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### RESEARCH ARTICLE

#### ASSESSMENT OF AVAILABLE RESOURCES, CHALLENGES OF DISTRICT EARLY INTERVENTION CENTRE UNDER RASHTRIYA BAL SWASTHYA KARYAKRAM AT DISTRICT JODHPUR: A CROSS SECTIONAL STUDY

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#### Abstract

**Background:** The Government of India launched the child health screening and early Intervention programme called Rashtriya Bal Swasthya Karyakram in 2014 to screen children from 0 to 18 years for the early detection of 4 D's (Defects, Diseases, Deficiency, and Developmental Delays including disabilities). Under this program, district early intervention centres (DEICs) are set up as nodal centres at the district level to manage the cases of 4Ds.

**Objectives:** To assess the available resources, challenges of District Early Intervention Centre under Rashtriya Bal Swasthya Karyakram at District Jodhpur.

**Methodology:** A cross sectional study was conducted in the month of April. Jodhpur district was selected by purposive sampling. Data regarding the available resources was collected by using observational checklist and the information regarding the challenges was collected by semi structured questionnaire through face-to-face interview with the DEIC manager.

**Results:** The results reveal that DEIC of district Jodhpur is deficient in terms of staff, equipment and physical space. The challenges identified were resistance in caretakers regarding treatment and less staff and physical space available for DEIC.

**Conclusion:** Overall the researcher identified that there was a deficiency of staff, furniture and medical equipment and tools at DEIC and the main challenges were community resistance, less staff and physical space. There is a need to be filled up vacant post and provide needed infrastructural facilities. separately so that RBSK program in DEIC can run smoothly and effectively. Education and sensitization of community with reinforcement could help to overcome the resistance in community.

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#### Introduction:-

India is home to 472 million children, who are below the age of 18 years, and comprise 39 percent of the country's total population. Out of the 128.5 million children residing in urban areas, close to 7.8 million children between the ages of 0 to six years still live in the conditions of poverty and backwardness in informal settlements, making it vital that one plans and builds sustainable and inclusive cities from their perspective<sup>1</sup>.

Children are central to sustainable development. It is well known that millions of children under five years of age in our country still do not receive appropriate care and support to become physically healthy, mentally alert and emotionally secure. According to March of Dimes (2006), out of every **100** babies born annually, **6 to 7** have a birth defect". India's annual birth cohort is **26 million**, this would translate to around **17 lakh** birth defects, which account for almost **10%** of the total newborn deaths and **4%** of under-five mortalities in our country. Children also suffer from a variety of deficiencies. Various nutritional deficiencies affecting the preschool children range from **4 to 70%**. Nearly **47%** of all children are malnourished, **43%** underweight and **20%** wasted, including 8 million severely acute malnourished children<sup>2</sup>.

The Ministry of Health & Family Welfare under the National Rural Health Mission has launched the Rashtriya Bal Swasthya Karyakram in 2013, a systemic approach of early identification and link to care, support and treatment to meet these challenges. It is estimated that about 270 million children including the new born and those attending Anganwadi Centres and Government schools will be benefitted through this program.

Any effective health intervention will reduce both direct costs and out-of-pocket expenditure. Child Health Screening and Early Intervention Services also aim at reducing the extent of disability, at improving the quality of life and enabling all persons to achieve their full potential<sup>3</sup>.

#### **District Early Intervention Centre (DEIC):**

The early intervention centres are to be established at the District Hospital level across the country as District Early Intervention Centres (DEIC). The purpose of DEIC is to provide referral support to children detected with health conditions during health screening, primarily for children up to 6 years of age group. There is also a provision for engaging a manager who would carry out mapping of tertiary care facilities in Government institutions for ensuring adequate referral support. The funds will be provided under NHM for management at the tertiary level at the rates –fixed by State Governments in consultation with Ministry of Health & Family Welfare<sup>4</sup>.

Composition of Team at DEIC The team consists of one Paediatrician, one medical officer, one dental surgeon, psychotherapist, audiologist and speech therapist, psychologist, optometrist, early interventionist-cum-special educator-cum-social worker, Lab. Technician, dental technician, Manager and data entry operator one each<sup>4</sup>.

The DEIC would promptly respond to and manage all issues related to developmental delays, hearing defects, vision impairment, neuromotor diseases, speech and languages delay, autism and cognitive impairment. DEIC is established with the aim to have more accessible health facilities with infrastructure and resources for interdisciplinary evaluation and intervention to be delivered under one roof. Mostly, disease and deficiency related cases are managed at CHC and defects at birth and developmental delays are referred to DEIC for management. All the cases are treated free of cost<sup>5</sup>.

With this background, the present study was conducted with the aim to evaluate the infrastructure of DEIC and challenges under RBSK programme so far and explore the problems and to recommend remedial measures.

#### **Objectives:-**

To assess the available resources, challenges of District Early Intervention Centre under Rashtriya Bal Swasthya Karyakram at District Jodhpur.

#### **Methodology:-**

Cross sectional research approach was used for the present study. The study was conducted at the district early intervention centre which is located at Mathuradas Mathur hospital district Jodhpur of Rajasthan. Jodhpur district was selected by purposive sampling. The study was conducted in the month of April 2022. Data regarding the available resources was collected by using observational checklist which was prepared according to the guidelines of RBSK program. The information regarding the challenges was collected by semi structured questionnaire through face-to-face interview with the DEIC manager. Ethical clearance was obtained from IEC AIIMS, Jodhpur. Written informed Consent was taken from the DEIC Manager regarding his willingness to participate in the research project. Confidentiality of data was maintained.

**Results:-****Table 1:-** Staff Position of DEIC, District Jodhpur.

Sr. No.	Name of the Post	Sanctioned	In Position	Vacant
i.	Paediatrician	1	1	0
ii.	Medical Officer	1	1	0
iii.	Dental Doctor	1	0	1
iv	Physiotherapist	1	1	0
v	Clinical Psychologist	1	1	0
vi	Paediatric Optometrist	1	0	1
vii	Paediatric Audiologist & Speech pathologist	1	0	1
viii	E I cum Social Worker	1	1	0
ix	Lab Technician	1	0	1
x	Dental Technician	1	0	1
xi	Manager	1	0	1
xii	Data Entry Operator	1	0	1
xiii	Genetic Counsellor	1	0	1
	Total	13	5	8

Table 1 reveals the staff position at District early intervention centre under RBSK program. With regard to staff, paediatrician, medical officer, Physiotherapist, Clinical psychologist and social worker were present whereas dentist, Paediatric optometrist, audiologist, lab technician, data entry operator and genetic counsellor were not present at DEIC.

**Table 2:-** Status of available furniture at District Early Intervention Centre under RBSK program.

2.	Furniture	Present (as per recommendation)
i.	Tables for consultation and examination for each room including reception	1
ii	Cupboards for storage for each room	1
iii	Racks for material for each room	1
iv	Display boards for each room	1
v	Computer Desktops for Reception/Registration and DEIC Manager room with internet facility	1
vi	Water Dispenser	1
vii	Television for the Waiting area	0
viii	Speaker System	0
ix	Intercom System for each room	0

Table 2 depicts the available status of furniture at District Early Intervention Centre under RBSK program. In case of furniture, tables cupboards, racks, display boards, desktop and water dispenser were present while television, speaker system and Intercom was not present at DEIC, Jodhpur.

**Table 3:-** Table 2: Status of available equipment and tools at District Early Intervention Centre under RBSK program.

Sr. No.	Equipment & Tools	Sanctioned Quantity	Present (as per recommendation)
	<b>Medical equipment</b>		
I	Paediatric Stethoscope	2	2
ii	Sphygmomanometer with pediatric cuff	2	2
iii	Direct Ophthalmoscope	1	1
iv	Ear speculum	2	0
v	Auroscope	1	0
vi	Magnifying glass	2	1
vii	Weighing machine (both baby and adult)	2	1

<b>Viii</b>	Infantometer	<b>2</b>	<b>1</b>
<b>Ix</b>	Stadiometer	<b>2</b>	<b>1</b>
<b>X</b>	Measuring tape	<b>2</b>	<b>1</b>
<b>Xi</b>	Torch	<b>2</b>	<b>1</b>
<b>Xii</b>	Knee hammer	<b>2</b>	<b>1</b>
<b>Xiii</b>	X Ray viewer	<b>2</b>	<b>0</b>

Table 3 shows the status of available equipment and tools at District Early Intervention Centre under RBSK program. With regards to equipment and tools, all the equipment were present except ear speculum, Auroscope and Xray.

**Table 4:-** Status of available physical space at District Early Intervention Centre under RBSK program.

<b>Sr. No.</b>	<b>Physical Space</b>	<b>Present (as per recommendation)</b>	<b>Not Present</b>
<b>I</b>	Reception lounge cum waiting	<b>1</b>	<b>0</b>
<b>Ii</b>	Registration and anthropometry	<b>1</b>	<b>0</b>
<b>Iii</b>	Nursing /nutrition area	<b>0</b>	<b>1</b>
<b>Iv</b>	Sensory Integration area	<b>0</b>	<b>1</b>
<b>V</b>	Paediatric Examination area	<b>1</b>	<b>0</b>
<b>Vi</b>	ECG cum ECHO room	<b>0</b>	<b>1</b>
<b>Vii</b>	Dental intervention room	<b>0</b>	<b>1</b>
<b>Viii</b>	Speech & Language Assessment room	<b>0</b>	<b>1</b>
<b>Ix</b>	Vision Assessment room	<b>0</b>	<b>1</b>
<b>X</b>	Hearing Assessment room	<b>0</b>	<b>1</b>
<b>Xi</b>	Occupational Therapy room	<b>0</b>	<b>1</b>
<b>Xii</b>	Psychological Assessment room	<b>1</b>	<b>0</b>
<b>Xiii</b>	Laboratory	<b>0</b>	<b>1</b>
<b>Xiv</b>	Play Area	<b>0</b>	<b>1</b>
<b>Xv</b>	Pantry	<b>0</b>	<b>1</b>
<b>Xvi</b>	Gender Specific and User-friendly toilets	<b>1</b>	<b>0</b>
<b>Xvii</b>	Manager and data entry room	<b>1</b>	<b>0</b>
<b>Xviii</b>	Two OPDs	<b>0</b>	<b>1</b>
<b>Xix</b>	Store	<b>0</b>	<b>1</b>
<b>Xx</b>	Ramp (disabled friendly)	<b>1</b>	<b>0</b>
<b>Xxi</b>	Outdoor space for Sensory integration garden	<b>0</b>	<b>1</b>

Table 4 depicts the status of available physical space (as per the recommendations) at District Early Intervention Centre under RBSK program. The results showed that in case of physical space, only reception, registration, paediatric examination area, gender specific toilets, data entry room, was present rest was absent.

### **Challenges of District Early Intervention Centre under Rashtriya Bal Swasthya Karyakram at District Jodhpur**

The information regarding the challenges was collected by semistructured questionnaire through face-to-face interview with the DEIC manager. The main challenge faced in the District Early intervention Centre is the community resistance faced by the DEIC manager. The caregivers are not ready to take treatment even though the treatment is free of cost. Even if they are coming once, they are not coming for follow ups. The other challenge is unavailability of physical space. DEIC is running in the MCH wing of MDM hospital. They have very less space to work because of that they are not able to use their equipment or articles.

### **Discussion:-**

The RBSK project was launched in February 2013 with the objectives of early detection and management of the 4Ds, and in this study, researcher tried to assess available resources and challenges of District Early intervention centre of RBSK in Jodhpur, Rajasthan

The present study reveals that DEIC of district Jodhpur is deficient in terms of staff, equipment and physical space. With regard to staff, paediatrician, medical officer, Physiotherapist, Clinical psychologist and social worker were present whereas dentist, Paediatric optometrist, audiologist, lab technician, data entry operator and genetic counsellor were not present at DEIC. These being key members of the multi-disciplinary team required at DEIC, in absence of these staff, quality of care provided to beneficiaries is compromised.

In case of furniture, tables cupboards, racks, display boards, desktop and water dispenser were present while television, speaker system and Intercom was not present at DEIC, Jodhpur. With regards to equipment and tools, all the equipment were present except ear speculum, Auroscope and Xray. The results showed that in case of physical space, only reception, registration, paediatric examination area, gender specific toilets, data entry room, was present rest was absent.

The study findings are consistent with the study conducted by Prabhu S A et al to assess the functioning and infrastructure of DEIC and beneficiary feedback. Observational check list according to norms was used for assessment of facilities, staffing pattern. The results shows that DEIC Raipur was deficient in staff and infrastructure<sup>6</sup>.

The study findings are also supported by the study conducted by the Parmar S which shows that the results showed that DEIC of Indore and Ujjain district were deficient in staff and infrastructure<sup>5</sup>.

### **Challenges of DEIC**

It was identified in this study that DEIC is getting supportive environment for their work in Hospital, but myths and misconceptions of the rural community were posing major challenges to their functioning. Parents are not coming for treatment and follow up even they are getting free of cost. Education and sensitization with reinforcement could help to overcome this barrier. There is also limited physical space provided to the DEIC. It is running in the MCH wing of MDM Hospital. They have equipment but do not have enough space to use those articles.

### **Conclusion and Recommendations:-**

RBSK Programme provided an effective platform for early screening of 0–18-year children for various health problem and a good referral support and management by staff of DEIC to children identified and referred to them. Awareness activities for the community with major involvement of local stakeholders would be helpful in reducing the community resistance. With this study the researcher identified that there was a deficiency of staff, furniture and medical equipment and tools at DEIC. There is a need to be filled up vacant post to make still more effective implementation of the programme. Needed infrastructural facilities should be provided separately so that RBSK program in DEIC can run smoothly and effectively.

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#### **Conflicts of interest:**

The author (s) declared no potential conflict of interests with respect to the research, authorship, and publication of article.

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