



AVAILABILITY OF PHYSICAL INFRASTRUCTURE FACILITY, SAFETY, HEALTH, HYGIENE AND NUTRITIONAL CARE OF PRESCHOOLERS

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ABSTRACT

A random sample of 80 preschools were selected from rural area (40 Anganwadis) from total 7 villages and remaining 40 preschools were selected from local Parbhani city Maharashtra. The data was collected by personally interviewing preschool teachers, Principal of the selected preschools. The study revealed that large majority of the preschools (91-98) were having safe, secure and comfortable environment for children. While maintaining hygiene and sanitation in preschool and safety of children, the adequacy of staff was categorized in fair category (46%) while more than half of the preschools were categorized as having inadequate staff. Eighty six per cent of the preschools reported that they imbibe hygienic practices among children and about supplementary nutrition all preschools were categorized into excellent category. It can be said that majority of the preschools were classified under excellent, very good and good category for providing proper infrastructure facility, safety, health, hygiene and nutritional care of preschoolers.

Keywords

Physical Infrastructure, Safety Measures, Health, Hygiene, Nutritional Care, Preschool Education

1. INTRODUCTION

The Constitution of India committed that, within the country, free and compulsory education would be provided to the children up to the age of 14 years. It is the Fundamental Right of every child to obtain good quality education. National Plan of Action (1992) had the main objective of ensuring the augmentation of ECCE services. National Charter of Children (2004) was initiated with the motive that early childhood care and education as essential for survival, growth and development. National Plan of Action (2005) was initiated with objective that, besides the inclusion of aspects such as care, health, nutrition, education and nourishment, the goals and strategies need to be formulated to promote the involvement of children in educational activities. National Educational Policy (2020) Early Childhood Education (ECE) section of this

new policy urges a Developmentally Appropriate Practice (DAP) approach incorporating 'play based, activity based and discovery based learning (WCD, 2007).

The main purpose of early childhood education is to lead to effectual growth and development of the students. It creates the foundation for learning among the students, so that they are able to develop their skills and abilities efficiently from the early age. Early childhood care and education also makes provision of information and knowledge to the families and communities, with the purpose of contributing towards their effective growth and development. The young students have to be well prepared to enter the education system at the formal level. In order to seek admission in formal schools, it is vital for the students to possess adequate understanding of academic concepts, so that they can appropriately cope up with the teaching-learning methods, provided to them by the teachers and enhance their performance. Early childhood education renders an effective contribution in the facilitation of learning and education in all these areas.

2. LITERATURE REVIEW

Desetty et al. (1998) irrespective of area & category, health component and regular cleanliness check up of children, occasional medical check up in follow up of it was very satisfactory in 7 per cent preschools while partially satisfactory in 2 per cent and not satisfactory in 91 per cent of the studied nursery schools. About the supplementary nutrition to nursery children in nursery schools, 75 per cent nursery schools were graded as partially satisfactory while 16 & 9 nursery schools were graded as not satisfactory respectively. All the nursery schools were found not satisfactory with regard to preserving nursery school childrens' work & maintaining their anecdotal record.

Arora et.al (2006) studied evaluation of nonformal preschool educational services provided at anganwadi centres in urban slums of Jammu city. Anganwadi workers used two way interaction method with the help of teaching aids and imparted education to the children. Indigenous material was used to make teaching aids like puppets, vegetables and fruits. Most of the parents were satisfied with the non-formal education provided at the anganwadi centre but few of them felt that anganwadi workers laid more emphasis on nutrition than education.

Olgan & Ozturk (2011) determined current status of 17 public and 17 private preschool playgrounds in Ankara, the capital city of Turkey. The playground rating system was used to evaluate the playground environment and equipment. According to the results, the maintenance and safety issues were of the utmost importance. Unfortunately, the current status of the playground environment and equipment in the public and private preschools in this study were incapable of enhancing childrens play. It was recommended that policies need to be developed to improve the outdoor physical environment of preschools.

Steen (2016) conducted a study to determine relationship between class sizes and student behaviors in preschool. The results of the study suggested that there was a relationship between class size and student behaviors, but it may not correspond with teacher opinions on class sizes. Although the majority of teachers agreed that large class sizes do not promote positive student behaviors and social emotional skills. The small class size offered more time for teachers to provide more individual student attention, but they do not promote positive social interactions and socio emotional skills in comparison to medium and large class sizes.

Singh & Mukherjee (2017) found that over the past two decades, the importance given to preschool education as laying the foundation for lifelong learning and development has been increasingly recognized. It was seen that children who attended private preschools, demonstrated higher cognitive skills and enhanced subjective well being at the age of 12, compared to those who attended government preschools.

Mwoma et al (2018) Government has endeavored to come up with guidelines and minimum standards through various policies but preschools in informal settlements were experiencing a myriad of challenges, impacting negatively on children's learning as poor infrastructure, lack of play space and play equipment, congested classrooms and school compounds not fenced. In view of the challenges, it was recommended that County government in collaboration with other stakeholders in early childhood, should come up with model preschools in informal settlements to create conducive learning environments.

Melariri (2019) determined Water, Sanitation and Hygiene (WASH) status and practices in ECD centres located in low socio-economic areas. It was found that ECD centres in the study area had access to improved water source but they were lacking adequate sanitary facilities and overall safe hygiene standards. Poor sanitation and hygiene standards may be the result of inadequate knowledge of caregivers about diseases. Equally poor practices in the selected ECD centers could be associated with inadequate funding for the management of the ECD centres.

Joe et al. (2021) examined Anganwadi centers (AWCs) to understand whether status of AWC infrastructure can have an effect on enhancing the coverage of preschool education (PSE) component. With regard to compound wall and fencing (16%), tap water for drinking (22%) or toys for children (26%) were available in fewer AWCs. A total of 76% of the AWCs had educational and learning materials (like blocks, cards etc.) and 66% of the AWCs had low wooden chairs and tables as well as shelves and racks for storage purposes. However, only 41% of the AWCs had PSE kits and 40% had Salter weighing scale for infants. Most of the AWCs were located in relatively pollution-free locations (68%) had clean and hygienic surroundings (64%) and had no dangerous places like ponds or lakes (79%) in their vicinity. Bhise and Sonawat (2019) evaluated the safety of building, 41 per cent of the AWCs had good quality whereas rest of the parameters showed average quality. About the availability of class room space in AWCs, except infrastructure facilities for children with special needs, all other parameters were showing moderate quality. Non-significant difference in the pre and post score on knowledge level of AWWs was noticed regarding infrastructure of AWCs.

Jaglarz (2017) elucidated on creating a child friendly hygienic and sanitary space, not only at home but in kindergartens, which were found to be one of the most important rooms in educational institutions. They had a significant impact on the well being of children, as well as their health and safety. Designing a functional, safe washing area for kindergarten requires knowledge of the rules, regulations and references to the needs of children in terms of their physical skills. However arranging the child friendly washing area needs consideration of the requirements and expectations of children in terms of their relationship with the environment and the widely understood friendliness, coziness and attractiveness of the surrounding conditions.

In view of these findings, the research was taken up to study the availability of physical infrastructure facility, safety, health, hygiene and nutritional care of preschoolers in parbhani dist. Marathwada region Maharashtra state.

3. RESEARCH METHODOLOGY

A stratified random sample of 80 preschools were selected from rural area (40 Anganwadis) from total 7 villages, namely Pandhri, Nandapur, Takali, Daithna, Zari, Pingli and Bori. The remaining 40 preschools were selected from local Parbhani city of Marathwada region Maharashtra state. Prior to the study, the permission was obtained from the concerned organizer/ head/ teacher of the preschool, for collecting information regarding their preschool. The data pertaining to the study was collected by personally interviewing urban and rural preschool teachers, staff or Principal of the selected preschool, based on prepared checklist and observation. The data collected was pooled, tabulated and discussed.

Summated Rating Scale (Five Point)

To have ease in analysing the data in terms of available facilities in preschools, summated rating scale (five point) was used, based on the guidelines of Quality Early Years Education (EYE), NCERT (2018) & Minimum Specifications set by NCERT (1992) for taking continuum as excellent, very good, good, fair and poor as given below.

Categories	Interpretation of rating scale
Excellent	All desirable and essential pre-requisites are present
Very Good	Above 50 per cent of desirable and essential pre-requisites are present
Good	50 per cent of desirable and essential pre-requisites are present
Fair	Below 50 per cent of desirable and essential pre-requisites are present
Poor	Below 20 per cent of desirable and essential pre-requisites are present

4. RESULTS AND DISCUSSION

Classification of selected preschools on the basis of location and safety measures is reiterated in table 1 and fig 1. With regard to location of preschools, 97 per cent of the preschools were categorized under excellent category for the safety of preschool surroundings in terms of their location, away from heavy traffic roads, unhygienic surroundings, away from electrical pole and pounds/ water tank or well. The remaining preschools (1-40%) were categorized in poor category being not following these minimum safety measures from childrens' safety point of view. Ninety one per cent of the preschools were situated on ground floor, which was important and safe for young children. Only 40 per cent of the preschools were either adjacent to primary school or in the their vicinity. Almost all preschools were found to be away from railway station, bus stand, factories.

Similarly all preschools were having natural resources like trees, plants in their surroundings, easily accessible for children having walkable distance and had direct approach for the conveyance of children and easy transport. A large majority of the preschools (91-98) were having safe, secure and comfortable environment for children, with good condition of school building additionally preschools were found away from market. However 60-70 per cent preschools were categorized very good for being away from drainage / canal / uncovered drains or stagnant water; away from burial grounds and for the safety of children, the school building were surrounded by fencing / compound wall.

Some of these findings are in support of the results recorded by Mwoma *et al* (2018) and Joe *et al.* (2021). On the contrary, 40-60 per cent preschools found near drainage / canal, burial grounds and not adjacent to primary schools, although all other parameters were found in very less percentages under poor category. Thus it can be said that majority of the preschools were following almost all safety measures in terms of location therefore majority of the preschools were categorized as excellent.

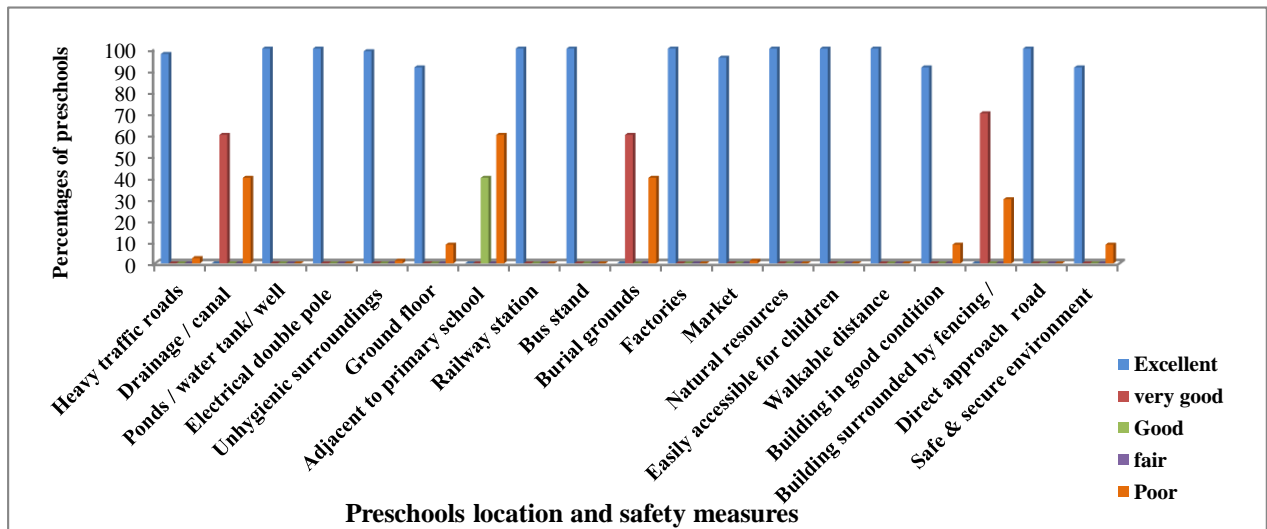


Fig 1. classification of selected preschools on the basis of location and safety measure

Table 1. Classification of selected preschools on the basis of location and safety measures

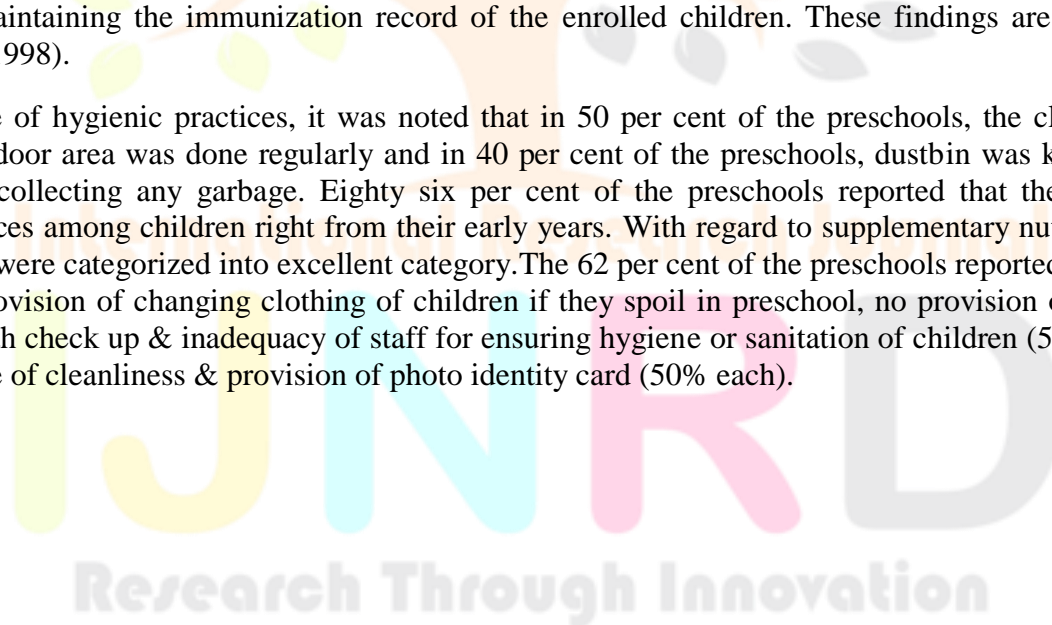
Preschool location	Classification and percentages of preschools (n=80)				
	Excellent	Very Good	Good	Fair	Poor
Surroundings of preschool					
Away from heavy traffic roads	97.50	-	-	-	02.50
Away from drainage / canal / uncovered drains / stagnant water etc	-	60.00	-	-	40.00
Away from ponds / water tank/ well	100.00	-	-	-	-
Away from electrical double pole (DP)	100.00	-	-	-	-
Away from unhygienic surroundings (garbage)	98.75	-	-	-	01.25
Located at ground floor	91.25	-	-	-	08.75
Adjacent / attached to primary school or in the vicinity	-	-	40.00	-	60.00
Away from railway station	100.00	-	-	-	-
Away from bus stand	100.00	-	-	-	-
Away from burial grounds	-	60.00	-	-	40.00
Away from factories	100.00	-	-	-	-
Away from market	98.75	-	-	-	01.25
Having natural resources Plants / Trees / Farms	100.00	-	-	-	-
Easily accessible for children	100.00	-	-	-	-
Walkable distance	100.00	-	-	-	-
Building in good condition	91.25	-	-	-	08.75
Building surrounded by fencing / compound wall/ boundary wall	-	70.00	-	-	30.00
Direct approach road for conveyance of children and easy transport	100.00	-	-	-	-
Safe, secure and comfortable environment for child	91.25	-	-	-	08.75

Figures in parenthesis indicate percentages

Classification of the selected preschools on the basis of safety, health, hygiene & nutritional practices followed is reiterated in table 2 and fig. 2. It was seen that seventy per cent of the preschools were having compound wall with gate and hence they were categorized under very good, being following safety measures so as to avoid many accidents or risk factors for preschoolers. Hundred per cent preschools were found to have inaccessible storage of harmful material, electronic outlets. Sixty two per cent of the selected preschools were having appropriate size and height of furniture and equipment for the enrolled children, which was seen to be in very good condition with regard to maintaining hygiene and sanitation in preschool. The adequacy of staff was categorized in fair category (46%) while more than half of the preschools were categorized as having inadequate staff (poor category). For pick up and dropping facility for preschool children and for availability and use of CCTV camera vigilance, preschools were found to be under poor (90-96%) and fair (15%) categories. Only fifty per cent of the preschools (good category) were issuing photo identity cards to preschool children. However 91 percent of the preschools were having first aid kit readily available for children in case of minor injuries during school hours.

With regard to safety of doors, 69 per cent of the preschools were found under very good category for having light weight doors. But 31 per cent of them were found to have poor category for it. On the contrary, it is to be noted that none of the preschool was having self locking or swinging type of door, hence all preschools were categorized into excellent category. Similarly all preschools were having window panels for the protection of children. While only 55 per cent of the windows were having stopper and grill. Less than half of the preschools (46%) were following regular health checkup in the school schedule from a medical practitioner once in year, as possible. A large majority of the selected preschools (85%) were maintaining the immunization record of the enrolled children. These findings are line with Desetty et al. (1998).

In case of hygienic practices, it was noted that in 50 per cent of the preschools, the cleaning of indoor and outdoor area was done regularly and in 40 per cent of the preschools, dustbin was kept in the classroom for collecting any garbage. Eighty six per cent of the preschools reported that they imbibe hygienic practices among children right from their early years. With regard to supplementary nutrition, all the preschools were categorized into excellent category. The 62 per cent of the preschools reported that they do not have provision of changing clothing of children if they spoil in preschool, no provision of dustbin (60%), no health check up & inadequacy of staff for ensuring hygiene or sanitation of children (53% each), no maintenance of cleanliness & provision of photo identity card (50% each).



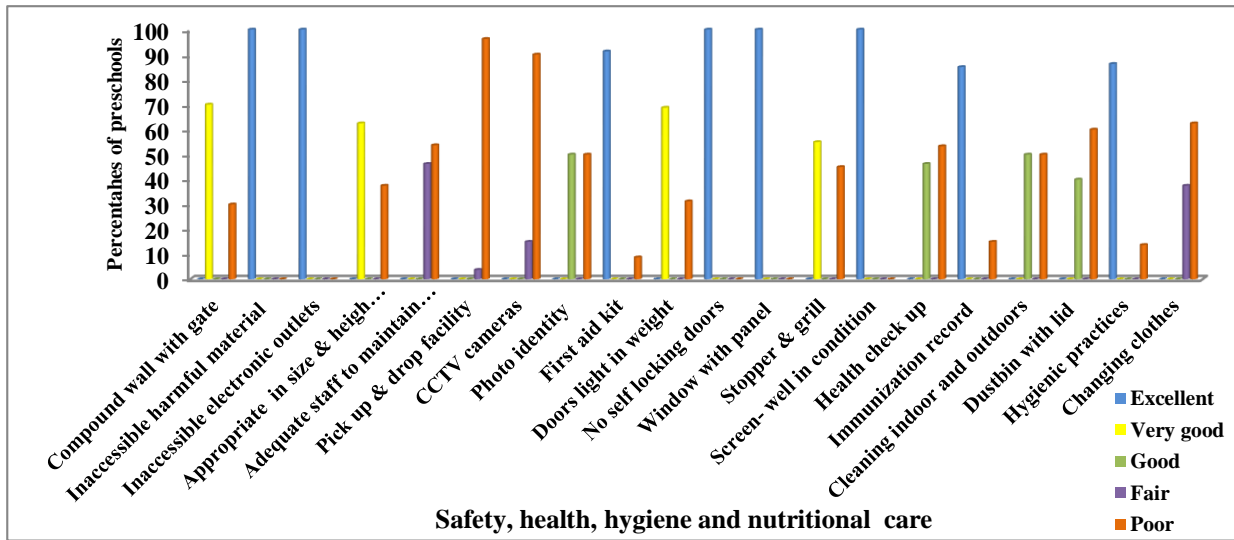


Fig. 2 Classification of selected preschools on the basis of safety, health, hygiene & nutritional practices followed

Table 2. Classification of selected preschools on the basis of safety, health, hygiene & nutritional practices followed

Safety, health, hygiene & nutritional practices	Classification and percentages of preschools (n=80)				
	Excellent	Very Good	Good	Fair	Poor
Safety measures					
Compound wall with gate	-	70.00	-	-	30.00
Inaccessible storage of harmful material	100.00	-	-	-	-
Inaccessible electronic outlets	100.00	-	-	-	-
Furniture & equipment -appropriate in size & height of children	-	62.50	-	-	37.50
Adequate staff to maintain hygiene /sanitation/ ensure safety etc	-	-	-	46.25	53.75
Pick up & drop facility	-	-	-	03.75	96.25
CCTV cameras	-	-	-	15.00	90.00
Photo identity to each child	-	-	50.00	-	50.00
First aid kit	91.25	-	-	-	08.75
Doors					
Light in weight	-	68.75	-	-	31.25
No self locking or swinging type doors	100.00	-	-	-	-
Windows					
Window with panel / mosquito net	100.00	-	-	-	-
Stopper & grill	-	55.00	-	-	45.00
Screen- well in condition	100.00	-	-	-	-
Health & Immunization					
Regular health check up	-	-	46.25	-	53.35
Immunization record	85.00	-	-	-	15.00
Hygienic practices					
Cleaning indoor and outdoors	-	-	50.00	-	50.00
Provision of dustbin with lid in classroom	-	-	40.00	-	60.00
Imbibe hygienic practices in children	86.25	-	-	-	13.75
Changing clothes if required	-	-	-	37.50	62.50
Supplementary nutrition					
Pleasant & learning experience	100.00	-	-	-	-
Heathy eating habits	100.00	-	-	-	-

Classification of selected preschools on the basis of indoor space and infrastructure facilities is illustrated in table 3 and fig. 3. In connection with walls of classroom, it was found that majority of the preschools (85-93%) were having strong walls without cracks, no patchy colour or ceiling leakages and proper plaster and colouring was noted. Therefore majority of the preschools were classified under excellent group for these parameters. The classrooms in selected preschools were found well ventilated and lighted (100%), with availability of staff furniture in classroom (92%), having child friendly furniture (87%), properly arranged or child friendly indoor space (100%), with adequate room size (84%), space for keeping belongings of children like bags, basket, shoes etc (50%). These preschools were categorized under excellent category.

Nearly 50 per cent of the preschools were classified as very good for having adequate storage space for various educational play material for children. Fifty per cent of the preschools were classified as good for having safe flooring, child sized desk, benches and chairs (52%) and 42 per cent of them were having low level open shelves to store play and learning material. The 27-30 per cent preschools were categorized fair being having low level chair for teacher, art work tables, separate staff rooms and having window height, so that they can visualize outside the classrooms. None of the preschool was found to admit children with special needs in preschool (100%) and none of the preschool was having sleeping or resting facility for children. Overall, it was observed that a large majority of the preschools were found under poor category for having separate staff room, low & light weight art work tables (70% each). The findings are in line with Bhise and Sonawat (1998).

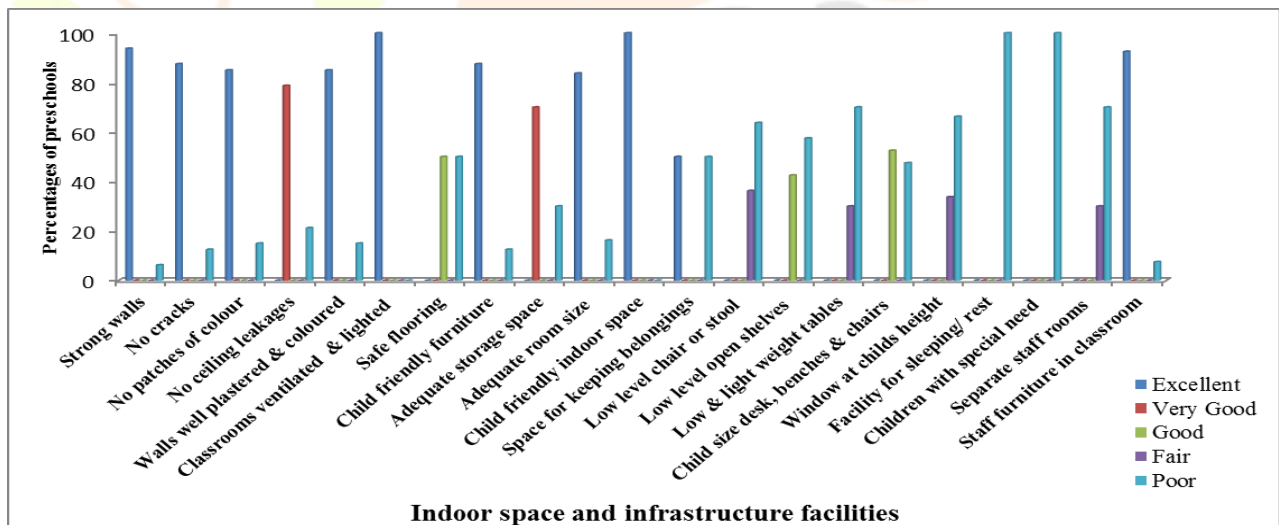


Fig 3. Classification of selected preschools on the basis of indoor space and infrastructure facilities

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Table 3. Classification of selected preschools on the basis of indoor space and infrastructure facilities

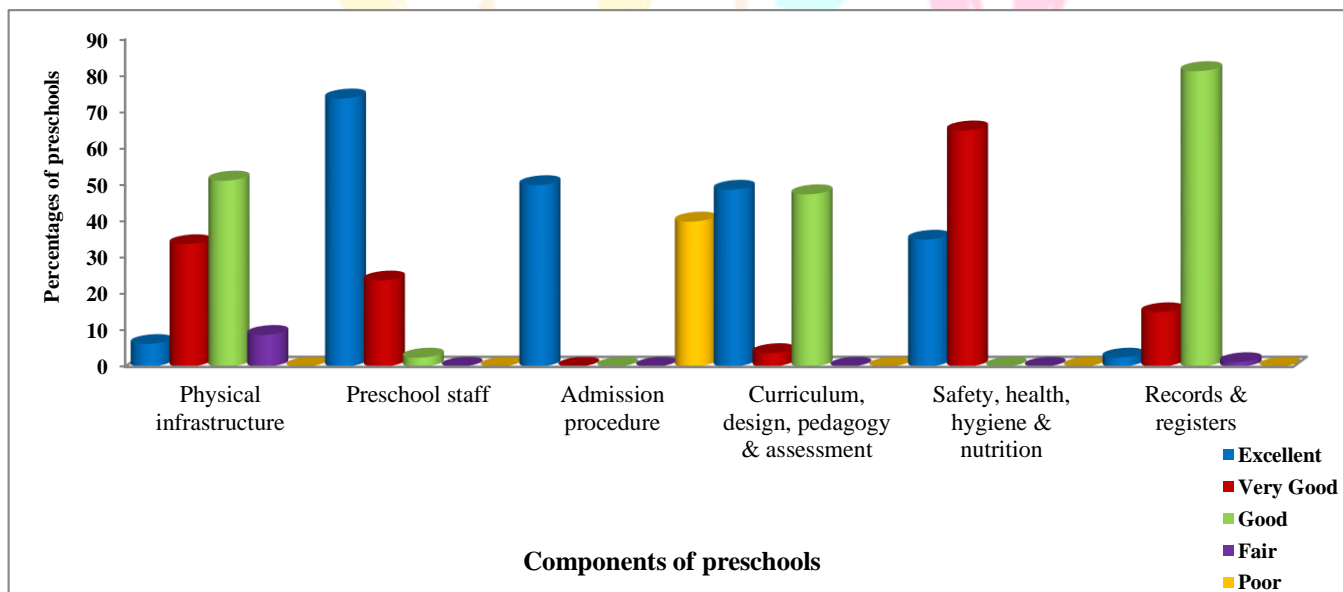
Indoor space and infrastructure facilities	Classification and percentages of preschools (n-80)				
	Excellent	Very Good	Good	Fair	Poor
Walls of classroom					
Strong	93.75	-	-	-	06.25
No cracks	87.50	-	-	-	12.50
No patches of colour	85.00	-	-	-	15.00
No ceiling leakages	-	78.75	-	-	21.25
Walls well plastered & coloured	85.00	-	-	-	15.00
Classrooms well ventilated & lighted	100.00	-	-	-	-
Safe flooring	-	-	50.00	-	50.00
Child friendly furniture	87.50	-	-	-	12.50
Adequate storage space for material		70.00	-	-	30.00
Adequate room size	83.75	-	-	-	16.25
Child friendly indoor space	100.00	-	-	-	-
Space for keeping belongings like bags, sandals etc	50.00	-	-	-	50.00
Low level chair or stool for teacher	-	-	-	36.25	63.75
Low level open shelves to store play & learning material	-	-	42.50	-	57.50
Low & light weight art work tables	-	-	-	30.00	70.00
Child size desk, benches & chairs	-	-	52.50	-	47.50
Window at childs height	-	-	-	33.75	66.25
Facility for sleeping/ rest	-	-	-	-	100.0
Children with special need admitted in preschool	-	-	-	-	100.00
Separate staff rooms	-	-	-	30.00	70.00
Staff furniture in classroom	92.50	-	-	-	07.50

Essential components	Classification and percentages of preschools (n-80)				
	Excellent	Very Good	Good	Fair	Poor
Physical infrastructure	06.25	33.75	51.25	08.75	-
Preschool staff	73.75	23.75	02.50	-	-
Admission procedure	50.00	-	-	50.00	-
Curriculum, design, pedagogy & assessment	48.75	03.75	47.50	-	-
Safety, health, hygiene & nutritional care	35.00	65.00	-	-	-
Records & registers	02.50	15.00	81.25	01.25	-

Figures in parenthesis indicate percentages

Overall classification of the preschools on the basis of various essential components based on guidelines of EYE is displayed in table 4 and fig. 4. It was seen that more than half of the selected preschools (51%) were categorized in good criteria while 73 percent of them were classified excellent for having good preschool staff and their qualities. The admission procedure followed in preschools was categorized under fair group (50%). Similar trend was seen for curriculum design, pedagogy and assessment adopted by the preschools which were classified under excellent and good category (nearly 48% each). For the parameter of safety, health, hygiene and nutritional care 65 percent preschools were found under very good category. With regard to maintenance of records & registers, 81 percent preschools were found under good category. On the whole it can be said that majority of the preschools were classified under excellent, very good and good category. Some of the preschools were also found under fair category for some of the parameters while none of the preschool was categorized as poor in terms of available facilities under essential components of preschools as per EYE (2018) guidelines of NCERT.

Fig 4 Overall classification of preschools on the basis of various essential components



5. CONCLUSION

The availability of physical infrastructure facility, safety, health, hygiene and nutritional care in early childhood education are utmost important. According to results it can be said that curriculum design, pedagogy and assessment adopted by the nearly fifty per cent of the preschools were classified under excellent and good category. For the parameter as safety, health, hygiene and nutritional care; 65 per cent of the selected preschools were found under very good category. Some of the preschools were also found under fair category while none of the preschool was categorized as poor in terms of available facilities under essential components of preschools as per EYE (2018) guidelines of NCERT. On the whole it can be said that majority of the preschools were classified under excellent, very good and good category. Some of the preschools were also found under fair category for some of the parameters while none of the preschool was categorized as poor in terms of available facilities under essential components of preschools as per EYE (2018) guidelines of NCERT. The present study help to stakeholders who are concerned with and working in the area of early years education programme which ultimately make early learning experiences interesting, joyful and meaningful for all children.

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