

## Research and Presentation Opportunities:

### Research Papers of Teachers and Students

Sr. No.	Name of Faculty	Name of Research Paper
1.	Mr. V.V. Koshti	सांख्यिकी शास्त्रज्ञ सीआर .राव यांचे संशोधनाचे मूल्य .
2.	Prof. Dr. M. K. Patil	Availability, Consumption and Quality of the Domestic Water in Kavathe Mahankal Tehsil.
3.	Prof. Dr. M. K. Patil	Comparison of Some Prediction Intervals for A Future Observation From Weibull Distribution
4.	Pranav Kute , Mr. V.V. Koshti	Statistical Analysis of Performance of Undergraduate Students in Kavathe Mahankal Tehsil Exploring
5.	Mr. G. D. Satpute and Miss. S. S. Patil	Evolution of Data: From Data Analysis to Artificial Intelligence
6.	Miss. S. S. Patil, Priyanka Balu Mali	Analysis of use of Mobile and Its Impact On Children's Health in Kavathe Mahankal Tehsil
7.	Miss. Snehal Zarekar	COVID-19's Impact On Health-care Systems
8.	Miss. Snehal Zarekar	Expanding Frontiers In Computer Vision and Language Fusion
9.	Rahul Pargonda Devarshi, Mr. G. D. Satpute	Impact of Organic and Inorganic Fertilizers on Grapes Production and Farmers Satisfaction
10.	Mr. V. V. Koshti	Insilico study and validation of SARS Coronavirus-2 (COVID19) proteins for better understanding
11.	Mr. V. V. Koshti, Dr. A. M. Suryawanshi, Mr. G. D. Satpute, Miss. S. S. Patil	Impact of Social Media Addiction on Life Satisfaction among Married Couples
12.	Mr. V. V. Koshti, Dr. A. M. Suryawanshi, Mr. G. D. Satpute, Miss. S. S. Patil	A Study on Relationship between Lifestyle Factors and Health Outcomes among Students
13.	Mr. V. V. Koshti, Dr. A. M. Suryawanshi, Mr. G. D. Satpute, Miss. S. S. Patil	Statistics of Election Integrity: Insights from Delhi Assembly Results.”
14.	Mr. V. V. Koshti, Dr. A. M. Suryawanshi, Mr. G. D. Satpute, Miss. S. S. Patil	Estimation of Monthly Per Capita Vehicle Fuel Consumption in Kavathe Mahankal Tahsil

Paper Presentation in online One Day National conference on “Bridging Boundaries: Multidisciplinary Research in Science, Commerce and Humanities”



The poster features a central text area with a white background and pink floral accents. At the top, there are three icons: a red flower-like shape on the left, a stylized eye logo in the center with the motto 'शिक्षणं सर्वज्ञानस्य प्रद' below it, and a portrait of an elderly man on the right. Below these icons is the text 'Shikshan Prasarak Sanstha's'. The main title of the conference is 'Padmabhushan Vasanttraodada Patil Mahavidyalaya, Kavathe Mahankal, Dist: Sangli, Maharashtra, 416405'. The conference theme is 'Bridging Boundaries: Multidisciplinary Research in Science, Commerce and Humanities', held in 'ONLINE MODE' on '21<sup>st</sup> March 2024'. It is organized by the 'Internal Quality Assurance Cell & Research Development Cell' under the 'Principal Prof. (Dr.) M. K. Patil'. The bottom section shows a photograph of the college building and lists the contact details for three individuals: Mr. A. A. Kamble (Co-ordinator IQAC), Mr. A. S. Pawar (Co-ordinator Research Development Cell), and Mr. N. P. Shinde (Convener, Mob-8080955157).

*Shikshan Prasarak Sanstha's*

**Padmabhushan Vasanttraodada Patil Mahavidyalaya,**  
Kavathe Mahankal, Dist: Sangli, Maharashtra, 416405

*Proceeding of One Day National Conference on*  
**"Bridging Boundaries: Multidisciplinary Research in Science,  
Commerce and Humanities"**

**ONLINE MODE**  
**21<sup>st</sup> March 2024**

**Organized by**  
Internal Quality Assurance Cell & Research Development Cell

**Principal**  
Prof. (Dr.) M. K. Patil



**Mr. A. A. Kamble**  
Co-ordinator IQAC

**Mr. A. S. Pawar**  
Co-ordinator  
Research Development Cell

**Mr. N. P. Shinde**  
Convener  
Mob-8080955157

### List of Participants for One Day National Conference

Sr. No.	Name Of Student	Name of Paper
1	Rahul Pargonda Devarshi, Mr. G. D. Satpute	Impact of Organic and Inorganic Fertilizers on Grapes Production and Farmers Satisfaction in Kavathe
2	Miss. S. S. Patil, Priyanka Balu Mali	Analysis of use of Mobile and Its Impact On Children's Health in Kavathe Mahankal Tehsil
3	Pranav Kute , Mr. V.V. Koshti	Statistical analysis of performance of undergraduate students in kavathe mahankal tehsil: exploring factors influencing academic success

**IMPACT OF ORGANIC AND INORGANIC FERTILIZERS ON GRAPE PRODUCTION AND  
FARMER SATISFACTION IN KAVATHE MAHANKAL TEHSIL**

**<sup>1</sup>G. D. Satpute, <sup>2</sup>R. Devarshi**

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**ABSTRACT:**

This study investigates the effects of organic and inorganic fertilizers on grape production and farmer pleasure in Kavathe Mahankal Tehsil. Utilizing a mixed-strategies approach, statistics from grape farmers had been analyzed to compare fertilizer utilization, grape manufacturing, and farmer pleasure ranges. Results highlight the importance of each styles of fertilizers in grape manufacturing, emphasizing the need of balanced fertilizer for most efficient yields(1). The study reveals the impartial have an effect on of soil type and grape variety on manufacturing effects, (2) with found disparities among 2022 and 2023 harvests. Additionally, it identifies the profitability of the Supersonaka grape variety and establishes a high quality correlation among fertilizer costs and grape income. However, notwithstanding those advantageous findings, farmer dissatisfaction with grape quotes underscores existing marketplace challenges. Furthermore, the studies explores broader topics together with the environmental effect of fertilizer use, adoption rates of sustainable practices, and socio-financial implications for rural livelihoods. By A considering these interconnected elements, the have a look at pursuits to provide complete insights into grape manufacturing complexities in the vicinity. Ultimately, the findings intention to tell evidence-primarily based guidelines and interventions to sell sustainable agricultural improvement and enhance the properly-being of grape farmers in Kavathe Mahankal Tehsil.

**KEYWORDS:** Grape production, Fertilizer impact, farmer satisfaction, Supersonaka grape, market improvements, sustainable agriculture.

**INTRODUCTION:**

This observe delves into the tricky dynamics of grape production and farmer pride in Kavathe Mahankal Tehsil with the aid of investigating the effects of natural and inorganic fertilizers. Through a complete exam of fertilizer usage patterns, soil type and grape range independence, production variances between 2021 and 2022, farmer satisfaction stages with grape costs, identification of excessive-profits grape sorts primarily based on fertilizer utility, and correlation among fertilizer charges and grape earnings, this research objectives to provide precious insights into optimizing agricultural practices and improving farmer livelihoods. By elucidating those multifaceted relationships, we will make a contribution to the improvement of sustainable agricultural techniques tailored to the particular situations of the vicinity, in the end fostering monetary prosperity and environmental resilience in grape farming communities. The utilization of organic and inorganic fertilizers represents a critical aspect of grape cultivation, impacting soil fertility and crop productivity. By discerning the effects of these fertilizers on grape production, we can determine the most effective strategies for maximizing yields while minimizing environmental degradation. Furthermore, comparing fertilizer usage among farmers allows us to identify prevailing agricultural practices and potential areas for improvement. Understanding the relationship between soil type and grape variety independence is essential for optimizing cultivation practices and ensuring crop resilience to varying environmental conditions. Analyzing production variances between consecutive years provides insights into the influence of external factors such as climate variability and management practices on grape yields, enabling farmers to make informed decisions to mitigate risks and enhance productivity.

## **ANALYSIS OF USE OF MOBILE AND ITS IMPACT ON CHILDREN'S HEALTH IN KAVATHE MAHANKAL TEHSIL.**

**<sup>1</sup>Patil S. S. and <sup>2</sup>Mali Priyanka**

<sup>1</sup> Assistant professor, Department of Statistics, Padmabhushan Vasanttraodada Patil  
Mahavidyalaya, Kavathe Mahankal Dist. Sangli.

<sup>2</sup> B. Sc. III Student, Department of Statistics, Padmabhushan Vasanttraodada Patil Mahavidyalaya,  
Kavathe Mahankal Dist. Sangli.

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### **ABSTRACT**

This research explores the digital habits of children, focusing on mobile device usage and YouTube consumption, and evaluates the impact of parental behavior on children's screen time. Surveying 250 children, we found a concerning trend of excessive mobile usage, with a majority exceeding 3 hours daily, primarily engaging with YouTube content. Parental usage patterns mirrored this behavior, with most spending around 2 hours on mobile or laptop devices. The study also identified behavioral repercussions, as 76 children displayed signs of irritable temper issues. YouTube shorts emerged as the preferred mobile activity, and the platform ranked highest for social networking among both genders. Unexpectedly, language development was found to be unaffected by mobile usage. However, children's screen time correlated with parental engagement. While this research provides valuable insights, its limitations underscore the need for further investigation and interventions to promote healthier digital habits among children.

**KEYWORDS:** Mobile, internet, children health, bar charts, pie charts, hypothesis testing.

### **INTRODUCTION**

In recent decades, the proliferation of mobile devices and internet connectivity has revolutionized how individuals interact with information and each other. Children, in particular, have become avid users of Smartphone, tablets, computers, and the internet for various purposes, ranging from entertainment and social networking to educational pursuits. While these technologies offer numerous benefits in terms of access to information and connectivity, concerns have emerged regarding their potential adverse effects on children's health.

The impact of mobile devices and the internet on children's health is a multifaceted issue encompassing physical, mental, and social dimensions. Excessive screen time has been linked to sedentary behavior, obesity, and sleep disturbances among children. Moreover, unrestricted access to online content may expose children to inappropriate material or cyber bullying, contributing to psychological distress and social isolation. Conversely, digital platforms also offer opportunities for educational enrichment, social engagement, and skill development. Amidst these conflicting perspectives, empirical research is essential to discern the true nature of the relationship between technology usage and children's health. By employing rigorous statistical analysis techniques, this study seeks to elucidate whether and to what extent the use of mobile devices and the internet impacts various aspects of children's well-being. Such insights are indispensable for policymakers, educators, parents, and healthcare professionals in formulating evidence-based strategies to mitigate potential harms and maximize the benefits of digital technology for children's health and development.

### **OBJECTIVES OF THE STUDY**

- To find the amount of screen time by children.
- To study which social media platform more used by children.
- To study how much time parents use mobile or laptop.
- To analyze the different diseases due to mobile.
- To check why children use mobile phones.

# STATISTICAL ANALYSIS OF PERFORMANCE OF UNDERGRADUATE STUDENTS IN KAVATHE MAHANKAL TEHSIL: EXPLORING FACTORS INFLUENCING ACADEMIC SUCCESS

Koshti V.V. , Kute Pranav\*

Department of Statistics  
P. V. P. Mahavidyalaya, Kavathe Mahankal (M.S.)

\* Student B.Sc. III

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## ABSTRACT

This research paper investigates the performance of undergraduate students through statistical analysis, aiming to uncover the factors that influence academic success. Using a dataset collected from a sample of undergraduate students in the Kavathe Mahankal Tehsil, this study employs descriptive statistics, correlation analysis, and regression analysis to explore the relationships between various variables and student performance. The results reveal significant associations between factors such as attendance, study habits, and participation in extracurricular activities, offering insights for educators and policymakers to enhance educational outcomes. Graphs, diagrams, and tables are utilized to visually represent the findings, facilitating a comprehensive understanding of the statistical analysis conducted in this study.

**Keywords:** undergraduate students, academic performance, statistical analysis, attendance, study habits, extracurricular activities.

## 1. INTRODUCTION:

The academic performance of undergraduate students in higher education institutions is a critical indicator of educational quality and effectiveness (Ariful Islam ( 2021). It is a topic of significant interest and importance in educational research. Understanding the factors that influence student success is essential for educators and policymakers to develop targeted interventions and support mechanisms (James Afrifa, et al. 2023). Understanding the factors that influence students' performance can provide valuable insights for educators, policymakers, and stakeholders involved in higher education. Statistical analysis plays a crucial role in examining these factors and identifying patterns or trends that may impact academic success. This research paper aims to conduct a comprehensive statistical analysis of undergraduate student performance, exploring the relationships between various factors and academic outcomes, with the goal of uncovering key factors that contribute to variations in performance levels. This research aims to conduct a comprehensive statistical analysis on the academic performance of undergraduate students,

## 2. OBJECTIVES

1. To determine the most preferred subject in final year across the Arts, Commerce and Science streams. .
2. To check dependency between the gender and pursuing higher study across different streams.
3. To compare the attendance percentage across different streams.
4. To identify the reasons why students are irregular.
5. To identify which competitive exam are most of the student preparing across different streams and also to compare the approaches to competitive exam preparation employed by male and female students
6. To check dependency between the gender and attendance percentage across different streams.
7. To identify the preparation method to prepare for competitive exams

Shikshan Prasarak Sanstha's  
PADMABHUSHAN VASANTRAODADA PATIL MAHAVIDYALAYA,  
KAVATHE MAHANKAL, DIST-SANGLI



One day National Multidisciplinary Conference (Online Mode)

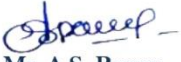
*"Bridging Boundaries: Multidisciplinary Research in Science, Commerce & Humanities"*

## Certificate


This is to certify that **R. Devarshi**, of **B.Sc.-III, Department of Statistics, Padmabhushan Vasantrodada Patil Mahavidyalaya, Kavathe Mahankal, Maharashtra** has attended/ participated in the One day Online National Conference on *"Bridging Boundaries: Multidisciplinary Research in Science, Commerce & Humanities"* organized by Padmabhushan Vasantrodada Patil Mahavidyalaya, Kavathe Mahankal Dist: Sangli, Maharashtra on Thursday, 21st March, 2024.

He has presented a research paper entitled :- *"Impact of Organic and Inorganic Fertilizers on Grape Production and Farmer Satisfaction in Kavathe Mahankal Tehsil"*

  
Mr. A. A. Kamble  
IQAC Co-ordinator

  
Mr. A.S. Pawar  
Research Development  
Cell

  
Mr. N.P. Shinde  
Convener

  
Prof. (Dr.) M. K. Patil  
Principal

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# IMPACT OF SOCIAL MEDIA ADDICTION ON LIFE SATISFACTION AMONG MARRIED COUPLES

<sup>1</sup>Miss. Dhanashri Bhosale, <sup>2</sup>Mr. Vijay Koshti, <sup>3</sup>Dr. Annasaheb Suryawanshi, <sup>4</sup>Mr. Ganesh Satpute, <sup>5</sup>Miss. Shital Patil

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**Abstract:** Social media has become deeply integrated into everyday life, but excessive use has increasingly been associated with addictive behaviors that may disrupt interpersonal relationships and emotional well-being. This study investigates the impact of social media addiction on life satisfaction among married couples. Using a cross-sectional design, data were collected from 100 married individuals through a structured questionnaire measuring social media addiction and life satisfaction using 7-item Likert scales. Statistical analyses, including correlation and multiple regression using SPSS, were performed to examine predictive relationships. Results revealed significant positive correlations between life satisfaction and both age ( $r = 0.477, p < 0.01$ ) and years of marriage ( $r = 0.482, p < 0.01$ ). Conversely, social media addiction demonstrated a significant negative correlation with life satisfaction ( $r = -0.559, p < 0.01$ ). Regression findings showed that social media addiction emerged as a significant negative predictor, whereas years of marriage showed a positive predictive effect. The study concludes that excessive social media use reduces life satisfaction among married couples, while longer marital duration enhances it. These findings underscore the importance of setting healthy digital boundaries and fostering meaningful in-person interactions to strengthen marital relationships and overall well-being.

**Keywords:** Social Media Addiction, Life Satisfaction, Correlation and Regression.

## 1. INTRODUCTION

Social media has become deeply embedded in everyday life, shaping how individuals communicate, share information, and maintain relationships. While it offers many benefits, its excessive use can develop into social media addiction—a compulsive pattern of online engagement that becomes difficult to control. Such addictive behavior can interfere with daily functioning and may have negative consequences for personal and relational well-being. For married couples, excessive time spent on social media can reduce meaningful face-to-face interaction, limit emotional bonding, and create misunderstandings or conflicts, ultimately affecting the quality of the marital relationship.

Life satisfaction, which reflects an individual's overall assessment of happiness and well-being, is closely influenced by the health of intimate relationships, especially marriage. When social media addiction disrupts communication, trust, or emotional closeness, it may diminish the sense of fulfillment within the relationship, thereby impacting overall life satisfaction. With the growing reliance on digital platforms, it becomes important to explore how such behaviors influence married individuals' well-being. Although previous studies have examined digital addiction and its psychological consequences, fewer investigations have focused specifically on married couples and the long-term implications for their happiness and life satisfaction. Understanding this relationship is crucial for promoting healthier digital habits and strengthening marital relationships in an increasingly connected world.

Liu's (2025) cross-cultural study found that cultural factors influence the relationship between social media use, self-esteem, and life satisfaction among U.S. and Chinese college students. Yashasvi & Joshi (2025) showed that high social media use negatively affects adults' life satisfaction and body self-image due to increased online comparison.

Ozenoglu (2024) Research on adolescents revealed that social media addiction is linked to unhealthy eating attitudes and reduced life satisfaction. Acun (2020) reported that trust, self-esteem, and social media use shape life satisfaction among university students, with self-esteem buffering negative effects. Poorbaferani et al. (2018) found that communication skills and self-efficacy significantly boost life satisfaction among married women, highlighting the role of interpersonal abilities. Hawi & Samaha (2017) found that social media addiction negatively correlates with self-esteem and life satisfaction among university students.

“A Study on Relationship between Lifestyle Factors and Health Outcomes among Students.”Published in International Journal of Web of Multidisciplinary Studies, E-ISSN: 3049-2424, pp. 482–489.



## A Study on Relationship between Lifestyle Factors and Health Outcomes among Students

Swaranjali Karande<sup>1</sup>, Vijay Koshti<sup>2</sup>, Annasaheb Suryawanshi<sup>3</sup>, Ganesh Satpute<sup>4</sup>, Shital Patil<sup>5</sup>, Snehal Zarekar<sup>6</sup>

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### Abstract:

This study examines how major lifestyle factors such as diet, sleep, physical activity, screen time, and substance use affect student's physical and mental health, including BMI, stress, anxiety, depression, and academic performance. Using a cross-sectional survey of 100 college students, statistical analyses such as correlation, chi-square, and regression were performed. Results showed that good diet and regular physical activity were associated with healthier BMI and lower depression and anxiety. Screen time emerged as the strongest predictor of poor mental health, significantly increasing both depression and anxiety levels. Sleep duration influenced BMI but had no significant effect on psychological outcomes. Chi-square tests revealed that alcohol use and smoking were significantly associated with academic performance, with non-users performing better academically. Regression analysis confirmed screen time, physical activity, and sleep hours as key predictors of depression. Overall, the study highlights that healthier lifestyle behaviors are essential for improving student's physical well-being, mental health, and academic outcomes.

**Keywords:** Lifestyle factor, BMI, Stress, Depression, Correlation, Chi-square, Regression

## 1. Introduction

Student's lifestyle choices have a profound impact on their health and academic performance. With increasing academic pressure, digital exposure, and changes in diet and sleep patterns, students face multiple challenges that affect both physical and mental well-being. This study seeks to understand the relationship between lifestyle factors such as diet, sleep, physical activity, stress, and screen time, and their effect on health outcomes including BMI, self-reported health, stress levels, anxiety, depression and academic performance among students.

Students today are experiencing rapid lifestyle transitions influenced by academic demands, technological advancements, and changing social environments. As academic pressure intensifies, many students adopt irregular routines that include unhealthy eating habits, inadequate sleep, reduced physical activity, and prolonged screen exposure. These lifestyle behaviors can significantly shape both their physical and mental health, directly affecting their academic performance and overall quality

“Statistics of Election Integrity: Insights from Delhi Assembly Results.”  
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and Educational Development, E-ISSN: 3107-6513, pp. 681–684.

# Statistics of Election Integrity: Insights from Delhi Assembly Results

G. D. Satpute<sup>1</sup>, V. V. Koshti<sup>2</sup>, A. M. Suryawanshi<sup>3</sup>, S. S. Patil<sup>4</sup>, S. M. Zarekar<sup>5</sup>

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**Abstract—** Election integrity is essential for democratic governance and demands objective, data-driven methods to assess the credibility of electoral outcomes. This study applies Benford’s Law, a statistical tool used in forensic analysis, to examine the vote count distribution in the Delhi Assembly Elections. The Chi-square goodness-of-fit test was used to compare observed digit frequencies with the expected Benford distribution. The results reveal significant deviations ( $p\text{-value} < 0.05$ ), suggesting possible irregularities. However, statistical deviations alone do not confirm electoral fraud; such deviations may arise from campaign strategies, demographic trends, regional political behavior, or structural limitations of Benford’s Law itself. The study also considers broader political and technical criticisms, including concerns raised by political parties and doubts about the reliability of Electronic Voting Machines (EVMs). Given the global use of Benford’s Law in election forensics, its application in the Indian context provides an evidence-based method to address public skepticism. This research highlights the value of statistical tools in strengthening electoral transparency and promoting data literacy in democratic systems.

**Keywords—** Benford’s Law, Election Forensics, Chi-square Test, Electoral Integrity, Vote Count Analysis, EVM Criticism, Political Analysis, Data Literacy

## 1. INTRODUCTION

Elections are the foundation of a democratic society, ensuring fair representation and public trust in governance. However, over the years, concerns regarding the credibility and transparency of elections in India have grown significantly. Allegations of vote tampering, manipulation of Electronic Voting Machines (EVMs), irregularities in voter lists, and lack of transparency in the electoral process have raised doubts in the minds of voters and political stakeholders.

In this context, there is an increasing need for scientific and objective tools to assess electoral integrity. One such tool is Benford’s Law, also known as the First Digit Law, which provides a statistical framework for analyzing the distribution of digits in naturally occurring datasets. It is widely used in forensic accounting, auditing, and fraud detection.

Benford’s Law has also been applied to election data across the world. Notable examples include its use in examining the 2009 Iranian Presidential Elections, 2011 Russian Parliamentary Elections, and the 2004 and 2016 U.S. Presidential Elections. These applications have helped detect anomalies and initiate further investigations.

Given such global precedence, it is both logical and relevant to apply Benford’s Law in the Indian electoral context. This study attempts to analyze vote count data from the Delhi Assembly Elections using Benford’s Law, with the objective of examining whether the digit distribution in vote counts follows natural statistical patterns or shows signs of irregularities. Through this analysis, the study aims to explore the scope of statistical tools in strengthening democratic processes and promoting data literacy in electoral studies.

## 2. POLITICAL AND TECHNICAL CRITICISMS

In recent years, various political parties and leaders have expressed concerns about the transparency and fairness of the electoral process in India. Common objections include irregularities in vote counting, inconsistencies in voter lists, and doubts regarding the integrity of Electronic Voting Machines (EVMs). Several parties have demanded greater scrutiny of the election process and questioned the impartiality of results. EVMs, in particular, have drawn criticism regarding the possibility of tampering, the lack of end-to-end transparency, and the inability of independent bodies to verify their internal functioning. In some instances, discrepancies between EVM and VVPAT (Voter Verified Paper Audit Trail) counts have added to the skepticism. Critics often describe EVMs as “black box systems” where the internal mechanisms are opaque to the public. While the Election Commission of India maintains that EVMs are secure and tamper-proof, and various court rulings have upheld their usage, skepticism remains among certain political and civil groups. However, political and technical criticisms alone are insufficient to conclude electoral fraud. Such criticisms, though important to acknowledge, require evidence-based evaluation. In this context, statistical tools such as Benford’s Law provide a neutral, objective, and scientific framework to assess the naturalness of vote distributions. These methods offer empirical responses to subjective doubts and help determine whether observed voting patterns are truly irregular or consistent with expected norms. Therefore, using such statistical tools is an appropriate and rational approach to address electoral concerns and reinforce democratic trust.

“Estimation of Monthly Per Capita Vehicle Fuel Consumption in Kavathe Mahankal Tahsil” Published in International Journal of Web of Multidisciplinary Studies, E-ISSN: 3049-2424, pp. 304-317.



**Estimation of Monthly Per Capita Vehicle Fuel Consumption in Kavathe Mahankal Tahsil**

Dhanashri Bhosale<sup>1</sup>, Vaishnavi Bhosale<sup>2</sup>, Rohini Mali<sup>3</sup>, Vijay Koshti<sup>4</sup>, Annasaheb Suryawanshi<sup>5</sup>, Ganesh Satpute<sup>6</sup>, Shital Patil<sup>7</sup>  
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**Corresponding Author:**

Dhanashri Bhosale

**Abstract:**

This study aims to estimate the average monthly per capita vehicle fuel consumption in Kavathe Mahankal Tahsil and to identify the key household, vehicle, and travel-related factors influencing fuel use. A cross-sectional survey was conducted among 373 households using a structured questionnaire, with households stratified by monthly income and selected through stratified random sampling using Neyman allocation. Independent two-sample t-tests and Welch ANOVA were applied to assess differences in monthly per capita vehicle fuel consumption across various groups, highlighting the significant effects of household income, occupation, gender, and vehicle-related factors. The fitted regression model effectively predicts monthly per capita vehicle fuel consumption based on average fuel economy, long trips per month, occupation of household head, number of adults, number of vehicles in family, traffic congestion in locality, frequent extra load, vehicle service interval, type of vehicle own and fuel consumption satisfaction.

**Keywords:** Fuel consumption, petrol, diesel, CNG/LPG, Welch ANOVA, correlation, regression

**1. Introduction**

**1.1 Background of the Study**

Transportation plays a vital role in the economic and social development of any region. In recent years, ownership and use of personal and commercial vehicles have increased rapidly due to population growth, improved living standards, and greater accessibility to credit facilities. Consequently, fuel consumption has risen significantly, making fuel expenditure a major recurring cost for households. In Indian localities, particularly semi-urban and rural areas, households often rely heavily on private vehicles for commuting, education, agriculture, business, and social activities. Two-wheelers and cars are commonly used for personal transportation, while tractors, autorickshaws, and goods vehicles serve occupational purposes. These vehicles operate on different fuels such as petrol, diesel, and Compressed Natural Gas (CNG), each with distinct cost and consumption patterns. Fuel consumption is influenced by vehicle type, fuel efficiency (mileage), distance traveled, road conditions, driving behavior, and maintenance practices. Socio-economic factors, including household income, family size, and number of earning members, further affect vehicle usage and fuel consumption. Therefore, fuel consumption patterns vary widely across households within the same locality.

2.Students' Abstract Presentation in the National Conference on Statistics and Its Applications



Sangola Taluka Shetkari Shikshan Prasarak Mandal Sangola's  
**Dr. Ganpatrao Deshmukh Mahavidyalaya,**  
**Sangola Dist. -Solapur (M.S.)**  
**Department of Statistics**



**organizes**  
**National Online Conference**  
**On**  
***Statistics and It's Applications***

**in collaboration with**  
**Internal Quality Assurance Cell (IQAC)**  
**(July 6<sup>th</sup>, 2023)**

 [Click here for Registration](#) 



**Vijaykumar Ghadage**

Convener

Head, Department of Statistics  
Dr. Ganpatrao Deshmukh Mahavidyalaya, Sangola  
(Email- vkghadage.stat@gmail.com)

List of Participants for National Conference on “Statistics and its applications”.

<b>Sr. No</b>	<b>Name of the Participants</b>	<b>Title of Paper</b>
1	LATTHE ROHINI MUKESH	COMPARATIVE ANALYSIS OF MILK FAT CONTENT IN COW AND BUFFALOES AND THE ROLE OF PROFESSIONALS IN MILK PRODUCTION.
	PAWAR YOGITA ANIL	
	BHOSALE SUSHMITA ABASO	
	V.V. KOSHTI	
2	MALI PRIYANKA BALU	STATISTICAL ANALYSIS ON IMPACT OF SOCIAL MEDIA ON COLLEGE STUDENTS
	PATIL AKSHATA BALASO	
	SHINDE SHAILAJA DILIP	
	SHINDE ASHWINI PANDURANG	
	JADHAV AARTI TANAJI	
	SHITAL S. PATIL	
3	CHOUDHARY GEETA DAYARAM	STATISTICAL ANALYSIS OF HEIGHT AND WEIGHT OF STUDENTS.
	PATIL PRATIKSHA ANANDRAV	
	MAHAJAN ASHWINI ANNASO	
	CHAVAN SWATI DEEPAK	
	PRAJKTA M. PATIL	
4	CHOUGULE YASHODA NATHAJI	A CASE STUDY ON PETROL DIESEL RATE ANALYSIS
	PATIL ANJALI DATTATRAY	
	PATIL PRANAVIKA SHAHAJI	
	FADATARE SHOBHA PANDIT	
	PRAJKTA M. PATIL	
5	KORE PRATIK JAYANT	STATISTICAL ANALYSIS ON THE ROLE OF MUSIC IN EVERYDAY LIFE
	NAGANE AKSHAY PANDURANG	
	M. K. PATIL	
	GANESH D. SATPUTE	
6	KUTE PRANAV KUNDLIK	STATISTICAL ANALYSIS OF EFFECT OF COACHING CLASSES ON STIDENT MAKES.
	SURYAWANSHI DIGVIJAY SANJAY	
	M. K. PATIL	
	GANESH D. SATPUTE	

## **Abstracts of All Groups:**

### **Comparative Analysis of milk fat content in Cows and Buffaloes and the Role of Professionals in Milk Production.**

PawarYogita<sup>1</sup>, Latthe Rohini<sup>2</sup>, Bhosale Susmita<sup>3</sup>, V. V. Koshti<sup>4</sup>

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#### **DEPARTMENT OF STATISTICS**

Padmabhushan Vasantraodada Patil Mahavidyalaya, Kavathe Mahankal, Sangli,  
Maharashtra, India, 416-405

#### **Abstract**

The present study was conducted to evaluate the nutritive quality of buffalo and cow milk in Kavathe Mahankal Tehsil of Sangli district, during the year 2023. A total of 200 milk samples of buffalo and cow for 10 days were examined for their fat. The statistical tools such as pie charts and column charts are used to represent the data. The Z test is used to check difference between cow and buffalo milk fat. A remarkable higher fat was observed in buffalo milk contrast to that of cow milk. Buffalo milk was concluded to be a rich source of macro-nutrients and suggested to be utilized as nutritional soft drink and/or as better base for dairy products. We also found that milk production is increased in rural areas and the involvement of farmers in milk production is more than the other professions.

**Key Words:** Cow milk, Buffalo milk, Fat, Profession.

# STATISTICAL ANALYSIS ON IMPACT OF SOCIAL MEDIA ON COLLEGE STUDENTS

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## DEPARTMENT OF STATISTICS

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### Abstract

Nowadays an impact of social media on everyone's life is increasing and has the need of study. The present study consists of effect of social media on college students and most popular social media platforms. Bar chart and pie chart are used to represent the data. Chi square test of independence of attributes is used to check the dependency between social media use and gender. In this study we investigated that WhatsApp is the mostly used platform and most of the students use social media for one hour. Also we found that use of social media and gender are dependent.

### Keywords

Social media, Bar chart, pie chart, chi square test for independence of attributes.

## **STATISTICAL ANALYSIS OF HEIGHT AND WEIGHT OF STUDENTS.**

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Prajakta Patil<sup>5</sup>

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### **DEPARTMENT OF STATISTICS.**

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#### **Abstract**

In this case study we are going to study the relationship between height and weight of persons. This study was conducted on a group of male and female students of age range of 18-25 years. The statistical methods used to interpret the data are correlation and graphical representations. In this paper it is tried to find out a correlation between height and weight of male and female students. A total of 80 students of different departments of P. V. P. Mahavidyalaya K. Mahankal of semester of 2023. The average height and weight are represented using bar chart. Body Mass Index (BMI) of the students was calculated to compare the health status of male and female students. It is found that that the most of the students (males and females) have the normal weight. The correlation between height and weight of students is calculated as 0.7706 (Pearson's coefficient of correlation). The result of this research which is expected to indicate how height is related to weight will help in the understanding of the variation in the relationship between height and weight of students.

**Key Words:** Weight, height, Correlation, BMI, Average.

## **A CASE STUDY ON PETROL DIESEL RATE ANALYSIS**

Patil Anjali <sup>1</sup>, Patil Pranavika<sup>2</sup>, Chougule Yashoda<sup>3</sup>, Fadatare Shobha<sup>4</sup>

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### **DEPARTMENT OF STATISTICS**

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Maharashtra, India, 416-405

#### **Abstract**

The purpose of this research is to examine the pricing of gasoline and diesel across India. Everyone has their own mode of transportation, and the number of automobiles on the road is expanding at an unimaginable rate. The rising demand for gasoline and diesel is primarily due to an increase in the number of automobiles on the road. With the rise in crude oil prices on the global market, market, the cost of gasoline and diesel is also rising. However, rising prices are posing a significant challenge for the general public.

The purpose of this study is to use the Time series and correlation methods to analyze and forecast petrol and diesel prices in various Indian cities. The data set was collected through online from last 34 year i.e. from 1989-2023. The statistical methods used to interpret the data are Time series. There are also graphical representations, and scatter diagrams. The scatter plot is used to represent increasing rate of petrol and diesel. Time series is used to forecast the value of petrol and diesel of year 2024 and that is 95.72/ltr and 92.66/ltr resp.

**Key Words:** Correlation, Time Series, Petrol, diesel

## **Statistical Analysis on the Role of Music in Everyday Life**

Pratik Kore<sup>1</sup>, Akshay Nagane<sup>2</sup>, M. K. Patil<sup>3</sup>, G. D. Satpute<sup>4</sup>

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### **DEPARTMENT OF STATISTICS**

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#### **Abstract**

This study presents a statistical analysis on the role of music in everyday life, with a focus on understanding the preferences, behaviors, and effects associated with music consumption. The objectives of the study include investigating the most popular genre of music, determining the most widely used music app, examining the impact of music on stress levels, and exploring the relationship between age and music listening habits. The sample of participants was selected from Kavthe Mahankal, representing diverse demographics and age groups. Data was collected through surveys and interviews. The key findings are the study identified the most popular genre of music, is contemporary pop music followed by rock and hip-hop. Secondly, the analysis determined the most frequently used music app is Spotify Thirdly, the study demonstrated a significant reduction in stress levels after listening to music, indicating the positive impact of music on stress. We also observed that younger participants tended to engage more actively with music.

**Keyword:** Music, Stress Level, Genre Preference.

# Statistical Analysis of effect of Coaching Classes on Student Marks

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## DEPARTMENT OF STATISTICS

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### Abstract

In this present study we, focus on the statistical analysis of the effect of coaching classes on student marks. The objectives of the study are to examine the graphical representation of pre-coaching marks and post-coaching marks, analyze the improvement in the consistency of student performance, and test whether marks show improvement after attending coaching classes.

To achieve these objectives, a sample of students who attended coaching classes will be selected, and their marks before and after attending the classes will be collected. Graphical representations, such as line graphs, will be used to visually compare the pre-coaching and post-coaching classes.

The findings of this study will provide valuable insights into the impact of coaching classes on student performance. It will contribute to the existing body of knowledge by highlighting the effectiveness of coaching classes in improving marks and consistency of student performance. The results can be used by educators, and students themselves to make informed decisions regarding the benefits of coaching classes.

**Keywords:** statistical analysis, coaching classes, student marks,

**Certificates:**



**Sangola Taluka Shetkari Shikshan Prasarak Mandal Sangola's  
Dr. Ganpatrao Deshmukh Mahavidyalaya, Sangola**

**Dist. -Solapur (M.S.)**

**Department of Statistics**

**in collaboration with**

**Internal Quality Assurance Cell (IQAC)**

**organized**

***National Online Conference***

**On**

***Statistics and Its Applications***

This is to certify that **PAWAR YOGITA** from **P.V.P.Mahavidyalaya Kavathe Mahankal** has presented a paper entitled "**Comparative Analysis of Milk Fat Content in Cows and Buffaloes and the Role of Professionals in Milk Production**" in the National online Conference on '**Statistics and its Applications**' organized on July 6<sup>th</sup>, 2023 by Department of Statistics, Dr. Ganpatrao Deshmukh Mahavidyalaya, Sangola(MS).

**Vijaykumar Ghadage**  
**Convener**

**Dr. S. M. Mulani**  
**Principal**

