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A Study to Assess the Level of Depression Among Mothers with Postnatal GDM at Nerkundram-OPD

Dr. Kalabarathi. S[1], Shalini. S[2], Kavitha. B[3], Dr. Kala Barathi. S[4]
[1]*Professor, Department of obstetrics and Gynaecology Nursing, SIMATS, Thandalam, Chennai*
[2]*Bsc Nursing 4 th year ,Saveetha college of Nursing ,SIMATS ,Thandalam,Chennai-602105.*
[3]*Bsc Nursing 4 th year ,Saveetha college of Nursing ,SIMATS ,Thandalam,Chennai-602105.*
[4]*Principal, HOD, Department of obstertrics and Gynaecology Nursing, SIMATS, Chennai, Tamilnadu, India.*

Abstract: ***The current study aims to assess the level of depression among postnatal mothers with gestational diabetes mellitus at nerkundram. The quantitative approach with Experimental descriptive research design was adopted for the present study. A total of 100 postnatal who metthe inclusion criteria was selected by Non- probability purposive sampling technique. This study has been conducted for a interval of 3 weeks .The demographic and the existing level of depression data was collected by self-structured questionnaire and the duration of 30 minuteswas given for completing the questionnaire . The Hamilton Depression Rating Scale was usedto assess the level of depression and the collected data were tabulated and analysed by using descriptive and inferential statistics. The results revealed that variable such as religion had significant association with level of depression .***
Keywords: Depression , Gestational Diabetes Mellitus, Postnatal Mothers

I. INTRODUCTION

Physical and emotional changes are associated with pregnancy. Some women are moreprone to experiencing depression symptoms during the postpartum period, which typically start 4 weeks after giving birth and last up to 3 months[1]. In 2015, 322 millionpeople worldwide were reportedly impacted by depression. There will likely be a 22.5%increase in depression. 57 million Indians (18%) suffer from depression.

In 2013, 37% of Disability Adjusted Life Years (DALY) were attributable to depression. Depression will be the third-most incapacitating condition worldwide by 2025[2]. In south-easternNigeria and Karachi, 34.6 percent of women suffer from PPD. 30.3 percent in Nepal.

PPD prevalence in low- and middle-income nations ranged from 11 to 40%[3]. 4. 17% of healthy women have postpartum depression. In comparison to Western nations, the Middle East and Asia have the highest frequency[4]. Studies from the National Instituteof Mental Health show that a woman's lifelong risk of depression is highest during thechildbearing years. [4] After giving birth to a child, about 15% of all women will develop PPD[5].

Biological, psychological, social, and interpersonal etiological variables are separated apart. The abrupt change in reproductive hormone levels, priorand family history of depressive disorder, and changes in sleep patterns are biological variables for postpartum psychiatric problems.

In the Indian context, gender bias, including a preference for a male kid, domestic violence, financial constraints, prior psychiatric illness, and inadequate spousal support, are the most prevalent psychological and interpersonal variables for PPD. Endocrine changes, alterations in body image, the triggering of unconscious psychological conflicts, and intrapsychic realisation of becoming a mother are some of the additional causes[6].

The entrance of the placenta during pregnancy causes the maternal hypothalamic-pituitary-adrenal axis to experience profound changes.

Dysregulation of the hypothalamic-pituitary-adrenal axis and placenta during pregnancy are risk factors for postpartum depression. Increased placental corticotropin-releasing hormone levels are linked to altered anterior pituitary cortisol sensitivity and possibly reduced central corticotropin-releasing hormone secretion. is a risk factor for postpartum depression development[7].

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Postnatal depression symptoms include depressed mood, decreased interest in or enjoyment from activities, diminished interest in food, disturbed sleep, physical agitation, fatigue, feelings of worthlessness or excessive or inappropriate guilt, decreased concentration or ability to make decisions, or recurrent thoughts of death or suicidal ideation, according to the World Health Organization[8].

Among non-pregnant people, the phenotypes of depression and glucose intolerance are very closely related. The development of hyperglycemia is potentially influenced by metabolic disturbances such as increased oxidative stress, ongoing inflammation, and insulin resistance that arepositively related with depression.

Women are more susceptible to depression and reduced glucose tolerance during and after pregnancy, which affects not only the health and wellbeing of the mother but also her unborn children[9]. GDM, often known as glucose, indicates a person's risk of developing type 2 diabetes in the future.

While glucose tolerance usually returns to normal in the first few weeks following delivery, women with GDM have a 20–70% chance of developing type 2 diabetes during the first ten years of giving birth[10].

The emergence or identification of poor glucose metabolism during pregnancy is known as gestational diabetes (GD). In the United States, GD complicates about 6% of pregnancies; trends suggest that prevalence has increased recently. According to the American Heart Association, GD increases the riskof cardiovascular disease (CVD) in women[11].

Obesity, excessive pregnancy weight gain, westernised diet, ethnicity, genetic polymorphisms, advanced maternal age, intrauterine environment (low or high birthweight), family and personal history of GDM, and other diseases of insulin resistance, such as polycystic ovarian syndrome (PCOS), are all risk factors for GDM. Each of these risk factors has a connection to decreased -cell function and/or insulin sensitivity, either directly or indirectly[12].

Early postpartum is a time when women are at a higher risk of developing a depressive episode. Although perinatal depression (PND), an unique subtype of major depressive disorder, and major depressive disorder share many features, women with PND experience higher rates of anxiety, obsessive-compulsive symptoms, and thoughts of harming their unborn child[13].

Depression and diabetes It is considered that the patient's sentiments of helplessness and pessimism caused by the self-care demands of diabetes, together with awareness of the diagnosis of diabetes and its complications, led to depression. In addition, unhealthy behaviours that promote obesity, such as inactivityand poor eating habits, have been linked to an increased prevalence of diabetes in patients with depression[14].

In the first two to six months after giving birth, 10% to 12% of new moms have postpartum depression. 1 Although the prevalence of depression is comparable in pregnant, postpartum, and nonpregnant women, the perinatal period is when new depression is more likely to start.

Untreated prenatal andpostpartum depression can have long-lasting detrimental repercussions on the woman,the mother-child bond, the development of the kid, the marriage, and the partner of thewoman who is affected[15].

II. MATERIALS AND METHODS

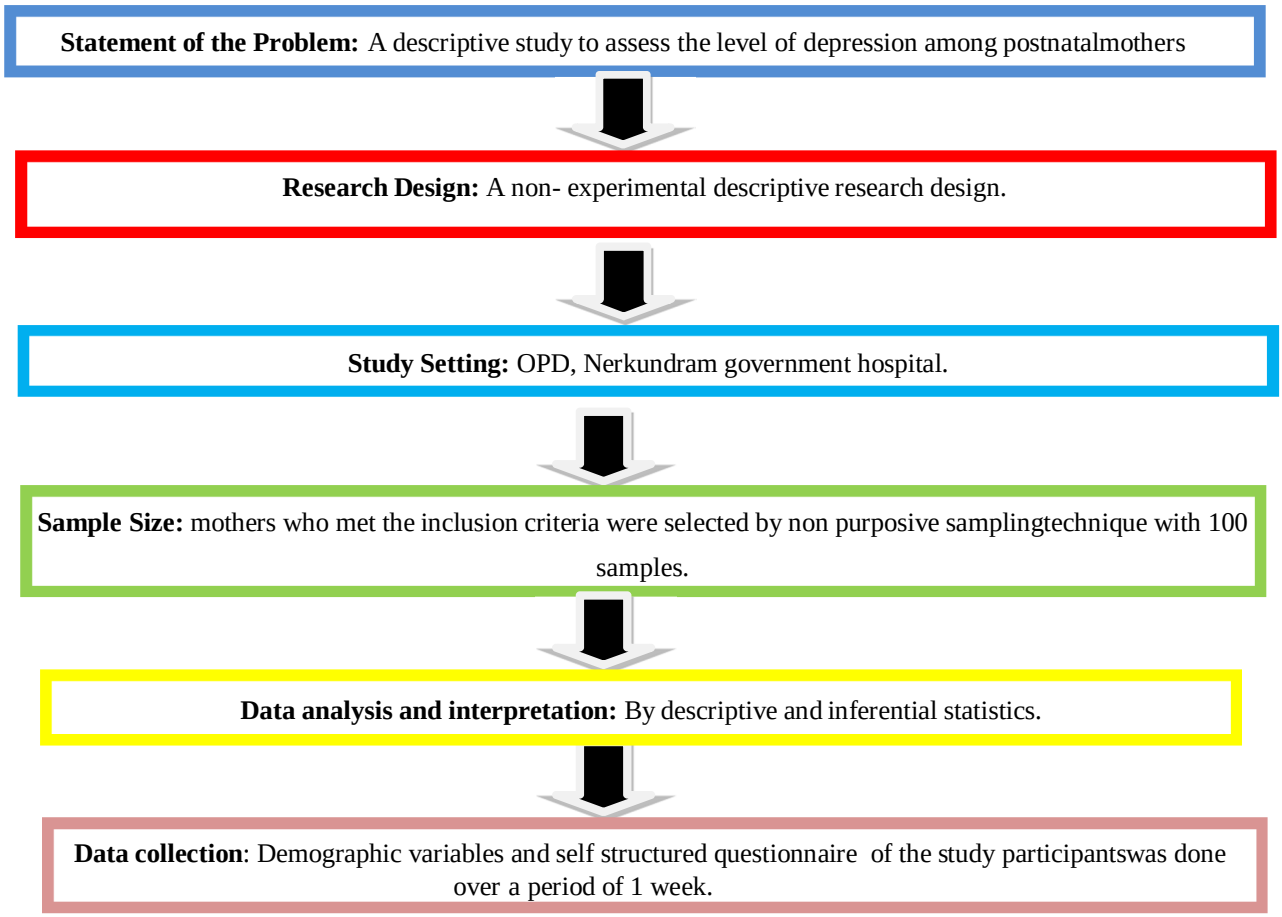
The study was conducted in in Nerkundram (Primary Health Centre),Thiruvallur district. Theresearch approach used for this study was quantitative approach and Experimental descriptiveresearch design.

The total study sample was 100 postnatal mothers were selected by Non- purposive sampling technique with the inclusion criteria of Postnatal mothers between the agegroup of less than 50 years. who are willing to participate the present study. who can read, write and understand English and Tamil .mothers who are not willing to participate the present study who are not available during the study period.

Who cannot read, write and understand English and Tamil are excluded. The study was conducted for the interval of 3 weeks. The permission letter was obtained from the medical officer in selected health centre and approved by the ethics committee of the institution..Informed consent was obtained by the investigator from the study samples and explained the purpose of the study to ensure better cooperation.

The demographic and the existing level of depression data was collected by self- structured questionnaire and the duration of 30 minutes was given for completing the questionnaire . The Hamilton Depression Rating Scale was used to assess the level of depression.

Fig:1 Schematic Representation Of Research Plan



III. RESULTS AND DISCUSSION

Demographic Variables	No.	%
Age in years		
12 to 25 years	17	17.0
26-35 years	52	52.0
38-49 years	31	31.0
Marital status		
Married	51	51.0
Unmarried	16	16.0
Widow	14	14.0
Divorce	19	19.0
Religion		
Hindu	22	22.0
Muslim	34	34.0
Christian	36	36.0
Others	8	8.0
Educational status		
Primary	12	12.0
Secondary	23	23.0
High secondary	15	15.0
Degree	26	26.0
Illiterate	24	24.0
Occupational status		

Demographic Variables	No.	%
Employed	16	16.0
Unemployed	57	57.0
Business	22	22.0
Laborer	5	5.0
Composition of family		
Nuclear	17	17.0
Joint	46	46.0
Extended	37	37.0
Type of diet		
Vegetarian	17	17.0
Non vegetarian	56	56.0
Mixed	27	27.0
Mode of delivery		
Normal vaginal delivery	23	23.0
Cesarean delivery	53	53.0
Instrumental delivery	24	24.0
Area of residency		
Urban	32	32.0
Rural	58	58.0
Others	10	10.0
Socio economic status		
Lower	32	32.0
Middle	38	38.0
Upper	30	30.0

The table shows that maximum of them were in the age group of 26-35 years , about 51% of the women were married , 36% were Christian, 26% of them had gained degree qualification , 46$% of them are living in joint family ,56% were non vegetarian ,53% of them had c-section delivery ,58% of them residing in urban area and 38% were from middle socio economic status

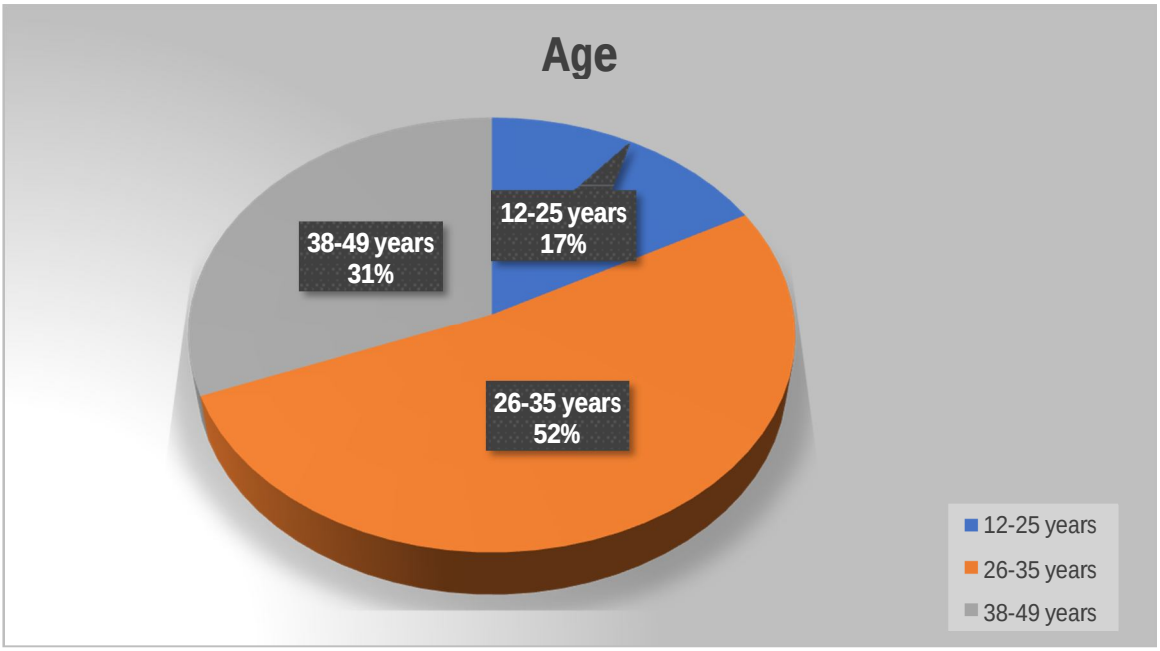


Figure1: Percentage distribution of age

1) Section B: Assessment of level of depression among mothers with gestational diabtesmellitus

Table 2: frequency and percentage level of depression among mothers with gestationaldiabetes mellitus

Variables	Mild		Moderate		Severe	
	F	%	f	%	f	%
Level of depression	32	32.0	28	28.0	40	40.0

The table despites that , about (40.0%) of them had severe depression , (28.0%) of them hadmoderate depression and (32%) of them had mild depression .

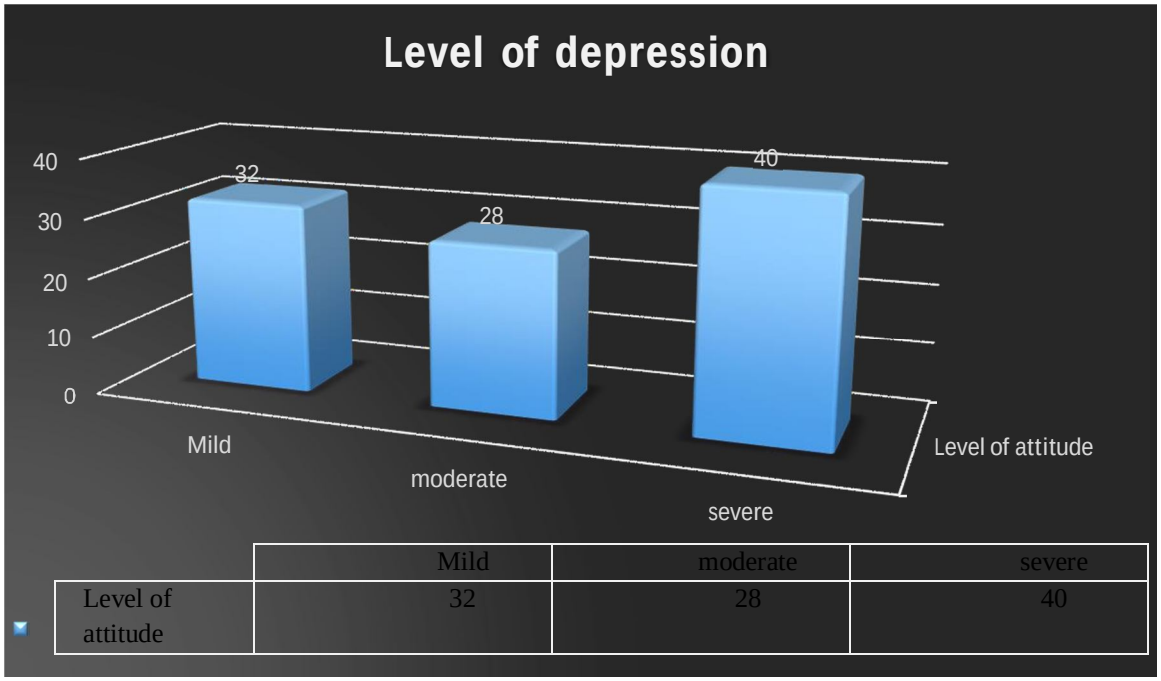


Figure2: Percentage distribution of level of depression

Table 3: Assessment of scores of level of depression
N = 100

Depression	Mean
Minimum Score	6.0
Maximum Score	18.0
Mean	15.72
Standard Deviation	4.45

The table shows that minimum score 6.0 , maximum score is 18.0 , mean is 15.72, and standarddeviation is 4.45 for symptoms of pelvic inflammatory disease

2) *Section D:* Association of level of depression with selected demographic variables amongthe mothers with gestational diabetes mellitus .

Table 4: association of level of depression with selected demographic variables among themothers with GDM

DemographicVariables	mild		moderate		severe		Chi-Square Value
	No.	%	No.	%	No.	%	
Age in years							χ^2=2.823
12 to 25 years	18	18.0	10	10.0	7	7.0	d.f=3 p = 0.420N.S
26-35 years	12	12.0	7	7.0	8	8.0	
38-49 years	10	10.0	24	24.0	4	4..0	
Marital status							χ^2=2.447
Married	4	4.0	17	17.0	2	2.0	d.f=1
Unmarried	12	12.0	4	4.0	4	4.0	p = 0.118N.S
Widow	8	8.0	16	16.0	6	6.0	
Divorce	16	16.0	4	4.0	7	7.0	
Religion							χ^2=8.971
Hindu	20	20.0	17	17.0	5	8.3	d.f=3
Muslim	12	12.0	6	6.0	8	8.0	p = 0.030
Christian	4	4.0	14	14.0	2	2.0	S*
Others	4	4.0	4	4.0	4	4.0	

DemographicVariables	mild		moderate		severe		Chi-Square Value
	No.	%	No.	%	No.	%	
Educational status							
Primary	6	6.0	20	20.0	7	7.0	χ^2=0.077
Secondary	2	2.0	2	2.0	2	2.0	d.f=1
High secondary	6	6..0	3	3.0	2	2.0	p = 0.781N.S
Degree	2	2.0	6	6.0	5	5.0	
Illiterate	24	24.0	10	20.0	3	3.0	
Occupational status							χ^2=1.247
Employed	9	9.0	11	11.0	5	5.0	d.f=3
Unemployed	11	11.0	6	6.0	1	1.0	p = 0.742N.S
Business	12	12.0	21	21.0	11	11.0	
Laborer	8	8.0	3	3.0	2	2.0	
Composition of family							χ^2=6.188
Nuclear	3	3.0	14	14.0	3	3.0	d.f=3
Joint	12	12.0	11	11.0	5	5.0	p = 0.103N.S
Extended	25	25.0	16	16.0	11	11.0	
Type of diet							χ^2=3.947
Vegetarian	23	23.0	10	10.0	7	7.0	d.f=2
Non vegetarian	15	15.0	9	9.0	7	7.0	p = 0.139N.S
Mixed	2	2.0	22	22.0	5	5.0	
Mode of delivery							χ^2=7.245
Normal vaginal delivery	13	13.0	17	17.0	6	6.0	

DemographicVariables	mild		moderate		severe		Chi-Square Value
	No.	%	No.	%	No.	%	
Cesarean delivery	12	12.0	6	6.0	7	7.0	d.f=3 p = 0.064N.S
Instrumental delivery	20	20.0	18	18.0	6	6.0	
Area of residency							χ^2=3.038
Urban	15	15.0	25	25.0	7	7.0	
Rural	5	5.0	10	10.0	9	9.0	d.f=1
Others	20	20.0	6	6.0	3	3.0	p = 0.081N.S
Socio economic status							χ^2=3.038
Lower	5	5.0	15	15.0	8	8.0	
Middle	30	30.0	10	10.0	2	2.0	d.f=1
Upper	5	5.0	16	16.0	9	9.0	p = 0.081N.S

*p<0.05, S – Significant, N.S – Not Significant

The table despites that, variable such as religion had significant association with level ofdepression.

IV. CONCLUSSION

Based on the findings of the current study it was evident that variable such as religion hadsignificant association with level of depression.

V. ACKNOWLEDGMENT

Authors would like to appreciate all the study participants for their co-operation tocomplete the study successfully.

VI. CONFLICT OF INTEREST

Authors declare no conflict of interest.

VII. FUNDING SUPPORT

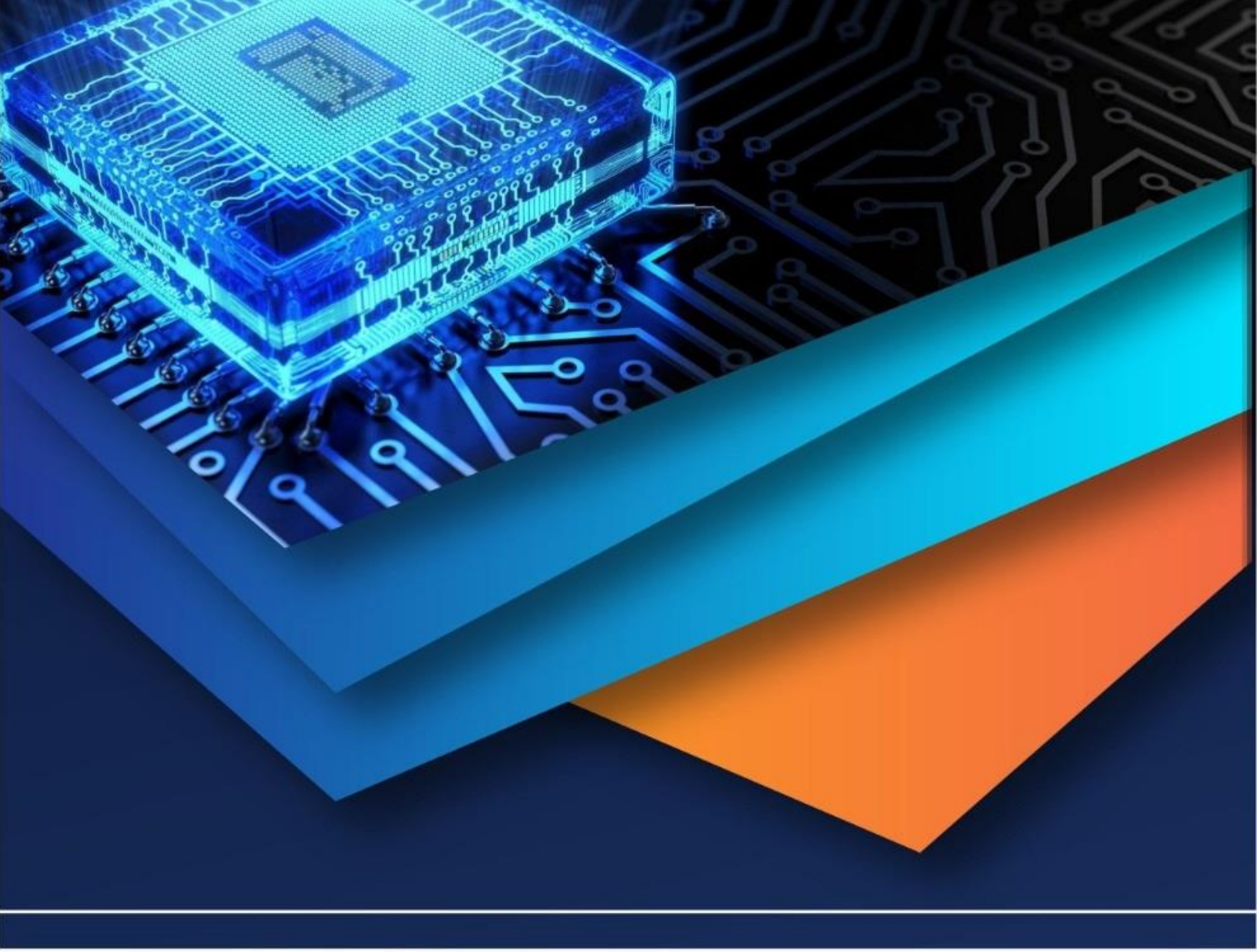
None.

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