**A STATISTICAL STUDY OF AWARENESS ON VEERAPANDIYA KATTABOMMAN**

**R. Sasikumar, J. Jackson Arun and K. Kaviyarasu**

Department of Statistics, Manonmaniam Sundaranar University, Tirunelveli – 627 012, Tamil Nadu, India.

sasikumar\_statis@msuniv.ac.in, jcksnarun@gmail.com and kaththikavi45@gmail.com

**ABSTRACT**

Veerapandiya Kattabomman otherwise called Katta Bomman was an eighteenth century Indian Palaiyakkarar clan leader from Panchalankurichi and one of the earliest to go against the British rule. He pursued a conflict with the British sixty years before Indian War of Independence which happened in 1857 in Northern pieces of India. This work makes sense of the methodology for examine the information on the consciousness of Veerapandiya Kattabomman in Kayathar and the was collected from Manimandapam,consisting of 80 samples (52 male and 28 female).

**1. INTRODUCTION**

**1.1. Biography of Veerapandiya Kattabomman**

Veerapandiya Kattabomman also known as Katta Bomman was an 18th century Indian Palaiyakkarar chieftain from Panchalankurichi and who was one of the earliest to oppose of the British rule? He waged a war with the British six decades before Indian War of Independence which occurred in 1857 in Northern parts of India. After a bloody war with the British he was captured by British and hanged in 1799 CE. His fort was destroyed and his wealth looted by the British army. Panchalankurichi is a historically important place in the present day Thoothukudi district of Tamil Nadu state, India.

**1.2. Early Life of Kattabomman**

Veerapandiya Kattabomman was born to Jagaveera Kattabomman and Arumugathammal on 3rd January, 1760. He had two younger brothers Dalavai Kumarasami and Duraisingam. Veerapandiyan was fondly called ‘Karuthaiah’ (the black prince), and Dalavai Kumarasami, ‘Sevathaiah’ (the white prince). Duraisingam, a good orator, was nicknamed ‘Oomaidurai’ meaning the Mute Prince.

**1.3. Veerapandiya Kattabomman Ancestors**

Azhagiya Veerapandiapuram (Otta – pidaram of today) was ruled by Jagaveera Pandiyan. He had a minister Bommu, also a brave warrior, after the god Sastha Ayyappan Swamy to describe his strength and fighting qualities which over a period of time, became Kattabomman in Tamil. Kattabomman ascended the throne after Jagaveera Pandiyan, who had no issue, as Adi Kattabomman, the first of the clan of Kattabomman.

**1.4. Panchalankurichi**

Legend has it that during a hunting trip into the forests of Salikulam (close to Azhagiya Pandiyapuram) one of the Kattabommans watched the spectacle of a hare chasing seven hounds. Kattabomman was amazed at this miracle. Believing that the land possessed great powers that could instil courage in people, he built his fort there and named it Panchalankurichi. On 2nd February, 1790, Veerapandiyan, 30, became the king of Panchalankurichi as Veera Pandia Kattabomman supposed to be the 47th ruler of the region and the 5th ruler from the Kattabomman clan and a Palya – karrar (or Polygar) of the Madurai Nayak kingdom.

**1.5. Events of Veerapandiya Kattabomman**

Kattabomman refused to pay his dues and for a long time refused to meet Jackson the Collector of the East India Company. Finally, he met Jackson at Ramalinga Vilasam, the palace of Sethupathi of Ramanathapuram. The meeting turned violent and ended in a skirmish in which the Deputy Commandant of the Company’s forces, Clarke was slain. Kattabomman and his men fought their way to freedom and safety, but Thanapathi Pillai, Kattabomman’s secretary was taken prisoner.

The Commission of Enquiry that went into the incident fixed the blame on Jackson and relieved him of his post, thinking the Company’s plan to take over the entire country gradually could be marred by Jackson’s fight with Veerapandiya Kattabomman.

The new Collector of Tirunelveli wrote to Kattabomman calling him for a meeting on 16th March, 1799. Kattabomman wrote back citing the extreme drought conditions for the delay in the payment of dues and also demanded that all that was robbed off him at Ramanathapuram be restored to him. The Collector wanted the ruling house of Sethupathis to prevent Kattabomman from aligning himself with the enemies of the Company and decided to attack Kattabomman.

The British also instigated his long time feuding neighbor Ettayapuram Poligar to make provocative wars over Kattabomman on their long pending territorial disputes.

**1.6. Veerapandiya Kattabomman Capture and Sentence**

Veerapandiya Kattabomman hid in so many places including thirumayam, virachilai and finally stayed at Kolarpatti at Rajagopala Naicker’s house where the forces surrounded the house. Kattabomman and his aides fled from there and took refuge in the Thirukalambur forests close to Pudu-k-kottai. Bannerman ordered the Raja of Pudukkottai to arrest Kattabomman. Accordingly, Kattabomman was captured and on 16th October, 1799 the case was taken up (nearly three weeks after his arrest near Pudukkottai).

After a summary trial, Kattabomman was hanged unceremoniously on a Tamarind tree in Kayathar (near Thirunelveli).

**1.7. Legend and Folklore**

In subsequent years, a good deal of legend and folklore developed around Kattabomman and the Marudu Brothers. Kayatharu, where Kattabomman was executed has remained a place of political pilgrimage.

In his Tinnevelly Gazetteer of 1917, H. R. Pate notes the presence, in Kayatharu, of “a great pile of stones of all sizes, which represents the accumulated offerings by wayfarers of the past hundred years. Folk songs recalling the heroism of the Poligar leaders remain alive in Tamil Nadu to this day…”

**1.8. Honor and Monuments of Veerapandiya Kattabomman**

Kattabomman became thus the pivot of the emerging feeling of Tamil nationhood. His story is celebrated in many legends and epic poetry in Tamil. Kattabomman is today recognised by the government as one of the earliest independence fighters opposing the British and has been hailed as the inspiration behind the first battle of independence of 1857, which the British called the Sepoy Mutiny.

* In 1974, the Government of Tamil Nadu constructed a new Memorial fort. The Memorial Hall has beautiful paintings on the walls depicting the heroic deeds of the saga which gives a good idea about the history of the period. A cemetery of British soldiers are also seen near the fort.
* The remnants of the old fort are protected by the Archaeological Survey of India.
* At Kayathar, near Tirunelveli on the present day NH7, the place where he was hanged, there is another memorial for Kattabomman.
* To commemorate the bicentenary on 16th October, 1999 of Kattabomman’s hanging, the Government of India brought out a postal stamp in his honour.
* India’s premier communication nerve centre of the Indian Navy, at Vijayanarayanam, about 40 km from here, is named as INS Kattabomman.
* Till recently (1999) the state transport buses of Kanniyakumari and Thirunelveli Districts were named Kattabomman Transport Corporation.
* Veerapandia Kattabomman Panpattu Kazhagam (Veerapandia Kattabomman Cultural association) is an organisation named in his honour.
* The district administration celebrates `Veerapandia Kattabomman festival’ at Panchalankurichi on his anniversaries.

**2. MATERIALS AND METHODS**

This section deals with the description of methodology and steps undertaken for collection. Then explain the procedure for analyze the data on the awareness of Veerapandiya Kattabomman in Kayathar. It is a test score data. Using this data we analyze the following statistical tools.

* + Descriptive analysis
  + Independent sample t-test
  + ANOVA test

##### 2.1. DESCRIPTIVE ANALYSIS:

**Descriptive statistics** is a summary statistic that quantitatively describes or summarizes features from a collection of information, while descriptive statisticsis the process of using and analysing those statistics. Descriptive statistics is distinguished from inferential statistics (or inductive statistics) by its aim to summarize a sample, rather than use the data to learn about the population that the sample of data is thought to represent. This generally means that descriptive statistics, unlike inferential statistics, is not developed on the basis of probability theory, and are frequently non-parametric statistics. Even when a data analysis draws its main conclusions using inferential statistics, descriptive statistics are generally also presented. For example, in papers reporting on human subjects, typically a table is included giving the overall sample size, sample sizes in important subgroups, and demographic or clinical characteristics such as the average age, the proportion of subjects of each sex, the proportion of subjects with related co-morbidities, etc.

Some measures that are commonly used to describe a data set are measures of central tendency and measures of variability or dispersion. Measures of central tendency include the mean, median and mode, while measures of variability include the standard deviation (or variance), the minimum and maximum values of the variables, kurtosis and skewness.

It is classified into two types. They are

* Measures of central tendency,
* Measures of dispersion.

##### 2.2. Central tendancy:

A central tendency (or measure of central tendency) is a central or typical value for a probability distribution. It may also be called a center or locationof the distribution. Colloquially, measures of central tendency are often called *averages.* The term *central tendency* dates from the late 1920s.

The most common measures of central tendency are the arithmetic mean, the median, and the mode. A middle tendency can be calculated for either a finite set of values or for a theoretical distribution, such as the normal distribution. Occasionally authors use central tendency to denote "the tendency of quantitative data to cluster around some central value.

The central tendency of a distribution is typically contrasted with its *dispersion* or *variability*; dispersion and central tendency are the often characterized properties of distributions. Analysis may judge whether data has a strong or a weak central tendency based on its dispersion.

##### 2.3. Arithmetic Mean:

The sum of all measurements divided by the number of observations in the data set.

The sample mean formula is: x̄ = ( Σ xi ) / n;

##### 2.4. Median:

The **median** is the value separating the higher half from the lower half of a data sample, a population, or a probability distribution. For a data set, it may be thought of as "the middle" value. The basic feature of the median in describing data compared to the mean (often simply described as the "average") is that it is not skewed by a small proportion of extremely large or small values, and therefore provides a better representation of a "typical" value. Median income, for example, may be a better way to suggest what a "typical" income is, because income distribution can be very skewed. The median is of central importance in robust statistics, as it is the most resistant statistic, having a breakdown point of 50%: so long as no more than half the data are contaminated, the median is not an arbitrarily large or small result.

##### 2.5. Mode:

The mode is the most common numberin a set. For example, the mode in this set of numbers is 21:

21, 21, 21, 23, 24, 26, 26, 28, 29, 30, 31, 33

##### 2.6. Measures of Dispersion:

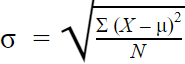
In Statistics, dispersion also called variability, scatter, or spread is the extent to which a distribution is stretched or squeezed. Common examples of measures of statistical dispersion are the variance, standard deviation, and interquartile range.

##### 2.7. Standard deviation:

The standard deviationis a measure of the amount of variation or dispersion of a set of values. A low standard deviation indicates that the values tend to be close to the mean (also called the expected value) of the set, while a high standard deviation indicates that the values are spread out over a wider range.

Standard deviation may be abbreviated SD, and is most commonly represented in mathematical texts and equations by the lower case Greek letter sigma [σ](https://en.wikipedia.org/wiki/Sigma), for the population standard deviation, or the Latin letter [s](https://en.wikipedia.org/wiki/S), for the sample standard deviation.

The standard deviation of a random variable, sample, statistical population, data set, or probability distribution is the square root of its variance. It is algebraically simpler, though in Practice, less robust than the average absolute deviation. A useful property of the standard deviation is that unlike the variance, it is expressed in the same unit as the data.



* + σ = population standard deviation
  + ∑ = sum of…
  + *X* = each value
  + μ = population mean
  + *N* = number of values in the population

##### 2.8. Variance:

Varianceis the expectation of the squared deviation of a random variable from its mean. In other words, it measures how far a set of numbers is spread out from their average value. Variance has a central role in statistics, where some ideas that use it include descriptive statistics, statistical inference, hypothesis testing, and goodness of fit, and Monte Carlo sampling. Variance is an important tool in the sciences, where statistical analysis of data is common. The variance is the square of the standard deviation, the second central moment of a distribution, and the covariance of the random variable with itself.

Sample Variance =

**2.8. Independent sample t-test**

Independent sample t-test is a statistical technique that is used to analyze the mean comparison of two independent groups. In independent samples t-test, when we take two samples from the same population, then the mean of the two samples may be identical. But when samples are taken from two different populations, then the mean of the sample may differ. In this case, it is used to draw conclusions about the means of two populations, and used to tell whether or not they are similar.

Assumptions in independent samples t-test:

1. Assumes that the dependent variable is normally distributed.
2. Assumes that the variance of the two groups are the same as the dependent variable.
3. Assumes that the two samples are independent of each other.
4. Samples are drawn from the population at random.
5. In independent sample t-test, all observations must be independent of each other.
6. In independent sample t-test, dependent variables must be measured on an interval or ratio scale.

Procedures for independent sample t-test:

1. Set up the hypothesis.

a. Null Hypothesis: It is assumed when the means of the two groups are not significantly different.

b. Alternative Hypothesis: Assumes that the means of the two groups are significantly different.

The standard deviation for the independent sample t-test formula:

The value of the independent sample t-test

Degree of freedom for independent sample t-test:

Where

= degree of freedom

= number of observations in both samples of the independent sample t-test.

Hypothesis testing: In hypothesis testing for the independent sample t-test, statistical decisions are made about whether or not the two population means are identical. Compare the calculated value of the independent sample t-test with the table value of the sample t-test. If the calculated value of the independent sample t-test is greater than the table value of the predetermined significance level, we will reject the null hypothesis and say that the means of the two groups are different. If the calculated value of the independent sample t-test is less than the table value, then we will say that the means of the two groups are the same.

**2.9. ANOVA**

Analysis of variance (ANOVA) is an analysis tool used in statistics that splits an observed aggregate variability found inside a data set into two parts: systematic factors and random factors. The systematic factors have a statistical influence on the given data set, while the random factors do not. Analysts use the ANOVA test to determine the influence that independent variables have on the dependent variable in a regression study.

The Formula for ANOVA is:

F =

where

F=ANOVA coefficient

MST=Mean sum of squares due to treatment

MSE=Mean sum of squares due to error

**3. RESULTS AND DISCUSSIONS**

In this study, we discussed about there are 80 sample data were collected from the Veerapandiya Kattabomman, Manimandapam, Kayathar and used to test the further Statistical Analysis

The age bunches of males and females about the attention to Indian political dissident Veerapandiya Kattabomman. In the age class 20-40 has the most elevated frequency of 55 and 68.8 percent which give the reasonable thought that the middle age bunches have better information about the Kattabomman. Age gathering of 40-60 has the most reduced frequency of 9 and with percent 11.3 when contrasted with other two age gatherings.

Reveals that Male have more information or mindfulness when contrasted with female that is with frequency of 52 and 65 percent.

Besides going into the instructive status of the age gatherings, the individuals who have schooling capability of UG has the most elevated frequency of 37 and 46 percent. Others (expect, UG, PG) have the most minimal frequency of 5 and 6.3 percent. Schooling capabilities old enough gatherings having underneath have frequency 32 and 40 percent and PG age bunches has frequency 6 and percent 7.5.

indicates that Bar outline shows the frequencies for the different age bunches who have the mindfulness about Veerapandiya Kattabomman.

The representation shows that the age bunches having 20-40 have the most noteworthy frequency and age bunches having 40-60 have the least frequency.

The illustration of the above bar chart shows the frequencies for the male and female who have the awareness about Veerapandiya Kattabomman. So male have the highest frequency as compared to female which means they have more knowledge about the Veerapandiya Kattabomman.

specific visual diagram shows the schooling capability of age bunches gatherings whose have the mindfulness Veerapandiya Kattabomman. Apparently, age bunches having schooling capability of UG have the most noteworthy frequency when contrasted with other instruction capability. That appears to be legit that middle age bunches have more mindfulness about Veerapandiya Kattabomman. Furthermore, others (expect, UG, PG) have the least frequency.

The below table provides basic information about the group comparisons, including the sample size (*n*), mean, standard deviation, and standard error for the groups. In this collected data, there are 52 Males and 28 Females. The mean of the knowledge about during his rule Veerapandiya kattabomman knows his people needs and satisfied for Male known is 4.67 and standard deviation is 0.760, and also for female known are mean is 4.79 and standard deviation 0.499.

The beneath table, in collected information, there are 52 Males and 28 Females. The mean of the information about Veerapandiya kattabomman ruled well during his period for Male known is 4.46 with Standard deviation 0.917, likewise for female known is 4.18 and the Standard deviation is 0.945.

Provides basic information about the group comparisons, the mean of the knowledge about during his rule Veerapandiya kattabomman knows his people needs and satisfied for Male known is 4.67 with Standard deviation 0.760, also for female known is 4.79 and the Standard deviation is 0.499.

The mean of the knowledge about Veerapandiya kattabomman was shot dead by the British for Male known is 1.27 with Standard deviation 0.952,also for female known is 1.11 and the Standard deviation is 0.315.

The mean of the knowledge about Devotion to Veerapandiya kattabomman is high for Male known is 3.79 with Standard deviation 0.997,also for female known is 3.79 and the Standard deviation is 0.917.

The mean of the knowledge about Veerapandiya kattabomman during his reign collected high taxes from the people for Male known is 2.40 with Standard deviation 1.089,also for female known is 2.36 and the Standard deviation is 1.026

The mean of the knowledge about there are 2 siblings to Veerapandiya kattabomman for Male known is 3.60 with Standard deviation 1.472, also for female known is 4.43 and the Standard deviation is 0.836.

the mean of the knowledge about Veerapandiya kattabomman speaks and acts kindly to the people for Male known is 4.02 with Standard deviation 1.038, also for female known is4.04 and the Standard deviation is 1.170.

The mean of the knowledge about Veerapandiya kattabomman is angry with his wife for the consequence of what happen outside for Male known is 2.33 with Standard deviation 0.964,also for female known is 2.07 and the Standard deviation is 0.766.

The mean of the knowledge about Veerapandiya kattabomman mother tongue is Tamil for Male known is 1.69 with Standard deviation 1.336, also for female known is 1.25 and the Standard deviation is 0.799.

The mean of the knowledge about Veerapandiya kattabomman was hanged at Palayamkottai for Male known is 1.06 with Standard deviation 0.416, also for female known is 1.21 and the Standard deviation is 0.630.

**4. Independent Sample T test:**

Indicates that independent samples T test for all the questions knowledge about Veerapandiya kattabomman.

Ho: All the peoples are well known about Veerapandiya Kattabomman

H1: All the peoples are not known about Veerapandiya kattabomman

In the likert scale data Knowledge about Veerapandiya Kattabomman, many of the peoples are well known about the Veerapandiya Kattabomman life because all 10 questions more than 8 questions independent significance value is above 0.05. So we accept the Null hypothesis, otherwise reject the alternative hypothesis.

There are 2 siblings to Veerapandiya kattabomman and Mother tongue is Tamil these two thinks significance value is below 0.05 so we reject the null hypothesis. Finally all the peoples are not well known about there are 2 siblings to Veerapandiya kattabomman and mother tongue is Tamil.

**ANOVA:**

The above table 3.5 shows the output of the ANOVA analysis and whether there is a statistically significant difference between our group means. We can see that the significance values are above 0.05 for all information about Veerapandiya Kattabomman, so there is no statistically significant difference for all.

H0: All the peoples are not well known basic knowledge of Veerapandiya Kattabomman.

H1: All the peoples are well known basic knowledge of Veerapandiya Kattabomman.

In the table all the values are above 0.05 so we reject the null hypothesis. This ANOVA table clearly explains the people knowledge about Veerapandiya Kattabomman is well known those who visit Veerapandiya Kattabomman, Manimandapam Kayathar.

**5. CONCLUSION**

The main purpose of this study is to analyze the awareness of peoples about Veerapandiya Kattabomman those who are visiting Veerapandiya Kattabomman Manimandapam, Kayathar.

Going deep into our study, the first chapter includes the introduction about Veerapandiya Kattabomman. Second chapter deals with description of methodology and steps undertaken for data collection. The data was collected from Manimandapam, consisting of 80 samples (52 male and 28 female). So we can say that there is a high majority of males visiting the Manimandapam.

We concluded that the results of frequency table give the reasonable thought that the middle age bunches have better information or knowledge about the Kattabomman. Which gives the clear idea that they are visiting Manimandapam more and age gathering of 40-60 has the most reduced frequency which says they don’t visit that much. So the authorities must investigate and find a better solution for this. Furthermore going into the instructive status of the age gatherings, the individuals who have schooling capability of UG has the most elevated frequency as compared to others. That is they have much knowledge about Kattabomman.

**REFERENCES:**

1. Statistics for management -D.levin and David S. rubin, Prentice Hall, The University of Michigan, 7th Edition, 1998.
2. Business Statistics for contemporary decision making - Ken Black, John Wiley and Sons Canada,Limited, 5th Edition, 2007
3. BasicEconometrics – Damodar N. Gujarati, McGraw-Hill, the University of California, 5th Edition, 1978.
4. Guy, Randor (9 May 2015). ["Veera Pandya Kattabomman 1959"](http://www.thehindu.com/features/cinema/veera-pandya-kattabomman-1959/article7188251.ece). *The Hindu*. Retrieved 20 February 2017.
5. ["The Valour"](https://www.google.com/books/edition/Thamizh_Is_Not_Just_A_Language/XJ8rDwAAQBAJ?hl=en&gbpv=1&dq=Veerapandiya+Kattabomman&pg=PA123&printsec=frontcover). Educreation Publishing. 11 July 2017.
6. [Unsung Heroes: Veerapandiya Kattabomman (organiser.org)](https://organiser.org/2022/06/26/87845/bharat/unsung-heroes-veerapandiya-kattabomman/).
7. [The Panchalankurichi Fort: An Ode to Veerapandiya Kattabomman | INDIAN CULTURE](https://indianculture.gov.in/node/2790151).
8. [Veerapandiya Kattabomman Manimandapam in the city Kayathar (worldorgs.com)](https://in.worldorgs.com/catalog/kayathar/tourist-attraction/veerapandiya-kattabomman-manimandapam).
9. [Veerapandiya Kattabomman Biography – Winentrance](https://www.winentrance.com/general_knowledge/biography/veerapandiya-kattabomman-biography.html).
10. [Veerapandiya Kattabomman - Profile, Biography and Life History | Veethi](https://www.veethi.com/india-people/veerapandiya_kattabomman-profile-1044-30.htm).

\*\*\*\*\*\*