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Status of Child Health in Haryana: A Spatial Analysis

Virender Chhachhiya [1], Ajay Kumar [2]
[1]*Research Scholar, Department of Geography, KUK*
[2]*Department of Geography, Punjab University, Chandigarh, India*

Abstract: In this article, an attempt has made to analyse the spatial variations of Child Health in Haryana. We take different variables like Diarrhea, Stunted in Children, Under Weight, and Anemia in all 21 districts of Haryana. These are the variables of Child Health Status. In this study, we use Arc GIS 9.3 to show the spatial pattern of the above variables. The SPSS 16 used to correlate the variables. The finding shows that The Districts having stunted among Children have mostly affected by Under Weight problems among children.

I. INTRODUCTION

Children are the future of any nation. The responsibility of future development and prosperity depends upon the wisdom and capability of our young generation. The children are prone to a lot of disease which negatively affect their caliber. The developing nations are facing this problem with a high frequency, although these problems are available in all countries with some variations. India is also facing the problem of child disease.

The children are gripped by a lot of disease which constrained their physical as well as mental growth. The major diseases are Anemia, Diarrhea Underweight and stunting. The present study is focused on these diseases in the Haryana state of India. The study covers all the 21 districts. The spatial pattern of these diseases has been analyzed in the present study. The maps are used to show the spatial distribution of these diseases. The maps are made on Arc GIS 9.3. The correlation of these diseases has also been analyzed with the help of SPSS-16. The results have also represented through graphs and diagrams.

Diarrhea is a common situation that involves unusually frequent liquid bowel movements. There are a lot of causes of diarrhea. Diarrhea is uncomfortable and dangerous to the health because it indicates underlying infection and the body is not able to absorb any nutrients due to the problem in bowels.

This is the second largest disease leading cause of death in children under 5 years after pneumonia. Every year diarrhea kills around 525000 children under five. It can be prevented with safe drinking water and adequate sanitation and hygiene. There are near about 1.7 billion cases of children diarrheal disease every year worldwide. Diarrhea is leading cause of malnutrition in children under five years old.

The major causes of diarrhea are severe dehydration, fluid loss, septic bacterial infection, malnutrition and poor hygiene.Stunting is a reduced growth rate in human development. It is a primary malnutrition and recurrent infections like diarrhea and helminthiasis. According to WHO the stunting is for the height for age value to be less than two standard deviations of the WHO child growth standard median. In India the UNICEF survey 2013-2014 shows an Improvement in the status of children malnutrition over the National Family Health Survey-3. Despite this the levels remains high and concern the feeding indicators remains stagnant.

The prevalence for stunting in five children decreased from 48% to 38.7%.A child is considered underweight if the child's weight for age measured is less than the standard deviation from globally accepted reference cut off point or these standard deviations in the case of severe. According to National Family Health Survey-3 there is a decline in prevalence of underweight from 42.5% to 29.4%. the causes of underweight are the child refuses to eat normal quantities because of bowel pain after eating, chronic vomiting, due to genetics and thyroid diseases etc.

Anemia is a condition in which there is a deficiency of blood or red cells or hemoglobin in the blood. The causes of anemia are iron deficiency, lack of vitamins, family history etc. anemia lead to reducing functional capacity and mobility, and quality of life.

A. Objectives

1) To analyse the spatial variations in Diarrhoea, Stunted, Under Weight, and Anaemia in Children in Haryana.

II. DATA AND METHODOLOGY

The district takes as the unit of study. The data used in present study taken from National Family Health Surveys 2015-2016 and Censes of India 2011.

A. Methodology

We take different variables like

1) Diarrhoea,
2) Stunted in Children,
3) Under Weight, and
4) Anaemia

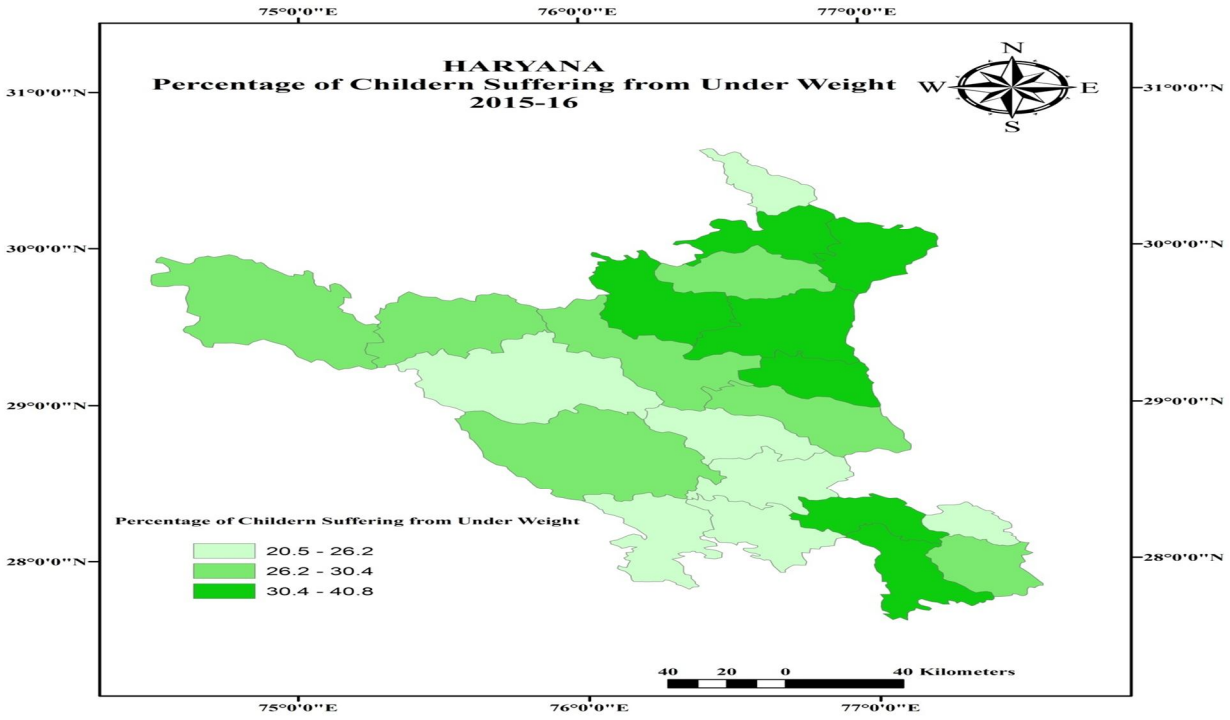
After collecting the data it is arranged, tabulated, calculated and analysed. Results occurred from this calculation is further represented by maps which are prepared by Arc-GIS 9.3. Correlations between all these 4 variables have calculated with the help of SPSS16 software

III. RESULTS AND DISCUSSIONS

The results of the study have shown that the percentage of all the diseases like Diarrhea, stunting, underweight and Anemia is very high. On an average the 70.95% children are affected by the Anemia and the least children are affected by Diarrhea with the average percentage of 7.5%.

The percentage of children affected by Diarrhea in Haryana is highest in Yamunanagar district with the percentage of 15.2%. After this Mewat and Fatehbad comes with high percentage with 12.7% and 10.9% respectively. The percentage of Diarrhea affected children is very less in the district Sonipat, Panchkula and Jhajjar with the percentage of 1.6%, 2.9% and 3.7% respectively. And the rest districts are moderate. The major causes of high percentage in above districts are lack of health facilities, poverty, severe dehydration and malnutrition.

If we talk about stunted children in Haryana, then the condition is also poor. On an average the 32.35% children of Haryana are stunted. The reason of this stunting is malnutrition. The districts in which the maximum children are affected by stunting are Mewat(52.3%) Panipat (44.6%) and Gurgaon (41.2%). The lowest percentages of affected children are the district Ambala 19.8%, Panchkula 21.5%, and Jhajjar 22.3%. The rest districts are moderate in no. of stunted children.



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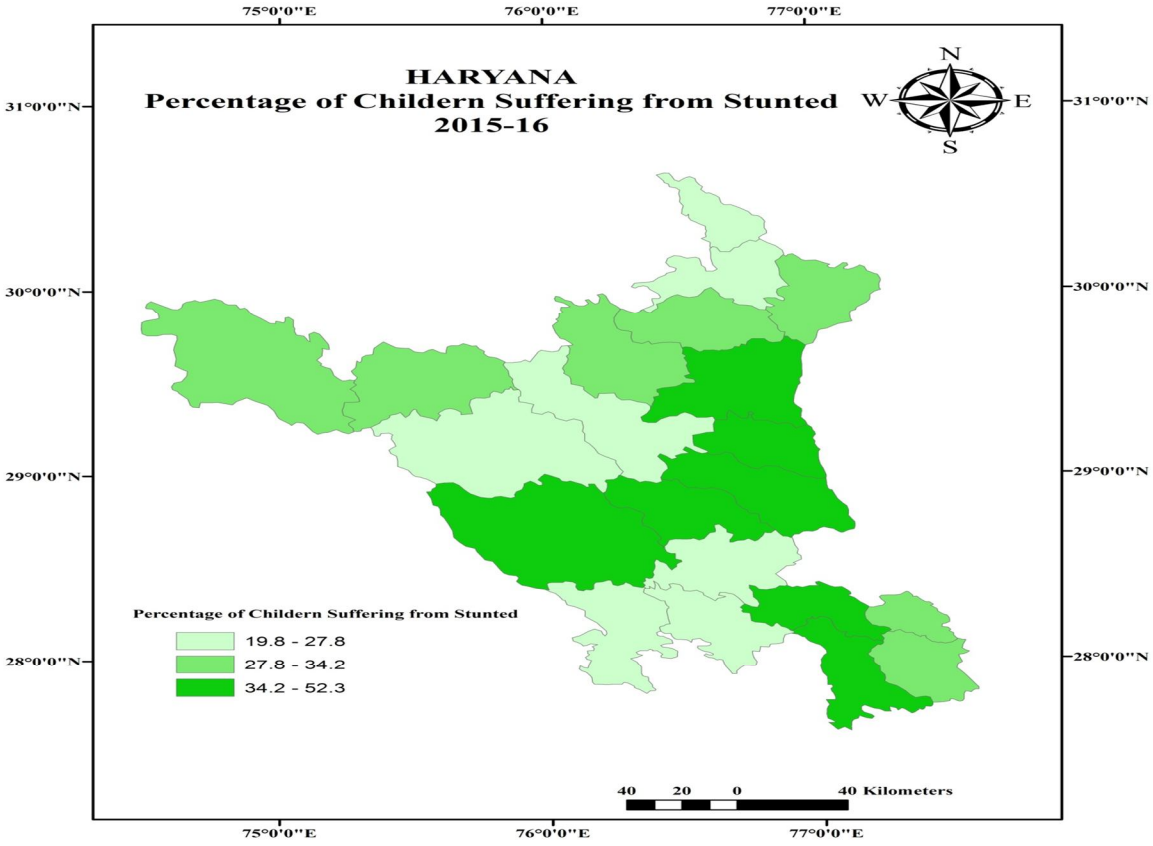

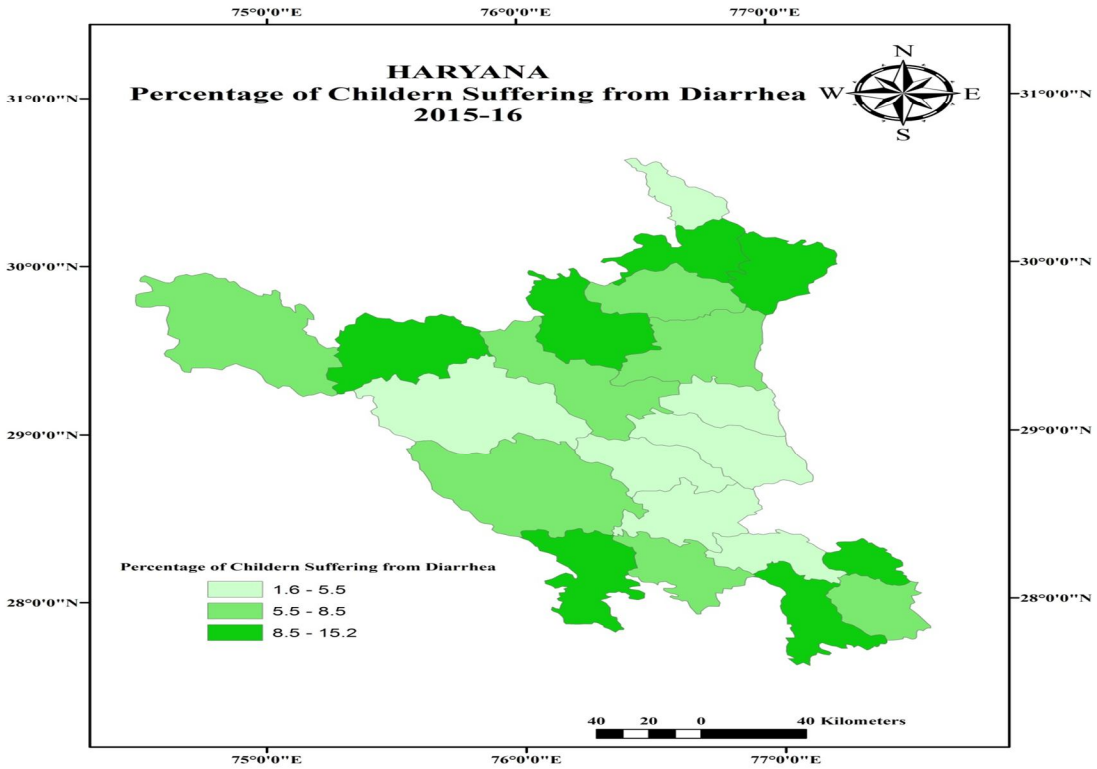

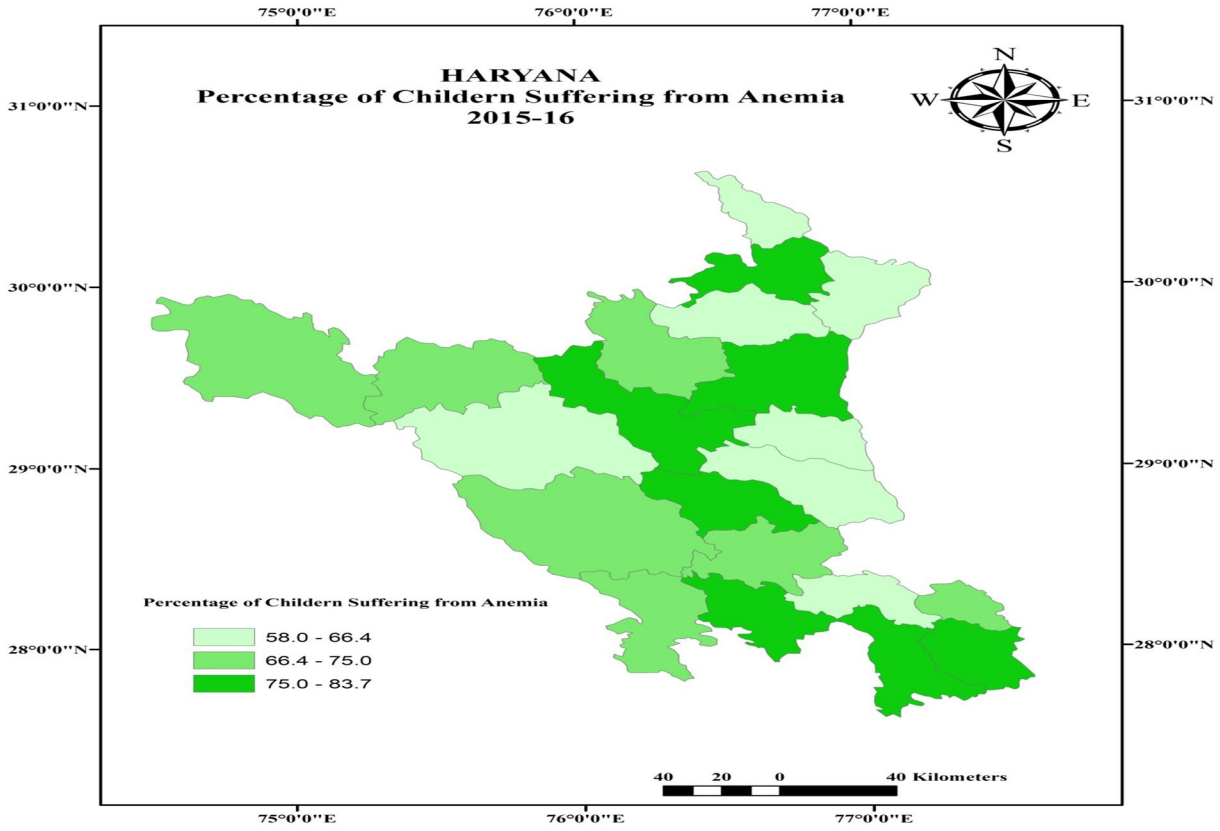

Source: National Family Health Survey – 4, 2015 -16

In case of underweight children in Haryana, 29.19% children are underweight on an average. The major cause of underweight is malnutrition, bowel pain after eating, chronic vomiting and diarrhea etc. The district Panipat is recorded with maximum percentage of underweight children with 40.8%. After this, Kaithal 37.5%% and Ambala 32.9% are at 2nd and 3rd number. Despite this the district Faridabad 20.5%, Jhajjar 21% and Rewari has recorded lowest percentage.

In case of Anemia the conditions are worst in Haryana. In Haryana 70.95% children are anemic. The anemia is a situation which is caused by lack of iron, vitamins and family history etc. the anemic children resulting in reducing functional capacity and quality of life. The Mewat district has most critical situation with 83.7% anemic children population, Rewari and Jind comes after Mewat with 77.8% and 76.6% anemic children. On the other hand the least no. of anemic children is in Yamunanagar (58%), Sonipat (58.6%) and Kurukshetra district with 63.3%. but this is also very high rate. Other all districts are under moderate percentage of anemic children.

CORRELATIONS MATRIX OF CHILD HEALTH				
	Diarrhea	Stunted	Under Weight	Anemia
Diarrhea	1	0.018	0.269	0.206
Stunted		1	.619**	0.082
Under Weight			1	-0.053
Anemia				1

Correlation is significant at the 0.01 level (1-tailed).

IV. CONCLUSION

The correlation matrix shows that the Diarrhea among Childers of Haryana is positively associated with Under Weight and Anemia problems among Children. However no significant associated with Stunted.In case of Stunted among Children of Haryana are

positively and significantly associated with Under Weight among children.The Districts having stunted among Children have mostly affected by Under Weight problems among children.The results of the above study reveals that the health related issues among children are very critical in Haryana. The huge numbers of children are underweight, stunted and anemic and diarrhea affected. In the district Ambala, Mewat, Jind, Kaithal, Panipat, Gurgaon, Fatehbad and Yamunanagar have very pathetic conditions of children health. Whereas Faridabad, Jhajjar, Kurukshetra and Sonipat have conditions better than above districts, but these are not enough. There is a great need of concern regarding the issue of children health in Haryana. Government should start some programs related to eradication of Diarrhea and anemia from the state. The government can start community awareness program for far inhabited rural areas, so that the people get aware of scientific solution of the health issues which are faced by them. The iron vaccines and tablets should also be provided by government to poor people of the state. With these affective steps there will be a positive impact on the health of children of Haryana. The other states can also apply these steps to eradicate health problems among children.

Table Showing Child Health in Haryana

	District	Diarrhoea	Stunted	Under Weight	Anemia
1	Ambala	9	19.8	32.9	75.1
2	Bhiwani	7.9	35.1	26.9	74.8
3	Faridabad	8.9	29.7	20.5	75
4	Fatehbad	10.9	28.5	30	70.5
5	Gurgaon	5	41.2	30.6	66.2
6	Hisar	5.5	25.6	23.5	66.4
7	Jhajjar	3.7	22.3	21	70.9
8	Jind	7.9	26	29.3	76.6
9	Kaithal	9.7	33.6	37.5	68
10	Karnal	5.8	41	32.5	75.5
11	Kurukshetra	8.3	31.9	27.1	63.4
12	Mahendragarh	9.4	23.5	26.1	73.7
13	Mewat	12.7	52.3	40.2	83.7
14	Palwal	8.5	34	27.5	75.2
15	Panchkula	2.9	21.5	26.2	66.4
16	Panipat	4.3	44.6	40.8	65.5
17	Rewari	6.9	27.8	23	77.8
18	Rohtak	5.3	36.6	25.2	76.3
19	Sirsa	8.1	34.2	30.1	72.4
20	Sonipat	1.6	40.2	30.4	58.6
21	Yamunanagar	15.2	30	31.8	58

Source: National Family Health Survey – 4, 2015 -16

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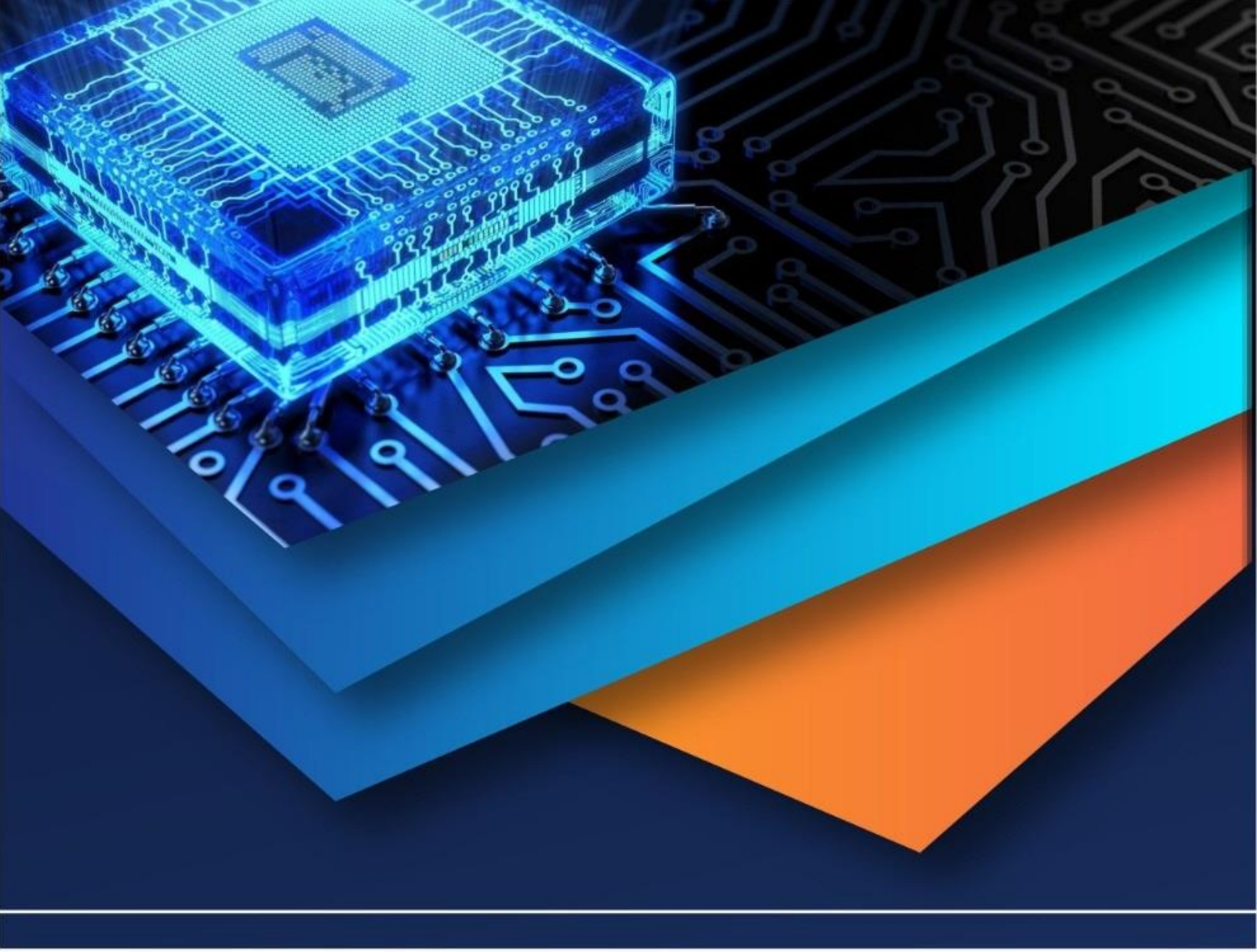

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