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Awareness of Vocal Hygiene and Vocal Abuse among Autorickshaw Drivers in Kottayam

Ms. Jiya Annu Jacob[1], Dr. Rohila Shetty[2]
Final Post Graduate Student, Dr. M. V. Shetty College of Speech and Hearing, Malady Court, Kavoor, Mangalore-15, Karnataka, India
Professor, Dept. of Speech-Language Pathology, Dr. M. V. Shetty College of Speech and Hearing, Malady Court, Kavoor, Mangalore-15, Karnataka, India

Abstract: ***Voice is an important aspect of healthy and effective communication. There is a lack of awareness among people about voice problems associated with occupation. Vocal awareness addresses the significance of proper care of vocal folds suggesting certain modification in behaviour, lifestyle and diet. Vocal hygiene and practice are essential in developing good voice among individuals. The purpose of the study is to analyse the awareness of vocal hygiene and vocal abuse with related risk factors like continuous noise, smoking and air pollution among autorickshaw drivers in Kottayam. In this study participants included 50 male randomly selected autorickshaw drivers from different areas of Kottayam whose age ranged between 25-65 years. A questionnaire with 20 sets of questions was developed and distributed among the participants. The result showed that the awareness on vocal hygiene and vocal abuse is less (53.2%) among the autorickshaw drivers.***
Keywords: Vocal Hygiene, Vocal Abuse, Autorickshaw drivers.

I. INTRODUCTION

Habitual voice is a regular and consistent tone of voice. It is the pitch that we use automatically or "habitually" for speaking, but it may not necessarily be one's best vocal quality. Voice disorders can occur due to frequent misuse of habitual voice. There are also many other contributing factors such as smoking, air pollution, respiratory infections, repeated throat clearing, vocal nodules and tumours. Vocal hygiene is a term used to describe habits, which support a healthy and strong voice throughout life.

A. Vocal Abuse

The vocal cords can be stressed by using too much tension while speaking which can cause problems in the vocal cords. This includes too much talking, shouting, or coughing, smoking and constantly clearing the throat. As a result, vocal nodules or polyps occur which disturb the quality of voice production. In some cases, a vocal cord can break or burst from vocal abuse. In certain cases, the vocal cord tends to bleed (haemorrhage) and one can lose their voice. Hence vocal cord bleeding must be treated right away. (University of Rochester Medical Center).

Most individuals are unaware about the harmful effects of over usage of voice. In addition to that individuals tend to avoid medical/or professional assistance due to which voice problems go untreated for long periods of time. There are professional voice users such as teachers, singers, vendors, politicians, drivers who rely on voice for their occupation and extensively use it on a daily basis. Autorickshaw drivers who have spent significant amount of time in noisy environments tend to over use their voice, there is also an intake of pollutants such as carbon dioxide and other gases emitting from vehicles, smoking, drinking alcohol which leads to changes in their system which involves voice production and at times they also develop voice issues.

It is essential to spread awareness among autorickshaw drivers in order to enhance quality of life through avoiding voice problems. Cynthia et.al., (2022) did a study on relationship between vocal hygiene awareness and voice function among teachers in selected public primary schools in Migori County, Kenya and the results showed that majority of the teachers were aware of vocal hygiene. It was also observed that as awareness of vocal hygiene increased vocal function problem reduced.

Roy, Merrill and Gray (2005) did a study on voice disorders in the general population: prevalence, risk factors, and occupational impact. The results showed that the lifetime prevalence of voice disorders was 29.9% with 6.6% of participants reporting persistent voice disorder. It was also observed that certain unique factors also contributed to the reporting of chronic voice disorders which included sex (women), age (40-59years), voice use patterns and demands, oesophageal reflux, chemical exposures, and frequent cold/sinus infections.

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Independently it was seen that tobacco or alcohol use did not contribute to chronic voice disorder. It was noted that voice disorder adversely impacted jaw performance and attendance with 4.3% of participants being unable to perform certain tasks in their current job. About 7.2% of the participants reported being absent from work for one or more days because of their voice and 2% reported an absence of 4 more than days due to voice related issues.

Prabhu et.al., (2019) investigated the awareness of hearing loss, vocal hygiene and vocal abuse among auto rickshaw drivers in Mumbai and it was found that 20% participants reported a decrease in hearing sensitivity since they had started driving an auto-rickshaw. About 29.09% of the participants agreed that background noise had an impact on their voice quality.

Mund, Suvarna and Banik (2019) did a study on the prevalence of voice problems among hawkers in Mumbai and the results showed that the prevalence of voice disorders was 31.6% among the hawkers. It was observed that females were more prone to having voice disorders. Sore throat was found to be the most common vocal symptom followed by coughing, blocked nose, swollen gland, phlegm and the least common symptom seen was throat infection. Smoking, tobacco, years of experience, and duration of work was also significantly associated with voice disorders.

Keerthiga and Kumaraswamy (2022) did a study on prevalence of vocal abuse and knowledge on vocal hygiene among spiritual chanters and the findings suggested that spiritual chanters were highly exposed to the risk of voice-related problems and the knowledge of vocal health and vocal hygiene practices was lower among them.

A. Need Of The Study

Human voice is an identity of a person that represents his /her state of mind. It modifies along a lifetime as a result of external stimuli or misuse. In professional voice users, they use voice for their daily living. In India, autorickshaw drivers are large in number and they contribute to the majority of the working population. Considering this point, awareness is required among them to help them from voice damage. Hence the present study highlights the significance of awareness among autorickshaw drivers in Kottayam which is a place in Kerala.

II. METHODOLOGY

A. Aim

To analyse the awareness of vocal hygiene and vocal abuse with related risk factors like continuous noise, smoking and air pollution among autorickshaw drivers in Kottayam.

B. Objectives

1) To examine the knowledge on vocal abuse and vocal hygiene among the autorickshaw drivers.
2) To compare voice usage in terms of years of experience in driving an autorickshaw.

III. METHOD

The present study was done in 2 phases.

A. Phase 1: Preparation Of Questionnaire

A questionnaire with 20 sets of questions was developed. Five speech and language professionals who are currently in practice validated the questionnaire. The suggestions and correction given by speech and language professionals were incorporated and was made ready for circulation among autorickshaw drivers.

B. Phase 2: Participants

About 50 autorickshaw drivers in and around Kottayam district with working experience of more than 5 years were taken.

1) Inclusion Criteria
a) Age range of participants should be between 25-65 years
b) Driving experience with an autorickshaw must be above 5 years.
c) Subject should not have psychological and neurological issues

2) Exclusion Criteria
a) Participants from other districts were excluded.
b) Female autorickshaw drivers were excluded.

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3) Procedure

In this study 50 male autorickshaw drivers were randomly selected from different areas of Kottayam in the age range between 25-65 years. The above questionnaire with 20 questions was circulated to the group of autorickshaw drivers. The need of the study was explained to them in order to derive appropriate responses.

4) Scoring

The validated questionnaire consisted of 20 questions. The response Yes was given a score of 1 and No was given 0. The data was arranged and given for statistical analysis.

5) Statistical Analysis

The collected data was summarized by using the Descriptive Statistics: frequency and percentage. Binomial test was used for comparisons. The p value < 0.05 was considered as significant. Data was analysed by using the SPSS software (SPSS Inc.; Chicago, IL) version 26.0.

IV. RESULTS AND DISCUSSION

The study aimed to analyse the awareness of vocal hygiene and vocal abuse with related risk factors like continuous noise, smoking and air pollution among autorickshaw drivers in Kottayam. The obtained data was statistically analysed and discussed.

Table 1: Awareness of vocal hygiene and vocal abuse among autorickshaw drivers in Kottayam.

(n = 50)	Aware		Not aware		p value	Significance
	n	%	n	%		
Do you feel any changes in your voice quality?	31	62	19	38	0.119	NS
How many hours in a day do you spend driving an auto-rickshaw? Do you ever feel vocal tiredness after driving for a long time?	23	46	27	54	0.672	NS
Do you feel pain in the throat while talking?	22	44	28	56	0.480	NS
Do you feel that your voice quality decreases as the day progresses?	20	40	30	60	0.203	NS
Do you feel harshness while talking?	25	50	25	50	1.000	NS
Have you experienced voiceless situations?	29	58	21	42	0.322	NS
Do you feel voice breaks during conversations?	31	62	19	38	0.119	NS
Do you use whispered voice?	26	52	24	48	0.888	NS
Do you find yourself repeatedly clearing your throat?	40	80	10	20	< 0.001	S
Do you think drinking plenty of water in a day relieves vocal dryness?	26	52	24	48	0.888	NS
Do you have any gastric reflux problems such as burning sensation in throat/chest which impacts voice?	27	54	23	46	0.672	NS
How many cigarettes do you smoke per day? Do you think smoking regularly causes changes in voice quality?	22	44	28	56	0.480	NS
Do you have a habit of consuming alcohol? Does it impact your voice?	26	52	24	48	0.888	NS
Do you have a habit of drinking caffeinated beverages like coffee? Does it impact your voice?	18	36	32	64	0.065	NS
Do you think the consumption of paan and gutkha affects the voice quality?	30	60	20	40	0.203	NS

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Do you shout/talk loudly very often? Does it cause any changes in your voice?	23	46	27	54	0.672	NS
Are you aware of vocal hygiene?	22	44	28	56	0.480	NS
Do you have trouble speaking loudly in a noisy situation?	29	58	21	42	0.322	NS
Do you feel the environment in which you work affects your voice?	24	48	26	52	0.888	NS
Have you consulted any medical/ professionals for voice problems and diagnosed with any voice disorder? If yes, please mention.	18	36	32	64	0.065	NS

Figure 1: Awareness on vocal hygiene and vocal abuse among autorickshaw drivers in Kottayam.

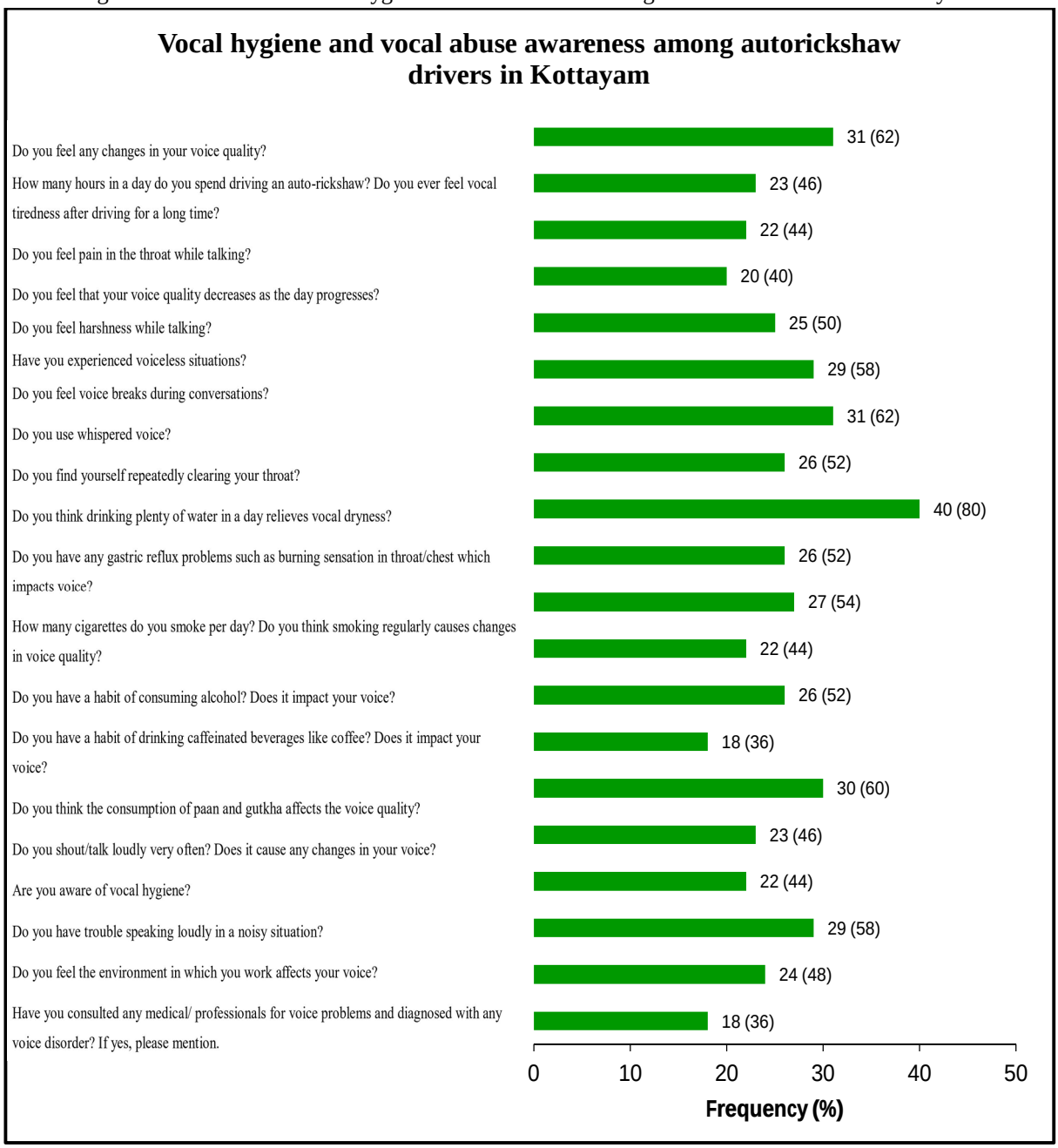


Table 1 and Figure 1 reveals that 80% of the autorickshaw drivers are repeatedly clearing their throat, 62% of them are aware of changes in their voice quality and voice breaks during conversation, 60% are aware of the consumption of paan and gutkha affecting their voice quality, 58% have experienced voiceless situations and have trouble speaking loudly in noisy situations, 54% are aware of gastric reflux problems such as burning sensation in throat/chest impacting voice. About 52% use whispered voice, they are aware that drinking plenty of water in a day relieves vocal dryness and the habit of consuming alcohol also impacts their voice. Around 50% are aware of harshness while talking, 48% are aware of the environment in which they work affecting their voice and 46% are aware of vocal tiredness after driving for a long time, they are also aware of whether or not any changes occur in their voice while shouting/talking loudly. It was also observed that 44% are aware of pain in their throat while talking, regular smoking causing changes in voice quality and are aware of vocal hygiene. It was also seen that 40% know of voice quality decreasing as the day progresses, 36% understand that taking caffeinated beverages like coffee impacts their voice and also 36% of autorickshaw drivers seek help from medical professionals for voice problems and have also been diagnosed with voice disorders.

Table 2: Overall awareness of vocal hygiene and vocal abuse among autorickshaw drivers in Kottayam.

Overall	Frequency	%
Aware	27	53.2
Not aware	23	46.8

Figure 2: Overall awareness of vocal hygiene and vocal abuse among autorickshaw drivers in Kottayam.

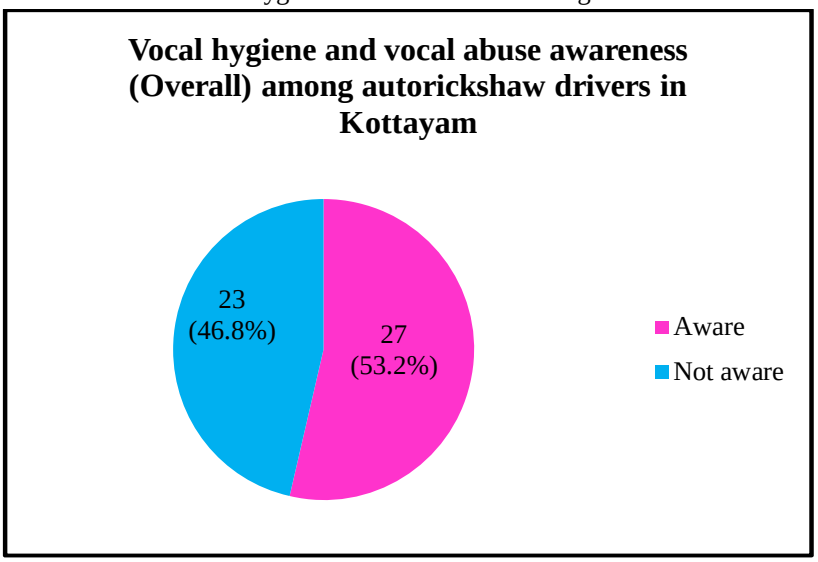


Table 2 and Figure 2 shows that among 50 autorickshaw drivers, 27 are aware of vocal hygiene and vocal abuse scoring 53.2% and 23 autorickshaw drivers are not aware scoring 46.8%.

V. DISCUSSION

Autorickshaw drivers are large in number and contribute to the majority of working population. They also tend to continuously talk for long durations without sufficient knowledge on vocal health. So, the present study aimed to find out about the awareness of vocal hygiene and vocal abuse with related risk factors like continuous noise, smoking and air pollution among autorickshaw drivers in Kottayam. About 50 autorickshaw drivers took part in this study. The questionnaire was distributed to these participants. The result showed that the awareness about vocal hygiene and vocal abuse was less (53.2%) among the autorickshaw drivers which was in accordance with the results by Prabhu et al., (2019) who reported the same.

VI. CONCLUSION

The present study attempts to describe in detail about the knowledge on awareness of vocal hygiene and vocal abuse among the autorickshaw drivers to enhance their quality of life by preventing them from voice disorders. This study can be extended by analysing the acoustic characteristics using objective method among the autorickshaw drivers.

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A. Limitations of the Present Study

1) Sample size is less.

2) Participants were from one district in Kerala.

B. Future Implications

1) Sample size can be increased.

2) Study could be carried out in several districts of Kerala.

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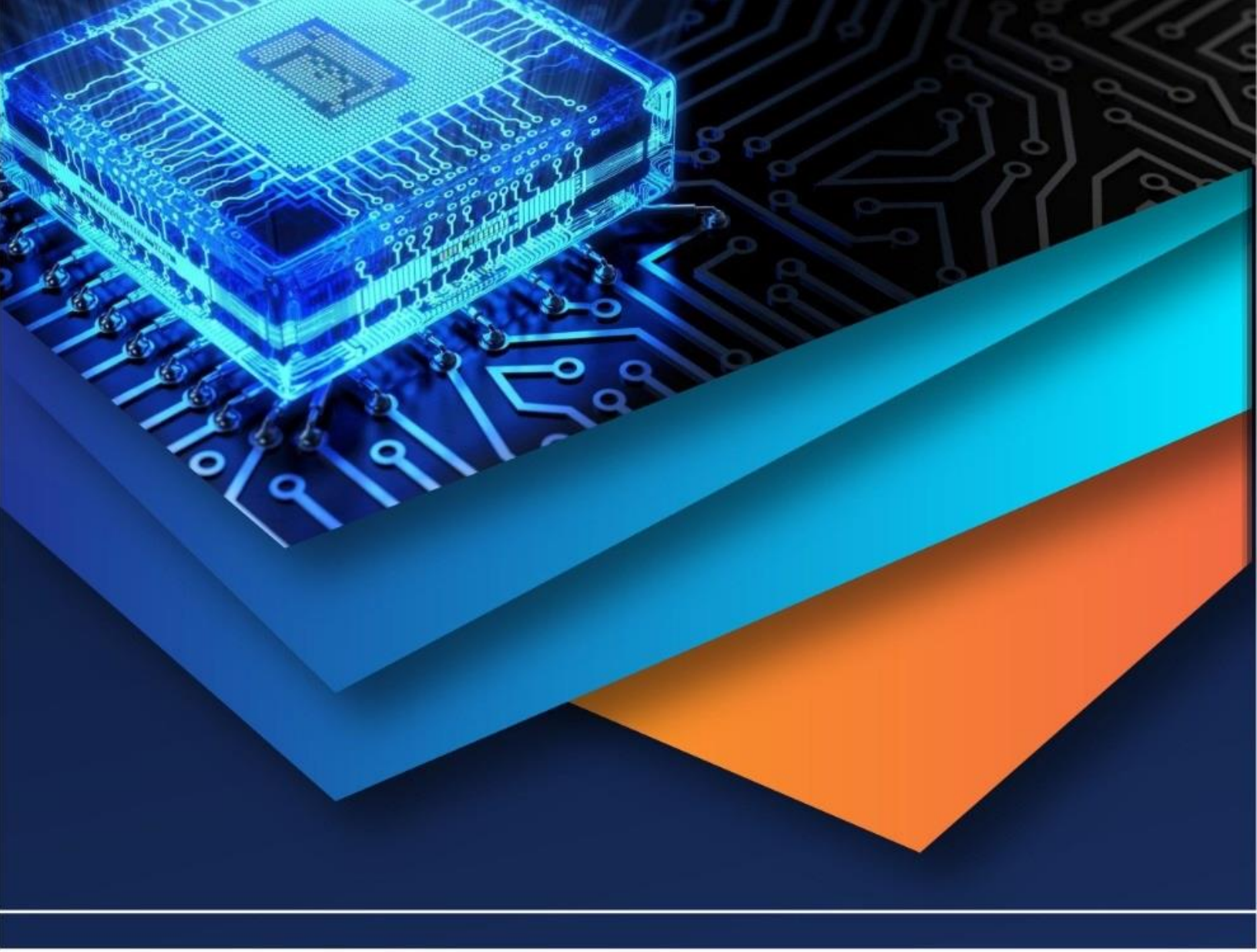
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