# Statistical Analysis Report: HPV Awareness Study (N=58)

Report generated on: September 04, 2025

# Key Insights and Recommendations

Insights:

- Average improvement: +7 points, significant (p<0.001).

- Education moderates impact: Undergrads gain most.

Recommendations:

- Tailor for post-grads with advanced content.

- Expand to rural/female participants for balance.

Limitations: Small N=58; potential biases.

## Table 1: Frequency and Percentage of Demographic Variables

|  |  |  |  |
| --- | --- | --- | --- |
| Variable | Category | Frequency (n) | Percentage (%) |
| Age | 15-19 Years | 49 | 84.5% |
| Age | 19-24 Years | 9 | 15.5% |
| Gender | Female | 21 | 36.2% |
| Gender | Male | 37 | 63.8% |
| Place of Residency | Rural | 20 | 34.5% |
| Place of Residency | Semi-Urban | 12 | 20.7% |
| Place of Residency | Urban | 26 | 44.8% |
| Education | High school | 5 | 8.6% |
| Education | Post-graduation | 3 | 5.2% |
| Education | Under graduation | 50 | 86.2% |
| Vaccination Status | Irregularly vaccinated | 11 | 19.0% |
| Vaccination Status | Not vaccinated | 39 | 67.2% |
| Vaccination Status | Regularly vaccinated | 8 | 13.8% |
| Health Care Access | Easily accessible | 31 | 53.4% |
| Health Care Access | Not accessible | 14 | 24.1% |
| Health Care Access | Not interested | 13 | 22.4% |
| Occupation of Parents | Professional | 21 | 36.2% |
| Occupation of Parents | Retired | 5 | 8.6% |
| Occupation of Parents | Skilled | 23 | 39.7% |
| Occupation of Parents | Unemployed | 9 | 15.5% |
| Family Income per Month | Below ₹14,997 | 34 | 58.6% |
| Family Income per Month | ₹14,977 - ₹22,494 | 13 | 22.4% |
| Family Income per Month | ₹22,495 - ₹37,492 | 4 | 6.9% |
| Family Income per Month | ₹37,493 - ₹74,999 | 5 | 8.6% |
| Family Income per Month | ₹75,000 and above | 2 | 3.4% |

## Table 2: Reliability of the Test and Intervention Effectiveness

The HPV Knowledge Scale showed high internal consistency both before the intervention (Cronbach's α = 0.86) and after (Cronbach's α = 0.74), confirming it is a reliable tool.

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|  |  |  |
| --- | --- | --- |
| Test | Mean Score | Standard Deviation |
| Pre-test | 14.97 | 6.70 |
| Post-test | 22.31 | 4.52 |

A Paired Samples t-test revealed that the increase in scores from pre-test to post-test was highly significant (t-statistic = 6.99, p-value < 0.001).

## Table 3: Association Between Awareness Levels and Baseline Variables

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Baseline Variable | Category | Pre-test Mean | Post-test Mean | Test | p-value (Pre) | p-value (Post) |
| Age | 15-19 Years | 15.41 | 22.18 | t-test | 0.244 ns | 0.623 ns |
| Age | 19-24 Years | 12.56 | 23.00 | t-test | 0.244 ns | 0.623 ns |
| Gender | Female | 15.24 | 22.38 | t-test | 0.818 ns | 0.930 ns |
| Gender | Male | 14.81 | 22.27 | t-test | 0.818 ns | 0.930 ns |
| Place of Residency | Rural | 15.00 | 23.05 | ANOVA | 0.985 ns | 0.641 ns |
| Place of Residency | Semi-Urban | 14.67 | 21.58 | ANOVA | 0.985 ns | 0.641 ns |
| Place of Residency | Urban | 15.08 | 22.08 | ANOVA | 0.985 ns | 0.641 ns |
| Education | High school | 18.00 | 26.20 | ANOVA | 0.161 ns | 0.128 ns |
| Education | Under graduation | 14.32 | 21.98 | ANOVA | 0.161 ns | 0.128 ns |
| Education | Post-graduation | 20.67 | 21.33 | ANOVA | 0.161 ns | 0.128 ns |
| Vaccination Status | Irregularly vaccinated | 15.00 | 24.64 | ANOVA | 0.080 ns | 0.069 ns |
| Vaccination Status | Regularly vaccinated | 10.12 | 19.88 | ANOVA | 0.080 ns | 0.069 ns |
| Vaccination Status | Not vaccinated | 15.95 | 22.15 | ANOVA | 0.080 ns | 0.069 ns |
| Health Care Access | Easily accessible | 14.71 | 23.00 | ANOVA | 0.951 ns | 0.260 ns |
| Health Care Access | Not accessible | 15.36 | 22.43 | ANOVA | 0.951 ns | 0.260 ns |
| Health Care Access | Not interested | 15.15 | 20.54 | ANOVA | 0.951 ns | 0.260 ns |
| Occupation of Parents | Professional | 15.24 | 23.43 | ANOVA | 0.724 ns | 0.261 ns |
| Occupation of Parents | Retired | 14.20 | 23.60 | ANOVA | 0.724 ns | 0.261 ns |
| Occupation of Parents | Skilled | 15.74 | 21.87 | ANOVA | 0.724 ns | 0.261 ns |
| Occupation of Parents | Unemployed | 12.78 | 20.11 | ANOVA | 0.724 ns | 0.261 ns |
| Family Income per Month | Below ₹14,997 | 14.53 | 22.03 | ANOVA | 0.611 ns | 0.264 ns |
| Family Income per Month | ₹14,977 - ₹22,494 | 16.92 | 23.08 | ANOVA | 0.611 ns | 0.264 ns |
| Family Income per Month | ₹22,495 - ₹37,492 | 16.50 | 21.50 | ANOVA | 0.611 ns | 0.264 ns |
| Family Income per Month | ₹37,493 - ₹74,999 | 13.60 | 20.40 | ANOVA | 0.611 ns | 0.264 ns |
| Family Income per Month | ₹75,000 and above | 10.00 | 28.50 | ANOVA | 0.611 ns | 0.264 ns |

\*Note: The p-value is for the entire variable group. 'ns' denotes non-significant (p >= 0.05), '\*\*' denotes significant (p < 0.05).\*