ibid* at pp. 212-213

¹²⁰Moushira Khattab, *Rethinking Poverty: Making Policies That Work for Children, Children, Youth and Environments* 19(2), 2009 at 14

It is also true that large numbers of children marry young. In Karnataka, one in five girls at least marry before they reach the age of 18¹²¹. Keeping this in mind, it is clear that criminalisation may not be the only remedy and we need to do more to strengthen institutions and provide service delivery across the board.

Karnataka's laws make child marriages void ab initio, so these young girls do not get the status of a wife and the threat of a void marriage hangs over them like a Damocles sword. This law has not been enforced yet, but could have long-term repercussions several years down the line when matters of succession to property arise. The law must be rolled back and child marriages should be voidable at the option of the child contracting the marriage.

This law also works in tandem with other laws such as POCSO and kidnapping. Viewing child marriage sees a lopsided reality in terms of what behaviour is criminalised. It is clear that complaints of child marriage or child sexual abuse seldom arise when the marriage is conducted at the instance of the parents or other relatives¹²². Most complaints arise when the child exercises agency to enter into a consensual sexual relationship in the 16 to just short of 18 category. Experts have opined that this must be examined carefully to ensure that the child is not marginalised and sent to a potentially hostile home with her parents. This is also needed in order to ensure that a child will receive adequate medical treatment and maternal healthcare if required without fear of reprisals against the family. Healthcare systems including counselling must not be fettered with mandatory reporting which hits at the root of doctor-patient confidentiality. Repercussions of some of these laws may be affecting child rights in insidious ways and these voices of experts and studies of ground realities must inform law reform, policy directions and institutional goals.

How then do we proceed in order to ensure that law and policy complies with rights of children? As a legislative reform, voidability must be reinstated instead of making child marriages void. Legislative reform must be backed by research. There is a need for urgent legal reforms in order to avoid the side effects of the mandatory reporting provisions. Safe spaces for children to receive medical support and mental health care as well as protection of reproductive health rights¹²³ cannot be safeguarded if mandatory reporting continues to work in this way. Research has shown the dangers of mandatory reporting.

Where both parties are children, and it is a consensual act, it would be unclear about who the victim and who the perpetrator would be. There needs to be a more robust diversion system which does not involve incarceration of children.

The state sector schemes and programmes which are commonly used in Karnataka like the Bhagyalakshmi scheme as also the Adarsha Vivaha scheme which can be used to provide financial assistance to girl children

¹²¹Sunitha Rao, "Child Marriages in Rural Karnataka drop 50% in 15 years" [https://timesofindia.indiatimes.com/city/bengaluru/tougher-to-prevent-child-marriages-in-urban-areas-official/articleshow/79806713.cms#:~:text=BENGALURU%3A%20Child%20marriages%20in%20rural,Family%20Health%20Survey%20\(NFHS\).&text=Women%20aged%2020%2D24%20years,20%20shows%20it%20is%2021.3%25.](https://timesofindia.indiatimes.com/city/bengaluru/tougher-to-prevent-child-marriages-in-urban-areas-official/articleshow/79806713.cms#:~:text=BENGALURU%3A%20Child%20marriages%20in%20rural,Family%20Health%20Survey%20(NFHS).&text=Women%20aged%2020%2D24%20years,20%20shows%20it%20is%2021.3%25.) Accessed on 21st December 2020

¹²²Sarasu Esther Thomas, *Child Marriage Law in India and the United States: Consent and Contestation in Family and Criminal Laws*, *International Journal of Law and Policy Review*, Volume 1 No. 2 (2012) 1 available at https://www.ijlprnujs.com/IJLPR_2013_Vol_2_No_1 <https://docs.google.com/file/d/0B4XaA30casoDTjFBX24wbWpsNjA/edit>

¹²³Aparna Bhat et. al. *CHILD MARRIAGES AND THE LAW IN INDIA*, *Human Rights Law Network*(2005) pp 42-43

and protect them from marrying before the minimum age are ongoing, but it is unclear how effective they have been in reducing the problem of child marriage. It is also unclear how budgetary allocations to this scheme are made, as child protection takes up about only 1% of the Budget¹²⁴.

Better legal structures are required for reporting and access to rehabilitation options, legal support is necessary so that the child's voice in this process is adequately heard. In cases of child marriage, it is imperative that a child's voice be heard as adults around the child may not be acting in the child's best interests. A guardian ad litem may be provided to the child to ensure the child's rights against her own parents if necessary.

The Healthcare System has an important role to play in the life of the child bride and perhaps young mother. There needs to be a budgeting for training on the health systems. Rules, SOPs and trainings which will allow for a non-adversarial approach, especially in cases of child marriage, must be followed. The Supreme Court has recognised the reproductive rights of women and girls irrespective of their marital status¹²⁵.

Primary education and further education should be strengthened to cater to girls and have mechanisms to be put in place which ensure that girls are in school and to prevent drop-outs for marriage. There are signs that Covid-19 has led to early and forced marriage just for girl children in many parts of the world¹²⁶. Educators are concerned that the closing of schools has had an impact.

There must be better implementation of the Pre-Conception and Prenatal Diagnostic Techniques Act, 1994 (the PCPNDT Act). The falling sex ratio could mean that men look beyond their cohort to younger brides, exacerbating the problem of child marriage.

The child rights approach views the problem from the perspective of child rights and more particularly from the standards laid down in the UN Convention on the Rights of the Child. This would include taking all decisions keeping in mind the best interest principle, ensuring child participation in decision making as well as respecting the autonomy of children.

The best interests of children would be protected if they are free from sexual exploitation, did not have to give up their education, and be free to marry if they wished according to their choice as adults. Ensuring child participation and autonomy would mean that the child gets to choose whether to stay in a child marriage or to leave it and may exercise this choice on attaining adulthood.

Budget allocations for payment of services rendered by support persons and fees must be fixed¹²⁷. There must be information regarding compensation schemes, materials on sex education must be prepared and disseminated in educational institutions. There must be regular inspections of child protection institutions by inspection committees under the JJ Act, 2015, JJBs, CWCs¹²⁸.

¹²⁴<https://fpibengaluru.karnataka.gov.in/storage/pdf-files/budget%20documents/Child%20Budget%202020-21.pdf> at page 25

¹²⁵*Suchita Srivastava v Chandigarh Administration* (2009) 9 SCC 1

¹²⁶Available at <https://ams3.digitaloceanspaces.com/girlsnotbrides-org/www/documents/COVID-19-and-child-early-and-forced-marriage.pdf>

¹²⁷*Centre for Child and the Law, IMPLEMENTATION OF THE POCSO ACT, 2012 BY SPECIAL COURTS: CHALLENGES AND ISSUES Based on CCL-NLSIU's Studies on the Working of Special Courts in Five States, Centre for Child and the Law, National Law School of India University (2018) at p. 211*

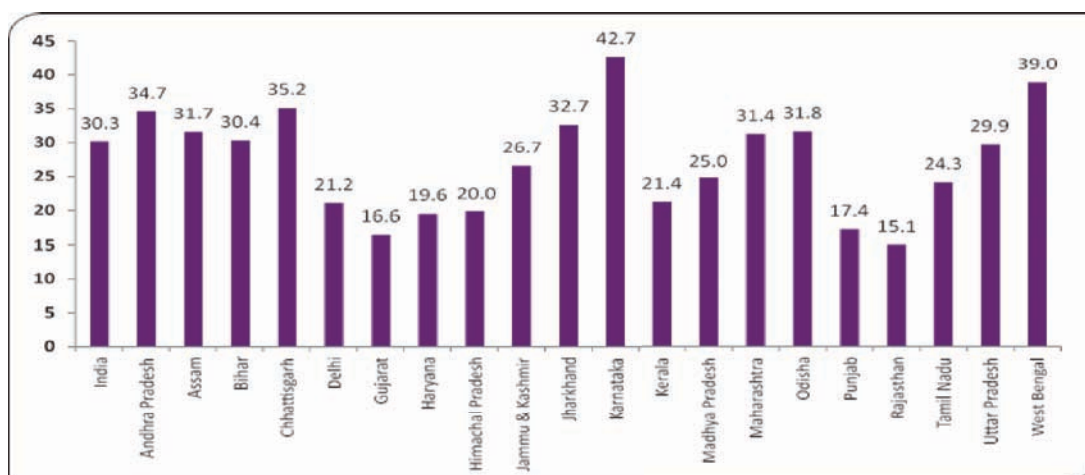
¹²⁸*ibid* at pp. 212-213

The legal system is still to adapt to these changes and throw up solutions to protect vulnerable children at risk of child marriages while at the same time recognising that the goal is the protection of child rights, especially of child brides.

Acknowledgment: Author would like to acknowledge the contributions of Ms. Lahar Jain, Ms. Keya Rebello, and Ms. Nitya Ravichandra for collecting and organising materials during their internship and Ms. Ashwini for providing secretarial assistance.

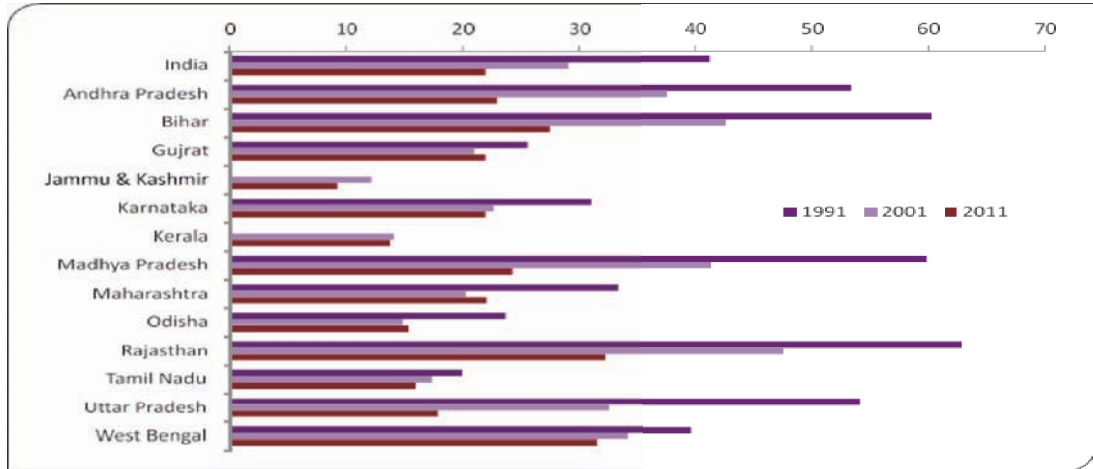
Annexure-8.1

Figure-1: Percentage of currently married women aged 18 years and below who have ever given birth, for India and select large states, 2007-08



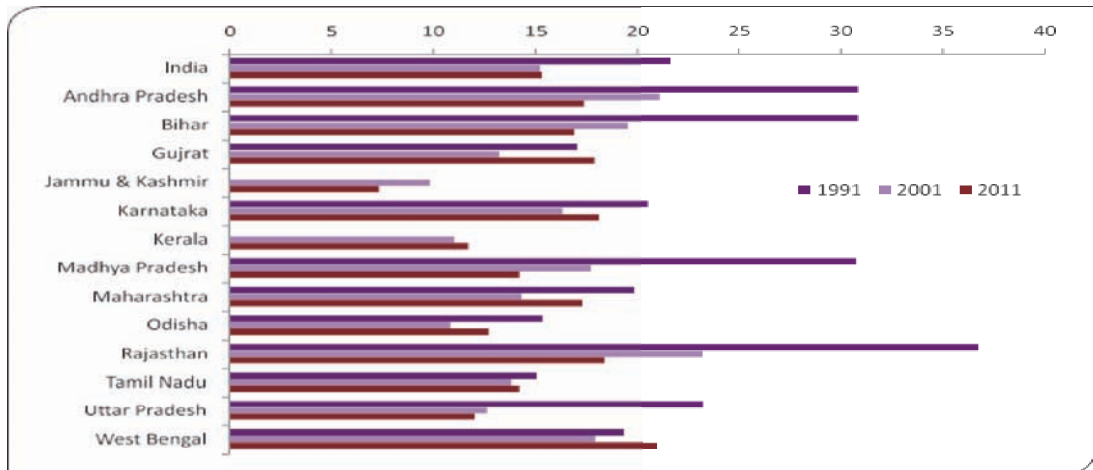
Source: District Level Household and Facility Survey (DLHS) 2007-08, Ministry of Health and Family Welfare, Government of India (New Delhi).

Figure 2. Percentage of ever-married females in the age group 15-19 years in 1991, 2001 and 2011 in rural areas in India and select large states



Source: Data from Census of India in 1991, 2001, and 2011.

Figure 3. Percentage of ever-married females in the age group 15-19 years in 1991, 2001 and 2011 in urban areas in India and select large states



Source: Data from Census of India in 1991, 2001, and 2011.

Today, 1 in 3 of the world's child brides live in India and of the country's 223 million child brides, 102 were married before turning 15¹²⁹.

¹²⁹ United Nations Children's Fund, 'Ending Child Marriage: A profile of child marriage in india', UNICEF, New York, 2019 at p.4

Chapter-9

Need-Based Child Budgeting in Karnataka

*M. R. Narayana*¹

9.1. Introduction

This chapter is focused on the policy research approach and methodology on need-based child budgeting in Karnataka state. This research aims to be analytical and includes details on policy descriptions, growth of the child population, and matching current needs of child population with current levels of budgetary allocation/expenditure in the Government of Karnataka's first Child Budget 2020-21. In addition, this research explores how the indicators related to the UN-SDGs can be linked to shifting priorities and developmental activities for children by the Government of Karnataka (GoK).

Need assessment is measured by developing a set of multi-dimensional indicators for the construction of components' indices and a composite index of child development. The framework for a choice of the select indicators is UN-SDGs as they are related to child development, using the monitoring indicators developed by UNICEF, Union Ministry of Statistics and Programme Implementation (MOSPI), and NITI Aayog. All required data are taken from the official sources, secondary in nature and available in the public domain.

Child Budget is officially prepared in India by states such as Arunachal Pradesh, Assam, Karnataka, Kerala, Maharashtra and Odisha. In general, these Child Budget preparations are diversified by the identification, classification and presentation of child centric-programmes in the respective state government budget. Further, Government of India's Statement on Allocations for the Welfare of Children (Statement No.12 in Expenditure Budget: Expenditure Profile) is presented by Demand Numbers by the Ministry and Departments since 2008-09. For FY 2021-22, the Statement includes 121 budget item allocations and expenditures under 25 Demand Numbers (Government of India, 2021). However, there is a policy need for the existing Child Budget preparations above to be based on need-assessment of children within the framework of UN-SDGs. For instance, Government of Odisha (2021a) has prepared a SDG Budget 2021-22 but not for child budget. Thus, need-based child budgeting within the UN-SDGs is a new policy imperative at national and state levels in India and contributory for the preparations of need-based Child Budget, and child development policy designs in Karnataka state in particular and other states in general. Throughout this paper, a child is a person in the age group of 0-18 years.

The rest of this chapter is organized as follows. Section 2 describes the scope of public expenditure for the preparation of the need-based Child Budget in Karnataka. Section 3 presents a framework for analyses in terms of the identification of child development indicators, methodology for construction of indicator scores and composite index of child development, and empirical results. Section 4 derives the implication of analyses for a need-based Child Budget in Karnataka. Section 5 includes the summary of main results and conclusions. Select recommendations and the way forward are highlighted in section 6.

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9.2. Scope of public expenditure for the preparation of a need-based Child Budget

9.2.1. Growth of child population as a general expenditure need for children

As per Census of India 2011, the total child population (0-18 years) in Karnataka is 2,07,29,561 persons or about 33.93 per cent of the total population of Karnataka state (6,10,95,297 persons). The child population of Karnataka is characterized by diversity in terms of gender composition, rural-urban distribution, social categorization and age distribution. For instance, as per the Census of India 2011, about 51.64 per cent were males; 63.39 per cent belonged to rural areas; 19.06 per cent were Scheduled Castes; 7.80 per cent were Scheduled Tribes; and 1.88 per cent were differently abled. Age distribution of child population shows that 29.59 per cent belong to the age group 0-5 years, 47.71 per cent to 6-14 years, 10.97 per cent to 15-16 years and 11.72 per cent to 17-18 years. Thus, Karnataka's child population has the largest share in the elementary school going population in age group 6-14 years. These figures show heterogeneity in the socio-demographic composition of the child population and need for multi-dimensional public expenditures and other policy interventions for child development in the state including adequate and need-based allocation of resources in the Child Budget.

In general, the size of child population is a common indicator for general expenditure needs of children. Other things being the same, variation in the size of child population over time (as a consequence of interaction between fertility and child mortality) may result in proportional variations in budgetary needs of children if the allocation criterion is guided by per child allocation. However, as mentioned above, the child population in Karnataka is diversified in terms of social categories, rural-urban composition, geographical regions, differently abled, and age composition of children. These compositional diversities in child population may bring differential needs for child development in the Child Budget.

Official population projections (Government of Karnataka, 2013; Government of India 2020a) are not available by the above diversities in the total population of Karnataka. For instance, Government of India (2020a) gives the latest official population projections for India and by states from 2011 to 2036. These projections are limited to a 5-year interval (2011, 2016, 2021, 2026, 2031 and 2036) and 17 broad age-groups (0-4 years to 80+ years) and by single year age from 5 years to 23 years. Hence, the changing diversity in the needs of children is not estimable by the available officially projected growth of the total population of children in Karnataka.

9.2.2. Scope of public expenditure for child development

Public expenditure on child development refers to those programmes/schemes which are designed, targeted or intended for children in the annual State Budget of GoK. This includes health (e.g. curative and preventive health and insurance), education (e.g. primary, secondary and early childhood education), social welfare (e.g. food, nutrition and hostel facilities, disability, protection against violence and abuse), and regulations (e.g. enforcement of laws for prevention of sexual offences and child labour). Benefits of the public expenditure lessen the deprivation of children from their basic needs. Further, children benefit directly or indirectly from other public expenditures on social and economic sectors which are contributory to the formation and accumulation of human capital for economic growth, higher human development, maximisation of demographic dividends, attainment of policy goals and targets including UN Sustainable Development Goals 2030 (SDGs). Thus, public expenditure on child development is broadly justifiable by the objectives of economic growth, income distribution and social justice.

The government's intervention for child development is justifiable to provide equal opportunity at affordable or subsidized cost for children who are relatively poor, vulnerable, socially disadvantaged and economically unequal. In the absence of government intervention, however, such children may be deprived of their opportunities for development due to lesser capacity to pay for private (household or out-of-pocket) expenditures and investments on human capital formation². Thus, government's intervention for child development is essential although, at times, such interventions may be selective by including socio-economic exclusionary clauses for beneficiaries.

To be holistic, need assessment for child development may include all public expenditure on the children above. If assessed within the framework of the state's Child Budget, the following basic policy useful question is answerable: Whether the allocation of budgetary resources on programmes and schemes for children is adequate? Or, whether the design of programmes and schemes realistically reflect the needs and rights of children?

9.2.3. Current framework for need-based child budgeting in GoK

The framework and methodology for the preparation of Child Budget in GoK is explained in the Child Budget 2020-21 (Government of Karnataka, 2020a) and Child Budget 2021-22 (Government of Karnataka, 2021). This includes budgeting processes from the issue of the annual Budget Circular to the presentation of the State Budget to the legislature which includes the Child Budget as one of the budget volumes. The methodology for the preparation of the Child Budget includes the identification of child centric schemes/programmes in the State Budget and classification of identified schemes/programmes into four categories: (a) 100% child centric programmes. (b) Less than 100% child centric programmes. (c) 100% child centric non-programmes. (d) Less than 100% child centric non-programmes. The State Budget allocation is totally accounted for 100% child centric programmes and non-programmes. For less than 100% child centric programmes and non-programmes, the State Budget allocation is reappropriated in proportion of the child population as per the latest population in the Census of India (i.e. Census of India in 2011).

Annual demand for grants submitted by the Line/Administrative departments for the child centric programmes and non-programmes is the most important official indicator of the annual budgetary needs (or expenditures) of their respective departments. In general, the demand for grants by the departments is prepared independent of resources' (e.g. taxes, non-taxes, and borrowings) availability and limitations. Thus, ultimately, the Finance Department allocates the budgetary resources among the competing demands (or expenditure needs) of the departments, given the constraints or limitations of revenue and capital receipts or fiscal space and objectives of the fiscal policy of the state. Further, all demands for the grants are specific to the demand numbers/departments/schemes/programmes. This approach does not guarantee the horizontal coordination of objectives for the demand for grants across demand numbers/departments/schemes/programmes in the State Budget.

Data on unmet demands of the departments are not in the public domain. Thus, observed allocations in the annual State Budget are taken as actual demands or needs of the departments. These allocations are presented by budget estimates, revised estimates and actual expenditure. For instance, Child Budget 2021-22

²In general, child development in Karnataka is contributed by public and private sectors. Private sector includes government aided institutions, households and corporate sector. Role of corporate sector through Corporate Social Responsibility initiatives, especially in education and health sectors, has been noteworthy. Contributions of private sector are complementary to public expenditure programmes for child development in the State. However, the scope of this chapter excludes the analyses of role of private sector in Karnataka's child development because they do not enter into Child Budget of GoK.

presents the estimates of allocation on the child centric programmes and non-programmes in terms of Budget Estimate for FY (2021-22), Revised Estimate for FY (2020-21) and actual expenditure of FY (2019-20).

Notwithstanding the above limitations, the current budget framework for need assessment is essential because any need-based assessment of children should be integrated within the demand for grants of the departments in the State Budget. A framework for this integration is presented below.

9.3. Framework for preparation of need-based Child Budget

A need-based Child Budget in GoK has the following four sequential preparatory steps. (a) Choice of a perspective for child development. (b) Selection of indicators for child development. (c) Construction of indicators' scores, components' indices and Composite Index of Child Development. (d) Determination of levels and priority indicators of child development in Karnataka. These steps are explained below.

9.3.1. Choice of a perspective for child development

Assessment of the multi-dimensional needs of children requires a policy perspective for child development. At present, these perspectives are evident by department-specific objectives, goals and targets for children. This approach does not integrate and consolidate the public spending of the GoK, across departments by the broad objectives of child development at the state level.

In contrast, the child rights perspective looks at budgetary allocation to programmes and schemes on children which are grounded or backed by the Constitutional provisions, legal and legislative actions at national and state levels. The United Nations Convention on the Rights of the Child (UNCRC) is the most widely ratified human rights treaty for children in the world. The child rights are inscribed in 41 Articles in Part I of UNCRC. Broadly, the rights or entitlements guaranteed to all children may be grouped under four heads: (a) Survival, health and nutrition; (b) Education and development; (c) Protection; and (d) Participation. These rights of children are affirmed by the Government of India's National Policy for Children, 2013 and 2016 (Government of India, 2016 and 2013). Karnataka State Child Protection Policy-2016 (Government of Karnataka, 2016) clearly states that: "The State is committed to ensuring child protection within the State, based on a rights-based approach, which implies promoting the safety and security of children within the framework of their legally recognized rights including children's right to participation" (Para 1.3). Thus, a rights-based approach is incorporated in Karnataka's child protection policy.

If adopted, the child rights perspective to child development shall be policy useful to identify and classify the public expenditure in the Child Budget in the following ways.

- a) **Survival, health and nutrition** interventions for child development may be clubbed together because many programmes have overlapping and intergenerational beneficiaries (e.g., pregnant women and their future children, and currently lactating mothers and their babies). Survival interventions may focus on maternal health that includes ante-natal care, safe delivery, post-natal care and nutritional support. Health programmes may aim at equitable access to preventive (including prevention of physical and mental disabilities), promotive, curative and rehabilitative health care for children. Nutrition programmes may focus on safeguarding children against hunger, poverty, deprivation and malnutrition.
- b) **Education and development** includes programmes/schemes which aim at accessible and affordable education for Early Childhood Care and Education (below 6 years of age) and school education up to

secondary levels for all children, out-of-school children, children with socio-economic disadvantages and children with special needs, promotion of creche and day care facilities for children of working mothers.

- c) **Protection** broadly covers programmes/schemes which create a caring, protective and safe environment for all children to reduce their vulnerabilities; ensure their protection from all forms of violence and abuse, harm, neglect, stigma, discrimination, deprivation (including being deprived of parental care), exploitation; and special protective measures for children in need of special protection.
- d) **Participation** includes programmes/schemes for the creation of an enabling environment and opportunities, awareness of rights, support for skill development, and respect for views of children, especially those of the girl child, children with disabilities, or children from minority groups and marginalized communities.

9.3.2. Selection of indicators for child development

Need-based child budgeting calls for developing the child development indicators and indices to assess the resource needs for child development within the framework of the Child Budget. Five important policy frameworks for the identification of plausible child development indicators in UN-SDGs framework are (i) UN-SDGs 2030 (United Nations, 2021), (ii) UNICEF's Briefing notes on SDG global indicators related to children (2018), (iii) Government of India's (Ministry of Statistics and Programme Implementation) Sustainable Development Goals (SDGs) - National Indicator Framework 2015-16 (Government of India, 2018a), (iv) NITI Aayog SDG India Index Base Line Report 2018 (Government of India, 2018b), SDG Index Report, 2019-20 (Government of India, 2019), and SDG India Index and Dashboard 2020-21 (Government of India, 2021b), and (v) SDGs 2030: Strategies and Action Plan for Karnataka (Government of Karnataka, 2020b). In what follows, the selection of plausible indicators of child development in the UN-SDGs framework is explained.

9.3.2.1. UN-Sustainable Development Goals 2030 (UN-SDGs) and child development indicators

UN-SDGs 2030 is a global framework for international development through 17 goals, 169 targets and 244 indicators (United Nations, 2021). Indicators are monitoring tools to determine the nature and extent of attainment of these targets. As targets are related to the goals, indicators help in monitoring goals through targets. Or, linking of indicators to targets and linking of targets to goals is explicit in the UN-SDGs. Within the UN-SDGs framework, UNICEF (2018) has identified 35 child-focused indicators under 10 goals as listed below. The number of child focused indicators under each goal is given in parentheses. For instance, under Goal 1 on No Poverty, there are 5 child focused indicators.

SDG 1: No Poverty (5)

SDG 2: Zero Hunger (2)

SDG 3: Good Health and Well-being (10)

SDG 4: Quality Education (4)

SDG 5: Gender Equality (4)

SDG 6: Clean Water and Sanitation (2)

SDG 7: Affordable and Clean Energy (1)

SDG 8: Decent Work and Economic Growth (1)

- SDG 9: Industry, Innovation and Infrastructure (0)
- SDG 10: Reduced Inequality (0)
- SDG 11: Sustainable Cities and Communities (0)
- SDG 12: Responsible Consumption and Production (0)
- SDG 13: Climate Action (1)
- SDG 14: Life Below Water (0)
- SDG 15: Life on Land (0)
- SDG 16: Peace, Justice and Strong Institutions (5)
- SDG 17: Partnerships for the Goals (0)

Out of 35 indicators, 28 indicators (or 80% of 35 indicators) are concentrated in 5 goals. That is, goals 1, 3, 4, 5 and 16. These goals and indicators are related to poverty, good health and well-being, quality education, gender equality and peace, justice and strong institutions. In addition, these goals broadly encompass child development from the perspective of child rights.

Among the above 35 UNICEF indicators, followings are the 17 most child-focused indicators under 7 goals. UNICEF is the custodian or co-custodian of these 17 indicators.

2.2.1 Stunting– Prevalence of stunting (height for age < 2 standard deviation from the median of WHO Child Growth Standards) among children under 5 years of age.

2.2.2 Wasting/overweight– Prevalence of malnutrition (weight for height >+2 or < -2 standard deviation from the median of WHO Child Growth Standards) among children under 5 years of age, by type (wasting and overweight).

3.1.2 Skilled attendant at birth– Proportion of births attended by skilled health personnel.

3.2.1 Under-five mortality– Under 5 mortality rate.

3.2.2 Neonatal mortality– Neonatal mortality rate.

3.b.1 Full vaccination coverage– Proportion of the population with access to affordable medicines and vaccines on a sustainable basis.

4.2.1 Early childhood development- Proportion of children under 5 years of age who are developmentally on track in health, learning and psychosocial well-being, by sex.

5.2.1 Sexual violence by intimate partner – Proportion of ever-partnered women and girls aged 15 years and older subjected to physical, sexual or psychological violence by a current or former intimate partner in the previous 12 months, by form of violence and by age

5.2.2 Sexual violence by non-intimate partner- Proportion of women and girls aged 15 years and older subjected to sexual violence by persons other than an intimate partner in the previous 12 months, by age and place of occurrence.

5.3.1 Early marriage- Proportion of women aged 20-24 years who were married or in a union before age 15 and before age 18

5.3.2 FGM/C - Proportion of girls and women aged 15-49 years who have undergone female genital mutilation/cutting, by age .

6.1.1 Safely managed drinking water- Proportion of population using safely managed drinking water services.

6.2.1 Safely managed sanitation and hygiene- Proportion of population using safely managed sanitation services, including a hand-washing facility with soap and water.

8.7.1 Child labour- Proportion and number of children aged 5-17 years engaged in child labour, by sex and age.

16.2.1 Child discipline- Proportion of children aged 1-17 years who experienced any physical punishment and/or psychological aggression by caregivers in the past month.

16.2.3 Sexual violence against children- Proportion of young women and men aged 18-29 years who experienced sexual violence by age 18.

16.9.1 Birth registration- Proportion of children under 5 years of age whose births have been registered with a civil authority, by age

In the above list, each indicator is identified by the Goal and Target number in UN-SDGs. For instance, 2.2.1 Stunting refers to Goal 2, Target 2 and Indicator 1. This means that stunting is indicator 1 in Target 2 under Goal 2. Further description of the indicators is given in United Nations (2021).

9.3.2.2. India's National Indicator Frameworks for UN-SDGs

Though not legally binding, UN-SDGs have become de facto international obligations with potential to reorient national and sub-national policy priorities in the member countries including India. However, India's commitment to implement the SDGs is based on nationally defined indicators which respond to national development priorities and needs.

The Ministry of Statistics and Programme Implementation (MOSPI) in Government of India has prepared the National Indicator Framework (NIF) for SDGs. Version 1 of this NIF in 2018 comprised 306 Indicators for 17 Goals (Government of India, 2018b). Version 2 of NIF in 2020 included 302 indicators for 17 Goals (Government of India, 2020b).

Based on the NIF (Version 1) above, the National Institution for Transforming India or NITI Aayog had constructed the SDG India Index. First, SDG-India Index: Baseline Report 2018-19 was constructed for 13 out of 17 SDGs (leaving out Goals 12, 13, 14 and 17) for states and UTs, using 62 National Indicators (aimed to measuring their progress on the outcomes of public interventions). Second, SDG India Index 2019-20 was constructed for 16 out of 17 SDGs (leaving out Goal 17) for all the states and UTs using 100 National Indicators. As of August 2022, SDG India Index 2020-21 (NITI Aayog, 2021) is the latest and constructed for 16 out of 17 SDGs (leaving out Goal 17) for all the states and UTs using 109 National Indicators.

Using the SDG India Index 2019-20 framework, the child development indicators are identified in the following ways. First, the comparability of child related indicators across the frameworks at the national level is determined. Second, the indicators in SDG India Index 2019-20 are used for identification of child

development indicators at the state level for four reasons: Data are official, consistent with MOSPI National Indicator Framework (Version 1), available at state level for comparison purposes, and the availability of overall SDG Index scores for all states. Thus, out of 100 indicators in NITI Aayog's SDG-India Index 2019-20, 24 indicators are identified as relevant for child development. These 24 indicators are listed in Table 9.1 below. Numbers in parentheses refer to the indicator which is consistent with the UN-SDG Goal, Target and Indicator. For instance, Maternal Mortality Rate (3.1.1) refer to Goal 3, Target 1 and Indicator 1 in UN-SDG.

Table 9.1: Child development indicators identified within the NITI Aayog's SDG Index 2019-20

	I. Child Health Indicators
1	Maternal Mortality Rate (3.1.1)
2	Proportion of institutional deliveries (3.1.2)
3	Under five mortality (3.2.1)
4	Percentage of fully immunised children in age group 0-5 years (3.b.1)
5	% of currently married women ages 15-49 years using modern family planning technique (3.7.1)
6	Proportion of the population (out of total eligible population) receiving social protection benefit under Maternity Benefit
	II. Child Nutrition Indicators
7	Percentage of children under age 5 years who are stunted (2.2.1)
8	Percentage of pregnant women aged 15-49 years who are anaemic (Hb<11.0 g/dl) (2.2.3)
9	Percentage of children aged 6-59 months who are anaemic (Hb<11.0 g/dl) (2.2.2)
10	Percentage children aged 0-4 years who are underweight (2.2.2)
	III. Child Education Indicators
11	Adjusted net enrolment rate of elementary and secondary education
12	Percentage of out of school children (6-13 age group)
13	Annual average dropout rate of secondary education
14	Percentage of students in grade 3, 5, 8 and 10 achieving at least a minimum proficiency level in terms of nationally defined learning outcomes to be attained by pupils at the end of each of above grades. (4.1.1)
15	Disabled children attending educational institution (5-19) (%) (5.5.1)
16	Proportion of trained teachers by education levels (Elementary and Secondary) (4.c.1)
17	Percentage of Schools with pupil-teacher ratio less than or equal to 30
	IV. Child Protection and Participation Indicators
18	Sex ratio at birth (5.1.1)
19	Proportion of sexual crime against girl children to total crime against children during the calendar year (5.2.2)
20	Proportion of schools with separate toilet facility for girls
21	Reported cognizable crimes against children per 1 lakh population (16.2.1)
22	Number of victims of human trafficking per 100000 population by sex, age and form of exploitation (16.2.2)
23	Percentage age of births registered (16.9.1)
24	Ever-married women aged 15-49 who have ever experienced spousal violence (%) (5.2.1)

Source: Author.

Salient features of the above 24 indicators are as follows.

- a) They broadly belong to the five essential areas of child development: Health; Nutrition; Education; Protection and Participation.
- b) The number of indicators varies across these major components of child development. For instance, 6 indicators are related to Health; 4 indicators are related to Nutrition; 7 indicators are related to Education; and 7 indicators are related to Protection and Participation.
- c) 11 indicators are consistent with the UN-SDG indicators. The remaining 6 indicators are specific to NIF (Version 1) and SDG Index 2019-20.
- d) 12 indicators are positive indicators (i.e. higher values mean higher development) and 12 indicators are negative indicators (i.e. higher values mean lower development).
- e) There is consistency in terms of the commonality of 11 indicators between the identified 24 indicators under 5 Goals and UNICEF's 17 most child-focused (custodian or co-custodian) indicators under 7 Goals. These 11 common indicators are as follows.

2.2.1 Stunting

2.2.2 Wasting/overweight

3.1.2 Skilled attendant at birth

3.2.1 Under-five mortality

3.b.1 Full vaccination coverage

5.2.1 Sexual violence by intimate partner

5.2.2 Sexual violence by non-intimate partner

6.2.1 Safely managed sanitation and hygiene

16.2.1 Child discipline

16.2.3 Sexual violence against children

16.9.1 Birth registration

Overall, the above 24 indicators are representative, if not exhaustive, of different dimensions of child development including child rights' perspective. Further, state-level data are available for these indicators from the official published sources for Karnataka and other states. Thus, inter-state levels of child development are comparable.

9.3.3. Construction of indicators' scores, components' indices and Composite Index of Child Development

Two statistical methods are applied for the construction of indicators' scores, components' indices and Composite Index of Child Development for Karnataka, using the 24 indicators in Table 9.1. First, NITI Aayog's SDG-India Index 2019-20 methodology. Second, Rank Score Technique. These methods are explained below. Throughout, all indicators in both the methods are given equal weight.

9.3.3.1. Methodology for construction of child development scores and indices

The methodology of SDG-India Index 2019-20 is adopted for the calculation of indicators' scores, components' indices and the construction of Composite Index of Child Development. Indicators' scores are calculated by normalizing the raw data. That is, raw data of all indicators are rescaled to a score between 0 and 100. These scores denote the distance from the national targets. A higher score indicates near to the target or a lower score indicates farther from the target. Normalized values of indicators are calculated separately for positive indicators (i.e. increasing value means higher performance) and negative indicators (i.e. increasing value means worse performance). The computational framework for the normalization of child development indicator values is as follows.

For positive indicators, the normalization formula used is as follows.

$$x' = \frac{x - \min(x)}{T(x) - \min(x)} \times 100 \quad (1)$$

Where, x' is the normalised value, x is raw data value, $\min(x)$ is minimum observed value of the indicator in the dataset, and $T(x)$ is the national target value of the indicator.

For negative indicators, the normalization formula used is given below.

$$x' = \left[1 - \frac{x - T(x)}{\max(x) - T(x)} \right] \times 100 \quad (2)$$

Where x = raw data value; $\max(x)$ = maximum observed value of the indicator in the dataset; $T(x)$ = national target value for indicator; x' = normalised value after rescaling. However, if a state has achieved higher than the target set, the normalised score is capped at 100.

Next, the computational framework for the calculation of child development components' scores is as follows.

$$I_{ij} (N_{ij}, I_{ijk}) = \sum_{k=1}^{N_{ij}} \frac{1}{N_{ij}} I_{ijk} \quad (3)$$

Where, I_{ij} is the score of i -th component in the j -th State, N_{ij} is number of normalized indicators in the i -th component in j -th state, I_{ijk} is the normalised value for x -th indicator in i -th component of j -th State. The arithmetic mean of the normalized values of all indicators under each child development component is called the component score.

Finally, the framework for computation of Composite Index of Child Development (CICD) in a state is as follows.

$$CCDI_j = \sum_{i=1}^{M_i} \frac{1}{M_j} I_{ij} \quad (4)$$

Where, $CCDI_j$ is the Composite Index of Child Development in j -th state, M_j is number of child development components in j -th state, and I_{ij} refers to i -th component's score in j -th state [as defined in equation (3)]. Hence, Composite Index of Child Development is computed as arithmetic mean of all components' scores within the j -th state.

9.3.3.2. Rank Score Method (Count Method or Borda Rule)

Rank-Score is an alternative method of calculation of the components' scores and construction of Composite Index of Child Development. In this method, each state is ranked by normalized score of each indicator in equation (1) and (2), and ranks are summed up for each component to obtain the rank scores for each component. Finally, rank scores of all components are summed up to obtain the total rank score for each state. Accordingly, each state is ranked by the total rank scores by components and for all components. A state which gets the lowest rank scores is ranked first and is considered most advanced or best performing in child development.

Rank-Score Method is also useful to determine the current level of attainment by each component vis-à-vis their best performing level. This is a useful policy guide on the design and implementation of strategies towards targeted attainment of child development goals and targets.

Following OECD (2008), Rank Score Method is the simplest additive aggregation method that entails the calculation of the ranking of each state according to each individual indicator and summation of the resulting rankings. The method is based on ordinal information (the Borda rule). It is simple and independent of outliers. However, the absolute value of information is lost in Rank Score Method.

9.3.4. Determination of levels and priority indicators of child development in Karnataka

Using the data in the NITI Aayog's SDG-Index Report 2019-20, the following empirical results are obtained on the levels and priority indicators of child development in Karnataka in 2019-20. For comparative analysis, Karnataka's level is compared with other states in southern India, viz., Andhra Pradesh, Kerala, Tamil Nadu and Telangana.

9.3.4.1. Empirical results based on NITI Aayog's SDG-Index methodology

Table 9.2 gives the computed values of the child development components' scores and Composite Index of Child Development. For comparative purposes, the values of all scores and indices are given for other Southern states, viz., Andhra Pradesh, Kerala, Tamil Nadu and Telangana.

Table 9.2: Level and composition of child development in Karnataka State based on NITI Aayog's SDG-Index method: 2019-20

Child development scores: Component-wise and Composite Index	Total Scores and Ranking of States				
	Karnataka	Andhra Pradesh	Kerala	Tamil Nadu	Telangana
1. Child Health Component	54 (3)	61 (2)	65 (1)	61 (2)	61 (2)
2. Child Nutrition Component	38 (3)	29 (5)	78 (1)	56 (2)	36 (4)
3. Child Education Component	64 (2)	57 (3)	71 (1)	64(2)	56 (4)
4. Child Protection and Participation Component	80 (2)	75 (3)	83 (1)	75 (3)	67 (4)
Composite Index of Child Development (CICD)	62 (3)	59 (4)	74 (1)	65 (2)	57 (5)
Performance categorization based on CICD	Performer	Performer	Front Runner	Front Runner	Performer
Composite SDG Index (All States are in Front Runner category)	67 (2)	66 (3)	70 (1)	67 (2)	67 (2)

Source: Author

Child Health Component score is calculated in the framework of equations (3) and by using child health indicators in Table 9.1. In the same way, child nutrition, education and protection and participation components' scores are calculated by using the relevant indicators in Table 9.1. Kerala ranks first in all the child development scores. Karnataka ranks third and lowest in health and nutrition component scores and ranks second in education and protection and participation scores. In terms of Composite Index of Child Development (CICD), Karnataka ranks third. The gap between the target (100) and the current achievement level shows the attainment distance in each component and composite scores. A bigger gap implies a longer distance to attain the targets and a smaller gap implies a shorter distance to attain the targets.

NITI Aayog (Government of India, 2019) has developed criteria for categorization of states by four levels of attainment of UN-SGD indicators. That is, a state is an Achiever if its overall score is 100; Front Runner, if the score is in the range of 65-99; Performer, if the score is in the range of 50-64 and Aspirant, if the score is in the range of 0-49. Accordingly, the achievement levels of states in child development in Table 9.2 can be categorized. That is, Karnataka is a Performer in CICD. Other states who are in the category of Performer are Andhra Pradesh and Telangana. In contrast, Kerala and Tamil Nadu are in the category of Front Runner.

As per the NITI Aayog's calculations (Government of India, 2019), Karnataka's total score in overall SDG-Index is 67. Scores for other states like Tamil Nadu and Telangana are evident in Table 9.2. Accordingly, Karnataka ranks second among the states in Table 9.2 in the overall SDG-Index scores. Interestingly, Karnataka's ranking in the overall SDG-Index is higher than in CICD. Thus, Karnataka's ranking is relatively lower in the child development components and CICD in 2019-20.

9.3.4.2. Empirical results based on Rank Score Method

Table 9.3 gives the computed values of scores for the individual child development component and Total Rank Score for all components based on the Rank Score Method explained in section 9.3.3.2.

Table 9.3: Level and composition of child development in Karnataka State based on Rank Score Method: 2019-20

Child development components and overall child development	Total Rank Scores and Ranking of States				
	Karnataka	Andhra Pradesh	Kerala	Tamil Nadu	Telangana
1. Child Health Component	24 (5)	17 (3)	12 (1)	16 (2)	19 (4)
2. Child Nutrition Component	15 (4)	19 (5)	5 (1)	7 (2)	14 (3)
3. Child Education Component	22 (3)	23 (4)	13 (1)	18 (2)	27 (5)
4. Child Protection and Participation Component	18 (2)	21 (4)	19 (3)	16 (1)	31 (5)
Total Rank Scores (TRS) or Overall Child Development	79 (3)	80 (4)	49 (1)	57 (2)	91 (5)
Current achievement levels via-a-vis the best performance level in child development (%)					
1. Child Health Component	0.25	0.35	0.50	0.38	0.32
2. Child Nutrition Component	0.27	0.21	0.80	0.57	0.29
3. Child Education Component	0.32	0.30	0.54	0.39	0.26
4. Child Protection and Participation Component	0.39	0.33	0.37	0.44	0.23
Overall Child Development	0.30	0.30	0.49	0.42	0.26

Note: Figures in parentheses are relative ranks of states by rank scores in each component.

Source: Author

The upper part of Table 9.3 shows the total rank scores by each component of child development in each state. Given the number of indicators by each component is Table 9.1, the minimum and maximum score for each component is as follows. Health component (Minimum is 6 and maximum is 30); Nutrition component (Minimum 4 and maximum 20); Education component (Minimum 7 and maximum 35); and Protection and participation component (Minimum 7 and maximum 35). Minimum ranks' scores for a state is equal to total number of indicators in each component and maximum rank score for a state is equal to total number of indicators multiplied by the total number of states. Further, a minimum score indicates the highest development and maximum score indicates the lowest development because the top performing state in each indicator is assigned a score 1. In principle, all computed scores must lie within these ranges. The results in Table 9.3 are consistent with this requirement of the Rank Score Method.

Karnataka's total rank scores in the child health component is 24, child nutrition component is 15, child education component is 22 and child protection and participation component is 18. As per the Rank Score Method, if Karnataka were to attain the top performance, its scores in these components should have been 6, 4, 7 and 7 respectively. However, no rank scores in any component is closer to these top performance scores. Comparatively, Karnataka's total rank scores for the protection and participation component is 2nd among the 5 states. In all other components' scores, Karnataka's relative ranking is below the 2nd position. Karnataka's lowest performance is evident in total rank scores for the health component (24) which is the highest among the 5 states.

Further, Karnataka stands 3rd among the 5 states by overall child development scores (79). These total scores for overall child development are the counterpart of CCID in Table 9.2. Thus, the scores are a measure of the Composite Index of Child Development in Rank Score Method.

The lower part of Table 9.3 gives the current level of attainment of goals and targets through the indicators via-vis the best performance scores. The current best performance attainment levels are calculated by dividing the minimum attainable scores (or best performance scores) in each component by actual scores. For instance, the best performance scores for health component are 6 and Karnataka's actual total rank scores in health component are 24. Thus, current attainment level is (6/24) or 0.25 or 25 percent of best performance. This implies a gap of 75 percent in best performance level of health component's indicators among the Southern states. In contrast, Kerala, being the top performing state, has the current level of best performance of 50 percent in health component's indicators. Overall, Karnataka's current achievement level in child development indicators is 30 percent of best performance. This is lower than Kerala (49 percent) and Tamil Nadu (42 percent), equal to Andhra Pradesh (30 percent) and higher than Telangana (26 percent).

It is important to identify the determinants or priority indicators of strengthening Karnataka's performance in the above child development components. To identify the same, the relative ranks of Karnataka in all 24 indicators is given in Table 9.4. It is apparent that, among the five states, Karnataka has the lowest (or 5th position) rank in 7 indicators, 4th position in 3 indicators, 3rd position in 7 indicators, 2nd position in 4 indicators and 1st position in 3 indicators. Thus, policy priority may be given to improve the competitive performance in those indicators in which Karnataka is lagging behind now.

Table 9.4: Karnataka's relative ranking in child development indicators: 2019-20

	Child Development Indicators	Karnataka's relative ranking among 5 states
	I. Child Health Indicators	
1	Maternal Mortality Rate	5
2	Proportion of Institutional Deliveries	5
3	Under five Mortality	3
4	Percentage of fully immunised children in the age group 0-5 years	4
5	Percentage of currently married women ages 15-49 years using modern family planning technique	4
6	Proportion of the population (out of total eligible population) receiving social protection benefit under Maternity Benefit	3
	II. Child Nutrition Indicators	
7	Percentage of children under age 5 years who are stunted	5
8	Percentage of pregnant women aged 15-49 years who are anaemic (Hb<11.0 g/dl)	3
9	Percentage of children aged 6-59 months who are anaemic (Hb<11.0 g/dl)	3
10	Percentage children aged 0-4 years who are underweight	4
	III. Child Education Indicators	
11	Adjusted Net Enrolment rate of Elementary and Secondary education	3
12	Percentage of Out of School children (6-13 age group)	5
13	Annual average dropout rate of Secondary education	5
14	Percentage of students in grade 3, 5, 8 and 10 achieving at least a minimum proficiency level in terms of nationally defined learning outcomes to be attained by pupils at the end of each of above grades.	1
15	Disabled children attending educational institution (5-19) (%)	2
16	Proportion of trained teachers by education levels (Elementary and Secondary)	1
17	Percentage of Schools with PTR less than or equal to 30	5

	IV. Child Protection and Participation Indicators	
18	Sex ratio at birth	2
19	Proportion of sexual crime against girl children to total crime against children during the calendar year	1
20	Proportion of schools with separate toilet facility for girls	5
21	Reported cognizable crimes against children per 1 lakh population	3
22	Number of victims of human trafficking per 100000 population by sex, age and form of exploitation	3
23	Percentage of births registered	2
24	Percentage of ever-married women aged 15-49 who have ever experienced spousal violence	2

Source: Author

9.4. Summary of main results and implications

The main results from within the analyses of this chapter are as follows.

- (i) This chapter has developed a simple empirical approach for need-based child budgeting in Karnataka. The approach captures the multi-dimensional aspects of child development. The indicators for child development are selected from the multiple official approaches from the global to the national levels using UN-SDGs 2030. Methodology for construction of indicators' scores and composite index of child development are based on NITI Aayog's SDG-Index 2019-20 and Rank Score Method. Operational aspects of these methods are illustrated by using the official data from the NITI Aayog.
- (ii) The approach and results in section 9.3 above can be linked to the need-based child budget in terms of accomplishing the goals, targets and indicators for child development in the framework of UN-SDGs. This calls for redesigning the child development programmes with explicit goals, targets and indicators within the framework of UN-SDGs by the Line Departments. Accordingly, budgetary resource requirements for targeted attainment of goals and targets in the specified time framework can be formulated and the same can be integrated into the annual budgeting process through the formulation of the demand for grants. This approach calls for a medium/long term planning of child development programmes and its annual execution/implementation through budgetary allocation, releases and utilization. In this regard, the indicators are also useful as monitoring indicators of the progress of the child development programmes through their implementation process and tracking public expenditure of those child development programmes for their intended beneficiaries. However, the preparation of need-based Child Budget is new for GoK. Its implementation may call for knowledge-building and technical capacity-building training programmes or workshops for the officers in the Line Departments where a large number child development programmes are designed and implemented.
- iii) Empirical results show that Karnataka's level of child development in 2019-20 lags behind other states in South India. Further, these results have policy implications for corrective policy interventions to strengthen child development in future because Karnataka's current best performance achievement levels of goals and targets through the indicators are at 30%.
- iv) Of the five southern states, Karnataka has the lowest (or 5th position) rank in 7 indicators [maternal mortality rate, proportion of institutional deliveries, percentage of children under age 5 years who are stunted, percentage of out of school children (6-13 age group), annual average dropout rate of secondary

education, percentage of schools with PTR less than or equal to 30, and proportion of schools with separate toilet facility for girls], 4th position in 3 indicators [percentage of fully immunised children in age group 0-5 years, percentage of currently married women ages 15-49 years using modern family planning techniques, and percentage children aged 0-4 years who are underweight], 3rd position in 7 indicators [under five mortality, proportion of the population (out of total eligible population) receiving social protection benefit under Maternity Benefit, percentage of pregnant women aged 15-49 years who are anaemic (Hb<11.0 g/dl), percentage of children aged 6-59 months who are anaemic (Hb<11.0 g/dl), adjusted Net Enrolment rate of Elementary and Secondary education, Reported cognizable crimes against children per 1 lakh population, number of victims of human trafficking per 100000 population by sex, age and form of exploitation, and number of victims of human trafficking per 100000 population by sex, age and form of exploitation], 2nd position in 4 indicators [percentage of disabled children attending educational institution (5-19), sex ratio at birth, percentage age of births registered, and ever-married women aged 15-49 who have ever experienced spousal violence (%)] and 1st position in 3 indicators [percentage of students in grade 3, 5, 8 and 10 achieving at least a minimum proficiency level in terms of nationally defined learning outcomes to be attained by pupils at the end of each of above grades, proportion of trained teachers by education levels (Elementary and Secondary), and proportion of sexual crime against girl children to total crime against children during the calendar year]. Thus, policy priority may be given to improve the competitive performance in those indicators in which Karnataka is at the bottom now. This is a plausible approach to translate the above ranking into strengthening the current and future child development programmes by the respective Line Departments.

- v) Karnataka's attainment of best performance levels of child development in 2019-20 is remarkably low (30%). This attainment shows considerable variations across components. That is, Child Health Component (25%), Child Nutrition Component (27%), Child Education Component (32%), Child Protection and Participation Component (39%). This implies a policy need for overall child development to attain the desired targets by child development indicators. In addition, these results are policy useful to link the quantum of progress targeted in the short and long term to the additional budget needed in terms of demand for grants.
- vi) Need-based budgeting for child development calls for integrating the budgetary needs for child development outcomes through the demand for grants by Line Departments (who design, implement, monitor and evaluate the programmes) in GoK. The empirical framework for need-based budgeting for child development in Karnataka is a useful guide for the Line Department to reorient their programmatic child budgeting from the perspective of SDGs and integrate them into need-based departmental budget. These outcome indicators are also useful as monitoring indicators for the child development programmes through their implementation process. GoK has well established digital support systems for monitoring the implementation of expenditure of budgetary allocations for the development programmes including child development programmes. For instance, the New Decision Support System (DSS) database or Avalokana for programmes' monitoring at Karnataka Development Programmes (KDP) meetings at the state, Zilla Panchayat level and Gram Panchayat levels. This support system is useful for monitoring the expenditure in terms of releases and utilization of budget allocation for development programmes including child development programmes. Avalokana also includes 29 monitoring indicators (child

and non-related indicators) of UN-SDGs in Karnataka. However, KDP's approach to monitoring the development programmes is a plausible institutional framework to monitor the progress of child development indicators, if the child development indicators and targets by programmes can be integrated into the current KDP monitoring framework.

9.5. Way forward

Based on the analyses and empirical results above, we recommend the following as ways forward for future policy design and analyses.

9.5.1. Mapping the Child Budget to Child Development Indicators

An attempt to map 279 Heads of Account (HoAs) in GoK's Child Budget 2020-21 to 24 child development indicators is faced with following challenges. First, each Head of Account cannot be uniquely mapped to one of 24 indicators. For example, several HoAs in Education can be associated with more than one child education indicator in Table 9.1. In this case, assessment of budgetary needs by child development indicators may not be plausible in the current budget framework. Alternatively, an attempt to map the HoAs to targets associated with the indicators is encountered with a similar problem of no unique correspondence between HoAs and targets for the child development. Further, there is a problem with the divisibility of child beneficiaries by indicators. For instance, under the ICDS programme, education under Early Childhood Care Education (ECCE) is called pre-school education for children in the age group 3-6 years. This programme is also relevant for caregivers of children. The ECCE is implemented through Anganwadi Centres under ICDS in Department of Women and Child Development. By design, ICDS integrates education, health, nutrition and other early childhood needs. Thus, ECCE is a component of the ICDS programme. Under ICDS, public expenditure for the ECCE is not strictly separable from other activities (i.e. health and nutrition programme interventions) because the same Anganwadi workers deliver all the integrated services for the same children. These analyses imply the following.

- i) From the programmes' design perspective, the Line Department of a multi-sectoral programme like ECCE may take into account the various indicators from the SDGs framework that needs to be included in regular programming. This may require detailed mapping of a programme's activities to the indicators and the budgetary allocation for each programme activity would then give an idea of what the needs could be in terms of the programme and its future budgetary implication. Thus, a need-based budgeting requires considering the programmatic needs that contribute to the progress of the targets and indicators. Or, the budgetary need mapping can only be undertaken once the programmes are mapped to indicators and a gap analysis done at the programmes' design level.
- ii) From the monitoring perspective, Child Budget can be mapped to goals and not to individual indicators where a number of budget lines can be clubbed and linked with different sets of activities to fulfil the goals/targets. This clubbing is plausible if the indicators are interdependent and cannot be measured and achieved in isolation. Also, an activity or intervention that relates to a development indicator may naturally have a number of diverse budget lines across departments (e.g. ECCE intervention clubs education interventions along with nutrition and health and is delivered through an AWC and therefore, there may be budgetary allocations under health and WCD departments).
- iii) At the macro level, effective mapping of the Child Budget to Child Development Indicators or vice versa by a broad group or objectives of child development programmes is considerable, such as child

rights perspectives: (a) Survival, health and nutrition, (b) Education and development, (c) Protection, and (d) Participation. Further, lessons from the global experiences of this mapping by the governments' budget to attain the goals and targets of UN-SDGs are of utmost policy importance for Karnataka to integrate need-based budgeting into the current framework of the Child Budget.

9.5.2. Broaden the scope of child development indicators

The child development indicators in this chapter are limited to the availability and comparability of SDG indicators in SDG India Index 2019-20 (Index 2.0). The latest (Index 3.0) SDG India Index 2020-21 (Government of India, 2021) was released in May 2021. Of 115 indicators constructed, 75 are common to Index 2.0. Of 75 common indicators, updated values have been used for 57 indicators. However, 109 indicators have been used for Index estimation in 2020-21. The updated scores for child development indicators shall be useful to extend and update the computations of indices in this chapter for 2019-20.

Further, additional indicators are identifiable from (1) UN-SDGs 2030, (2) UNICEF's Briefing notes on SDG global indicators related to children (2018), (3) Government of India's (Ministry of Statistics and Programme Implementation) Sustainable Development Goals (SDGs) - National Indicator Framework 2015-16, and (4) SDGs 2030: Strategies and Action Plan for Karnataka (2020). Thus, exploration of the possibilities to broaden the scope of the child development indicators outside the SDG India Index framework as well, subject to availability and comparability of official data, may deserve a serious policy attention.

9.5.3. Capacity-building for policy formulation and analysis on need-based child development programmes in Child Budget

Capacity-building for the child centric departments for the preparation of need-based Child Budget of GoK is essential for developing and integrating the child development related goals, targets and indicators of UN-SDG into the departmental budget, using the National Indicator Framework and other official frameworks at global and state levels. This capacity-building may also include mapping of child budget lines to SDG-based Child Budget indicators in order to develop need-based child budgeting in GoK. This capacity-building is essential to integrate the need-based budgeting in the current demand for grants-based child budgeting in Karnataka.

9.5.4. Expenditure tracking of child development programmes

In general, Child Budget shows the budgetary allocation and expenditure to child-centric and related programmes or schemes in terms of Budget Estimate, Revised Estimates and Actual Expenditure. Budget allocation can be related to monitoring/outcome/impact indicators through expenditure tracking methods. Public expenditure tracking aims at examining how public resources flow to the ultimate and intended beneficiaries in a programme/scheme. It is useful, among others, to (a) correct for inclusion or exclusion errors, and (b) determine effectiveness and efficiency in the implementation of child development programmes. Administratively, expenditure tracking is a process of monitoring the release and utilization of budget allocation and attainment of financial and physical targets of the child development programmes/schemes.

Karnataka's Child Budget comprises three types of schemes: State Sector Schemes; Centrally-Sponsored Schemes; and District Sector Schemes. For instance, Child Budget 2021-22 allocation shows that of the total child centric programmes (308), 31 programmes are in District Sector but the share of allocations to district sector programmes is 69.32%. Thus, expenditure tracking of child development programmes is of special

relevance for the District Sector programmes in GoK, especially from the perspective of balanced regional (or inter-district) child development in the state.

9.5.5. Demographic features and disaggregation in Child Budget

The child population in Karnataka is diversified in terms of social categories, rural-urban composition, geographical regions, differently able, and age composition of children. Ex post analyses of Child Budget based on these demographic changes may offer useful insights on the design of child development policies and programmes targeted for these demographic groups. If child development indicators are linkable to these demographic groups, the indicators shall also be useful to monitor the impact of programmes on these demographic groups in the population. Further, construction of child development indices at district, taluk and village panchayat level may be useful for decentralized policy formulation and implementation for child development in Karnataka.

If implemented, the above recommendations will go a long way for (a) preparation of departmental budget (or demand for grants) by including the resource needs for achieving the plausible goals and targets of child development through the child development indicators within the framework of UN-SDGs; (b) determine the adequacy of allocation/spending for children by need-based Child Budget; and (c) provide with empirical frameworks and bases for expenditure monitoring and tracking of child development programmes in Child Budget.

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This book contains eight research papers on child budgeting and development within the framework of public finances for children in Karnataka State. These papers focus on the multi-dimensional micro and macro issues and challenges of child development from the perspectives of child health, nutrition and survival, education, legal frameworks for child protection, socio-demographic aspects of children, public financing and budgeting framework for child development in Karnataka State. This book is a scientific beginning of research on public finances for children in Karnataka State. It has the potential to be expanded and extended in future as a policy reference and guide. This book is also a useful reference to national and state level policymakers, child development practitioners, academicians and professionals in research and teaching of public finance with special reference to children in India.

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