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# Kruskal-Wallis Test Analyzed

# The Basic Security of Video Conferencing In India

**[a]D.V.P.Noblin, [b]K.Ravichandran**

## ABSTRACT

This study describes how video conferencing saves a person profits and time, reduces travel costs, and stimulates its participation everywhere. These Video conferencing is a technique for visual correspondence in which eye-to-eye and direct contact takes place without any traffic. It shows the behavioral development of social events, workshops, and instructional courses by exchanging these ongoing communications with the help of the website. Furthermore, it provides cost reduction and profitability and safe living for long-distance travelers and enables its service to run smoothly without any hindrance. With the development of this information technology, it has become very important for various activities such as online video conferences. At the same time, the method of video conferencing has been safely developed without giving place to online crimes. There is a huge gap between basic security and its impacts on society, and gaps need to be analyzed to improve the situation. Accordingly, when 243 samples were taken to explore the primary video conferencing type of security and explored through the Kruskel-Wallis test, various advantages emerged. This research method shows separate box plots regarding primary video conferencing security. Various companies are making HD video calls from their favorite gadgets that can be connected to the Internet from anywhere and run in minutes with safe operations explore its applications through this amazingly advanced cloud video conferencing.

***Keywords:*** *Video conference, Kruskal-Wallis tests, Basic security and decreases travel costs*

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Department of Visual Communication and Animation,
Dr.MGR Educational and Research Institute, Chennai- Tamil Nadu, India
E-mail: ravi.news10@yahoo.com, mailnoblin@gmail.com

## I. Introduction

Video conferencing bolsters gainfulness saves time, decreases travel costs, and all-around propels participation. The upside of video conferencing is the ability to support those points of interest without requiring reliable travel for opposite correspondence [1]. Video conferencing is the

strategy for visual correspondence wherein eye to eye, live correspondence occurs without requiring any transportation [2-3]. Video conferencing annihilates the limitations of partitions and assistants continuously correspondence with the help of the web [4]. It is commonly used by the associations to speak with their laborers and clients inside the country and abroad. It diminished the development costs of an association, as it grants holding social events, workshops, and instructional courses without requiring the far away agents and clients to make an excursion to the essential zone. As there are certain and negatives sides of every development, video conferencing in like manner as it's a lot of central focuses and burdens [5-6].

Video conferencing helps in lessening the development costs gained by an association manifold. It allows the association to speak with its delegates and clients, and offer screens, reports, HD sounds, and accounts with no issue [7]. Video conferencing hinders the increase of work, as it allows the agents to discuss the issues with the concerned individual right away [8-9]. Basic openness of correspondence hinders correspondence gaps; along these lines, reducing the chances of ensnarement in the work [10]. Video conferencing destroys the limits of time and spot by allowing a social event of people to analyze things with those working in expelled territories without moving from their territory [11-12]. This allows a smooth work process in the association without any breaks and hitches [13].

The breakdown of any of the gear or programming fragments can hamper the smooth working of the work. To address the issue, capable specific people are required. This may concede the work and add to the upkeep cost of the association. A social occasion or a gathering by methods for video conferencing can at times lead to wrong decisions and judgments, a similar number of a period it gets hard to get to the movements and character of a person through this virtual medium[14-15]. Installing a video conferencing structure can be cash related load for a little degree association, as it is to some degree expensive development and needs standard help [16]. Thus we have come to present a pushed video conferencing structure in business spaces at genuine rates; along these lines improving their benefit and profitability manifolds [17].

## II. Statement of Problem

Even though Online Communication Networks Google Hangouts, Skype, Microsoft Teams, Zoom, Jitsi, GoToMeeting, Hangouts Meet, BigBlueButton, Lifesize and Cisco Webex Meetings are providing more facility and Transfer the information by online video conferences, the common public has repeatedly been victimized through various purposes. Awareness halfway the public on online video conferences and safeguarding themselves is very less. According to the many research studies, the major reason the moratorium is not responsible utilization of basic security with online video conferences.

## III. The need for the Study

In India, the breaking of the law outlay has increased every year. Many people have happened to victims of different crimes like online video conferences. So there is a major gap between the Basic

security of video conferencing and its impacts in community etc., to analyze the gaps and improve the situation.

## IV. Aim of the Study

The major aim is the impact of the Basic security of video conferencing and empirical study in India.

## V. Objectives

The specific objectives of the study are to analyze the method of sources of Basic security of video conferencing, the perception of public thoughts of the Basic security of video conferencing, and the impact on the online video conferencing among the public.

## VI. Methodology

The research methodology is ways to systematically solve the research problem, which may be understood by scientific analysis of how the research is done scientifically. This research survey method has been used for collecting samples of targeted Academicians by questionnaire method. It will help of holding to know the expert perception of the Basic security of video conferencing. Impacts of video conferencing on the public and empirical study of samples have taken 234 samples in India. The collected data will be processed and analyzed with relevant statistical methods which will be used to substantiate the objectives.

## VII. Result and Discussion

The sample of 234 has analyzed by Non-parametric variables which will be studied the following factors of General idea in video Conferencing Security, Mandatory video Conferencing Security, Basic video Conferencing Security, Advanced video Conferencing Security, Balancing security with ease of use, Basic Cloud video Conferencing Security, Key Aspect of Cloud Video Conferencing Security and Overall rating and inference

In Gender, there is a Male 62.60% and Female 37.40%. There is in Age Group (in Years) Less Than 30 samples are, 91.40%. There is a Domain in Student 72.40%, IT Employee, Bank Employee 18.90%, and Teaching 4.50%. According to security based, Most familiar Video Conferencing Services are to know Google Hangouts 2.90% Skype 9.10% Microsoft Teams 8.20% Zoom 11.90% and Cisco Webex Meetings 62.60%.

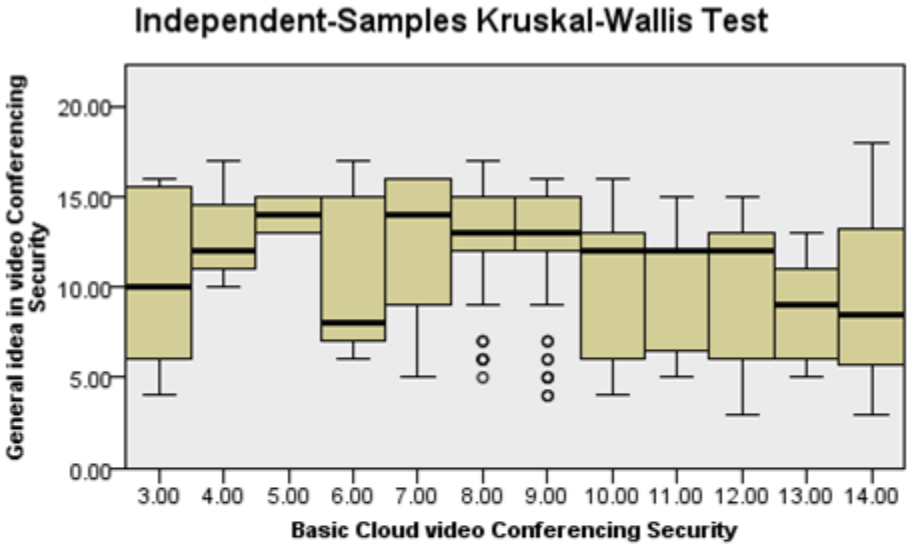
### Test Statistic for the Kruskal Wallis Test

The test statistic for the Kruskal Wallis test is denoted H and is defined as follows:

$$H = \left( \frac{12}{N(N+1)} \sum_{j=1}^{k} \frac{{R_j}^2}{n_j} \right) - 3(N+1)$$

Where k=the number of examination gatherings, N= the all-out example size, $n_j$ is the example size in the $j^{th}$ gathering and $R_j$ is the aggregate of the positions in the $j^{th}$ gathering.

We should now decide if they watched test measurement H underpins the invalid or examination speculation. By and by, this is finished by building up a basic estimation of H. On the off chance that the watched estimation of H is more noteworthy than or equivalent to the basic worth, we reject H0 for H1; if they watched estimation of H is not exactly the basic worth we don't dismiss H0. The basic estimation of H can be found in the table underneath.




| | |
|---|---|
| **Total N** | 243 |
| **Test Statistic** | 34.071 |
| **Degrees of Freedom** | 11 |
| **Asymptotic Sig. (2-sided test)** | .000 |

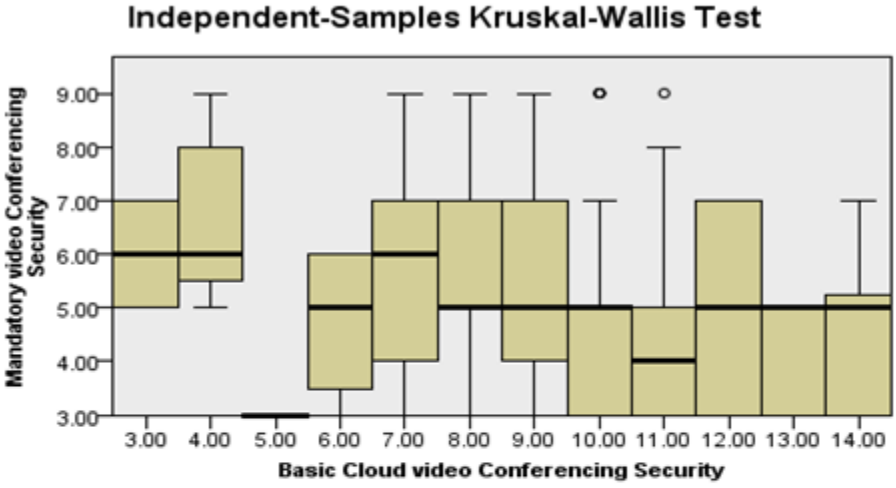
1. The test statistic is adjusted for ties.

Figure 1. - General Idea in Video Conferencing Security

The default sub-view shows (Figure 1) additional details of the Kruskel-Wallis test for a general idea in video conferencing security, including test statistics 34.071 and 11 is Degrees of freedom

for testing. When tests say that the primary video conferencing type is not the same throughout (since its significance value is less than 0.05), it does not indicate which video conferencing is different.

This display shows separate box plots for each primary video conferencing. With that basic video conferencing security analyzed by subjects and suggested by Box Blatts as their primary conference, however, a pairing comparison view is needed to confirm this significant value 0.001***.

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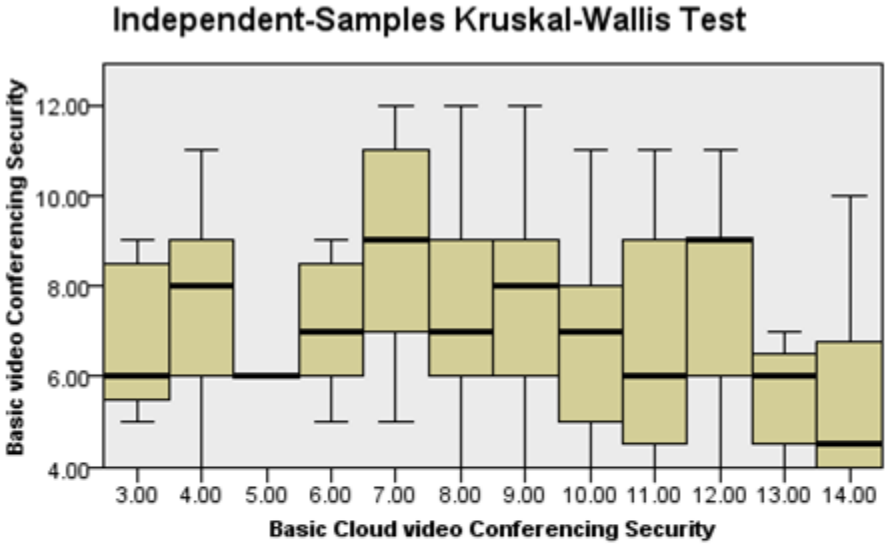
| **Total N** | 243 |
| **Test Statistic** | 31.629 |
| **Degrees of Freedom** | 11 |
| **Asymptotic Sig. (2-sided test)** | .001 |

1. The test statistic is adjusted for ties.

Figure 2 – Mandatory Video Conferencing Security

The default auxiliary view shows(Figure 2) further details of the Kruskal-Wallis test for Mandatory video conferencing security including the test statistic 31.629 and degrees of freedom for the test 11. Note that while the test tells you that the total number of items is 243 not the same across the primary video conferencing type (because its significance value is less than 0.05), it doesn't tell you which video conferencing is different.

The view also displays separate boxplots for each primary video conferencing. The boxplots suggest that the securities analyzed by subjects with Basic cloud video conferencing society as their primary conferencing, but you will need to look at the pairwise comparisons view to be sure in 0.001***.



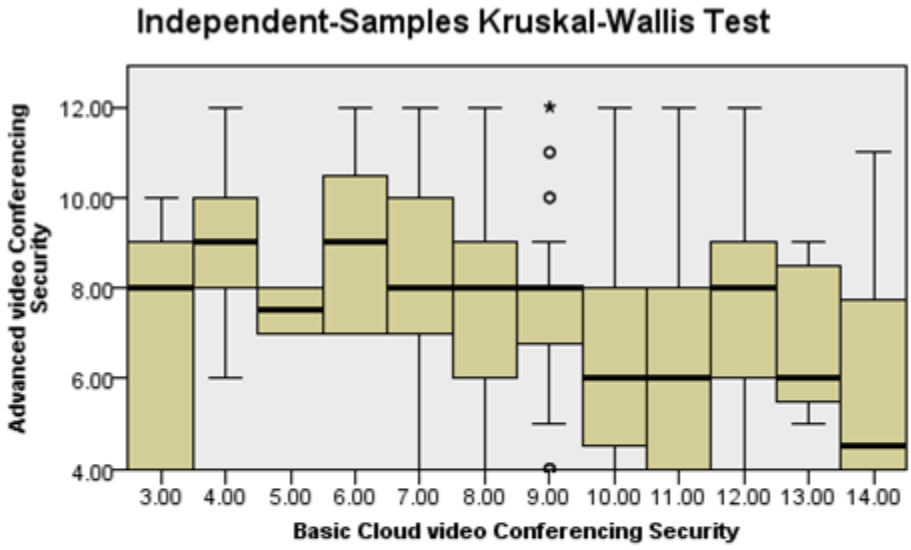

| | |
|---|---|
| **Total N** | 243 |
| **Test Statistic** | 33.319 |
| **Degrees of Freedom** | 11 |
| **Asymptotic Sig. (2-sided test)** | .000 |

1. The test statistic is adjusted for ties.

Figure 3 – Basic Video Conferencing Security

The default auxiliary view shows(Figure 3) further details of the Kruskal-Wallis test for Basic video conferencing society including the test statistic 33.319 and 11 is a degree of freedom for the test. Note that while the test tells you that the total number of items is not the same across the primary video conferencing type (because its significance value is less than 0.05), it doesn't tell you which video conferencing is different.

The view also displays separate boxplots for each primary video conferencing. The boxplots suggest that the securities analyzed by subjects with Basic video conferencing security as their primary conferencing, but you will need to look at the pairwise comparisons view to be sure in 0.001***.




| | |
|---|---|
| **Total N** | 243 |
| **Test Statistic** | 32.149 |
| **Degrees of Freedom** | 11 |
| **Asymptotic Sig. (2-sided test)** | .001 |

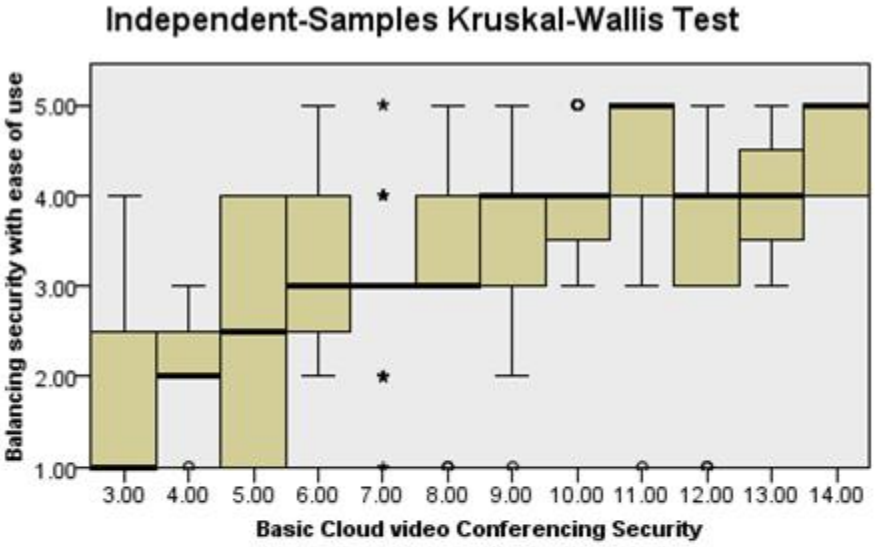
1. The test statistic is adjusted for ties.

Figure 4 – Advanced Video Conferencing security

The default auxiliary view shows(Figure 4) further details of the Kruskal-Wallis test for advanced video conferencing security including the test statistic 32.149 and 11 is a degree of freedom for the test. Note that while the test tells you that the total number of items is not the same across the primary video conferencing type (because its significance value is less than 0.05), it doesn't tell you which video conferencing is different.

The view also displays separate boxplots for each primary video conferencing. The boxplots suggest that the securities analyzed by subjects with Basic video conferencing security as their

primary conferencing, but you will need to look at the pairwise comparisons view to be sure in 0.001***.




| | |
|---|---|
| **Total N** | 243 |
| **Test Statistic** | 89.814 |
| **Degrees of Freedom** | 11 |
| **Asymptotic Sig. (2-sided test)** | .000 |

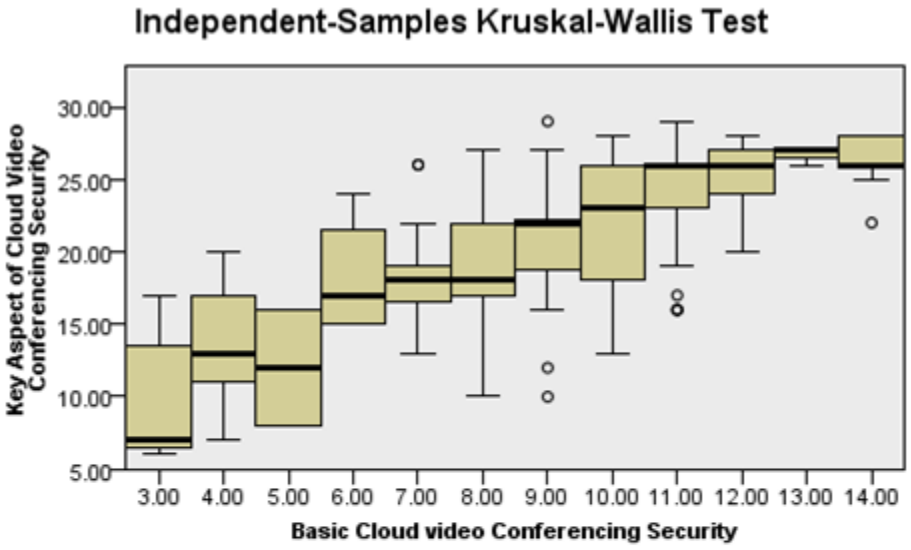
1. The test statistic is adjusted for ties.

Figure 5 – Balancing security with ease of use

The default auxiliary view shows (Figure 5) further details of the Kruskal-Wallis test for balancing security with ease of use including the test statistic 89.814 and 11 is degrees of freedom for the test. Note that while the test tells you that the total number of items 243 is not the same across the primary video conferencing type (because its significance value is less than 0.05), it doesn't tell you which video conferencing is different.

The view also displays separate boxplots for each primary video conferencing. The boxplots suggest that the securities analyzed by subjects with Basic video conferencing security as their

primary conferencing, but you will need to look at the pairwise comparisons view to be sure in 0.001***.




| | |
|---|---|
| **Total N** | 243 |
| **Test Statistic** | 113.305 |
| **Degrees of Freedom** | 11 |
| **Asymptotic Sig. (2-sided test)** | .000 |

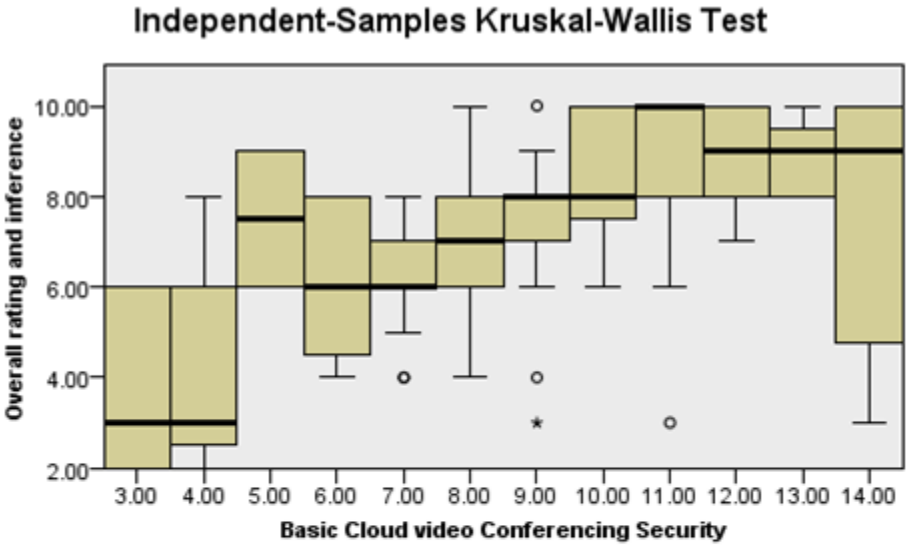
1. The test statistic is adjusted for ties.

Figure 6 – Key aspect of Cloud Video Conferencing Security

The default auxiliary view shows (Figure 6) further details of the Kruskal-Wallis test for a key aspect of cloud video conferencing security including the test statistic 113.305 and 11 are degrees of freedom for the test. Note that while the test tells you that the total number of items is not the same across the primary video conferencing type (because its significance value is less than 0.05), it doesn't tell you which video conferencing is different.

The view also displays separate boxplots for each primary video conferencing. The boxplots suggest that the securities analyzed by subjects with Basic video conferencing security as their

primary conferencing, but you will need to look at the pairwise comparisons view to be sure in 0.001***.




| | |
|---|---|
| **Total N** | 243 |
| **Test Statistic** | 98.063 |
| **Degrees of Freedom** | 11 |
| **Asymptotic Sig. (2-sided test)** | .000 |

1. The test statistic is adjusted for ties.

Figure 7 – Overall rating and inference

The default auxiliary view

shows (Figure 7) further details of the Kruskal-Wallis test for an overall rating of inference including the test statistic 98.063 and 11 is a degree of freedom for the test. Note that while the test tells you that the total number of items is not the same across the primary video conferencing type (because its significance value is less than 0.05), it doesn't tell you which video conferencing is different.

The view also displays separate boxplots for each primary video conferencing. The boxplots suggest that the securities analyzed by subjects with Basic video conferencing security as their

primary conferencing, but you will need to look at the pairwise comparisons view to be sure in 0.001***.

**Discussion:**

Distribution of the general idea in video conferencing security is one of the basic types of cloud video conferencing security. Its significant value is 0.001 ***. The distribution of compulsory video conferencing security is one of the basic cloud video conferencing security types.

**Hypothesis Test Summary**

| | Null Hypothesis | Test | Sig, | Decesion |
|---|---|---|---|---|
| 1. | The distribution of General idea in video Conferencing Security is the same across categories of Basic Cloud video Conferencing Security. | Independent- Samples Kruskal-Wallis Test | 0.001*** | Reject the null hypothesis. |
| 2. | The distribution of Mandatory video Conferencing Security is the same across categories of Basic Cloud video Conferencing Security | Independent- Samples Kruskal-Wallis Test | 0.001*** | Reject the null hypothesis. |
| 3. | The distribution of Basic video Conferencing Security is the same across categories of Basic Cloud video Conferencing Security. | Independent- Samples Kruskal-Wallis Test | 0.001*** | Reject the null hypothesis. |
| 4. | The distribution of Advanced video Conferencing Security is the same across categories of Basic Cloud video Conferencing Security. | Independent- Samples Kruskal-Wallis Test | 0.001*** | Reject the null hypothesis. |
| 5. | The distribution of Balancing security with ease of use is the same across categories of Basic Cloud video Conferencing Security. | Independent- Samples Kruskal-Wallis Test | 0.001*** | Reject the null hypothesis. |
| 6. | The distribution of Key Aspect of Cloud Video Conferencing Security is the same across | Independent- Samples Kruskal-Wallis Test | 0.001*** | Reject the null hypothesis. |

| | | | | |
|---|---|---|---|---|
| | categories of Basic Cloud video Conferencing Security | | | |
| 7. | The distribution of Overall rating and inference is the same across categories of Basic Cloud video Conferencing Security. | Independent- Samples Kruskal-Wallis Test | 0.001*** | Reject the null hypothesis. |

Asympatotic Significances are displayed. The Significance Level is 0.005

Its significant value is 0.001 ***. The distribution of basic video conferencing security is one of the basic cloud video conferencing security types. Its significant value is 0.001 ***. The distribution of advanced video conferencing security is one of the basic cloud video conferencing security types. Its significant value is 0.001 *** Reject the null hypothesis. The distribution of security that easily balances the application is identical to the basic cloud video conferencing security types. Its significant value is 0.001 ***. Distribution of a key feature of cloud video conferencing security is one of the basic types of cloud video conferencing security. Its significant value is 0.001 ***. The basic rating and distribution of the assumption are the same as in the basic cloud video conferencing security categories. Its significant value is 0.001 ***.

With Cloud Video Conferencing, We could make HD video calls out of our preferred gadgets that can connect with the Internet from everywhere and run in minutes. Cloud videoconferencing maintains to form the manner organizations talk and is complete of brilliant advances. Cloud video conferencing has come to a protracted manner because of its inception, and it nevertheless has a protracted manner to go. As for workplace communications, audio conferencing nevertheless dominates, frequently because of its affordability, comfort, and ubiquity. Usually, while the call for conversation will increase, the audio fill fails. But as video conferencing suggests an increase, the necessities hold converting.

Huddle rooms for cloud video conferencing alter the usage of conferencing within side the workplace. Often, bendy places of work have become greater open, making telecommunications a feasible alternative due to the fact operating hours are greater negotiable. To be a precious member of a team, the conversation needs to alternate. With video conferencing, you could see in real-time how human beings assume and feel. This will increase conversation efficiency. Cloud conferencing strives to provide the maximum bendy alternatives as it's a far lower price for small and medium organizations and available on all structures and gadgets. However, that is inaccessible. Cloud video conferencing is converting the manner organizations interact, and as a result what abilities they have. As many within side the conferencing enterprise expect, there is a big capacity for destiny growth.

**Conclusion:**

Video conferencing has come to a protracted manner. Low body costs and grain pix have grown exponentially from company boardrooms to high-cease settings to available and mild cloud video systems. The dreams of cloud video conferencing are simple -well-communicated. This is greater securely available, the higher carrier for much less money. As this era present-day workplace areas alternate and hut rooms increase, cloud conferencing has now no longer grow to be a feasible alternative as it's far essential for upcoming organizations. Only one element appears certain, the destiny of cloud video conferencing is bright.

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