Descriptive Statistics

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Color | N | Median | Mean Rank | Z-Value |
| Blue | 7 | 14 | 7.1 | -2.76 |
| Green | 7 | 35 | 17.3 | 1.03 |
| Lemon Yellow | 7 | 47 | 24.7 | 3.79 |
| White | 7 | 16 | 8.9 | -2.07 |
| Overall | 28 |  | 14.5 |  |

Test

|  |  |
| --- | --- |
| Null hypothesis | H₀: All medians are equal |
| Alternative hypothesis | H₁: At least one median is different |

|  |  |  |  |
| --- | --- | --- | --- |
| Method | DF | H-Value | P-Value |
| Not adjusted for ties | 3 | 20.52 | 0.000 |
| Adjusted for ties | 3 | 20.54 | 0.000 |

Descriptive Statistics: No. of insects trapped

Statistics

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable | Color | Mean | Minimum | Q1 | Median | Q3 | Maximum |
| No. of insects trapped | Blue | 14.14 | 7.00 | 10.00 | 14.00 | 20.00 | 21.00 |
|  | Green | 32.00 | 15.00 | 25.00 | 35.00 | 39.00 | 41.00 |
|  | Lemon Yellow | 47.86 | 38.00 | 45.00 | 47.00 | 52.00 | 59.00 |
|  | White | 15.71 | 12.00 | 13.00 | 16.00 | 17.00 | 21.00 |

Boxplot of No. of insects trapped



Conclusion:

1. The p-value of the test (0.00) is very small than significance probability (0.05) we strongly reject the null hypothesis at 5% level of significance.
2. The median no. of insects trapped using different colors is not same. i.e. there is a significant difference in the median no. of insects trapped using various colors.
3. The insects are most attracted to color lemon yellow (median = 47), the next popular color is green (median = 35). The least attracted color are blue (median = 14) and white (median = 16).
4. Green has most variability, blue yellow similar, white least variable ie.e most consistent. Blue yellow right skewed. Green lefet skered. White left skewed