Question 1



**State=Alaska**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Analysis Variable : Magnitude Magnitude** | | | | | | | |
| **N** | **Mean** | **Std Dev** | **Minimum** | **25th Pctl** | **Median** | **75th Pctl** | **Maximum** |
| 53 | 7.25 | 0.75 | 4.80 | 7.00 | 7.20 | 7.70 | 9.20 |

**State=California**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Analysis Variable : Magnitude Magnitude** | | | | | | | |
| **N** | **Mean** | **Std Dev** | **Minimum** | **25th Pctl** | **Median** | **75th Pctl** | **Maximum** |
| 116 | 5.76 | 1.19 | 3.00 | 4.85 | 6.10 | 6.65 | 7.90 |

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|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Analysis Variable : Magnitude Magnitude** | | | | | | | | | | |
| **Year** | **State** | **N Obs** | **N** | **Mean** | **Std Dev** | **Minimum** | **25th Pctl** | **Median** | **75th Pctl** | **Maximum** |
| 2002 | Alaska | 3 | 3 | 6.63 | 1.30 | 5.30 | 5.30 | 6.70 | 7.90 | 7.90 |
| California | 6 | 6 | 4.52 | 0.64 | 3.60 | 3.90 | 4.70 | 4.90 | 5.30 |
| Indiana | 1 | 1 | 4.60 | . | 4.60 | 4.60 | 4.60 | 4.60 | 4.60 |
| New York | 2 | 2 | 4.20 | 1.27 | 3.30 | 3.30 | 4.20 | 5.10 | 5.10 |
| Oregon | 1 | 1 | 4.50 | . | 4.50 | 4.50 | 4.50 | 4.50 | 4.50 |
| South Carolina | 1 | 1 | 4.40 | . | 4.40 | 4.40 | 4.40 | 4.40 | 4.40 |
| Washington | 2 | 2 | 3.90 | 0.28 | 3.70 | 3.70 | 3.90 | 4.10 | 4.10 |
| Wyoming | 1 | 1 | 4.20 | . | 4.20 | 4.20 | 4.20 | 4.20 | 4.20 |
| 2003 | Alabama | 1 | 1 | 4.60 | . | 4.60 | 4.60 | 4.60 | 4.60 | 4.60 |
| Alaska | 4 | 4 | 7.10 | 0.51 | 6.60 | 6.75 | 7.00 | 7.45 | 7.80 |
| Arkansas | 1 | 1 | 4.00 | . | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| California | 15 | 15 | 4.29 | 0.88 | 3.40 | 3.60 | 4.00 | 4.70 | 6.60 |
| Hawaii | 1 | 1 | 4.70 | . | 4.70 | 4.70 | 4.70 | 4.70 | 4.70 |
| Idaho | 1 | 1 | 3.30 | . | 3.30 | 3.30 | 3.30 | 3.30 | 3.30 |
| Kentucky | 1 | 1 | 4.00 | . | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| Massachusetts | 1 | 1 | 3.60 | . | 3.60 | 3.60 | 3.60 | 3.60 | 3.60 |
| New Jersey | 1 | 1 | 3.80 | . | 3.80 | 3.80 | 3.80 | 3.80 | 3.80 |
| Oregon | 1 | 1 | 6.30 | . | 6.30 | 6.30 | 6.30 | 6.30 | 6.30 |
| South Dakota | 1 | 1 | 4.00 | . | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| Virginia | 2 | 2 | 4.20 | 0.42 | 3.90 | 3.90 | 4.20 | 4.50 | 4.50 |
| Washington | 2 | 2 | 3.65 | 0.07 | 3.60 | 3.60 | 3.65 | 3.70 | 3.70 |
| Wyoming | 1 | 1 | 4.50 | . | 4.50 | 4.50 | 4.50 | 4.50 | 4.50 |
| 2004 | Alabama | 1 | 1 | 3.60 | . | 3.60 | 3.60 | 3.60 | 3.60 | 3.60 |
| Alaska | 1 | 1 | 6.80 | . | 6.80 | 6.80 | 6.80 | 6.80 | 6.80 |
| California | 2 | 2 | 4.50 | 2.12 | 3.00 | 3.00 | 4.50 | 6.00 | 6.00 |
| Illinois | 1 | 1 | 4.20 | . | 4.20 | 4.20 | 4.20 | 4.20 | 4.20 |
| Kentucky | 1 | 1 | 3.70 | . | 3.70 | 3.70 | 3.70 | 3.70 | 3.70 |
| Oregon | 1 | 1 | 4.90 | . | 4.90 | 4.90 | 4.90 | 4.90 | 4.90 |
| Wyoming | 3 | 3 | 4.27 | 0.64 | 3.80 | 3.80 | 4.00 | 5.00 | 5.00 |
| 2005 | Alaska | 1 | 1 | 6.80 | . | 6.80 | 6.80 | 6.80 | 6.80 | 6.80 |
| Arkansas | 2 | 2 | 4.15 | 0.07 | 4.10 | 4.10 | 4.15 | 4.20 | 4.20 |
| California | 6 | 6 | 5.45 | 1.19 | 4.10 | 4.70 | 5.05 | 6.60 | 7.20 |
| Hawaii | 2 | 2 | 5.20 | 0.14 | 5.10 | 5.10 | 5.20 | 5.30 | 5.30 |
| Montana | 2 | 2 | 5.05 | 0.78 | 4.50 | 4.50 | 5.05 | 5.60 | 5.60 |
| New Mexico | 2 | 2 | 4.55 | 0.64 | 4.10 | 4.10 | 4.55 | 5.00 | 5.00 |
| 2006 | Alaska | 1 | 1 | 4.80 | . | 4.80 | 4.80 | 4.80 | 4.80 | 4.80 |
| California | 1 | 1 | 4.50 | . | 4.50 | 4.50 | 4.50 | 4.50 | 4.50 |
| Colorado | 1 | 1 | 3.80 | . | 3.80 | 3.80 | 3.80 | 3.80 | 3.80 |
| Hawaii | 1 | 1 | 6.70 | . | 6.70 | 6.70 | 6.70 | 6.70 | 6.70 |
| Illinois | 1 | 1 | 3.60 | . | 3.60 | 3.60 | 3.60 | 3.60 | 3.60 |
| Maine | 1 | 1 | 3.80 | . | 3.80 | 3.80 | 3.80 | 3.80 | 3.80 |
| Montana | 1 | 1 | 4.20 | . | 4.20 | 4.20 | 4.20 | 4.20 | 4.20 |
| 2007 | Alaska | 4 | 4 | 6.70 | 0.36 | 6.40 | 6.45 | 6.60 | 6.95 | 7.20 |
| California | 5 | 5 | 4.74 | 0.62 | 4.20 | 4.30 | 4.40 | 5.20 | 5.60 |
| Hawaii | 1 | 1 | 5.40 | . | 5.40 | 5.40 | 5.40 | 5.40 | 5.40 |
| Montana | 1 | 1 | 4.50 | . | 4.50 | 4.50 | 4.50 | 4.50 | 4.50 |
| 2008 | Alaska | 2 | 2 | 6.60 | 0.00 | 6.60 | 6.60 | 6.60 | 6.60 | 6.60 |
| California | 2 | 2 | 5.45 | 0.07 | 5.40 | 5.40 | 5.45 | 5.50 | 5.50 |
| Illinois | 1 | 1 | 5.40 | . | 5.40 | 5.40 | 5.40 | 5.40 | 5.40 |
| Nevada | 2 | 2 | 5.50 | 0.71 | 5.00 | 5.00 | 5.50 | 6.00 | 6.00 |
| 2009 | Alaska | 1 | 1 | 5.80 | . | 5.80 | 5.80 | 5.80 | 5.80 | 5.80 |
| California | 6 | 6 | 4.00 | 0.56 | 3.50 | 3.50 | 3.90 | 4.50 | 4.70 |
| Colorado | 1 | 1 | 3.70 | . | 3.70 | 3.70 | 3.70 | 3.70 | 3.70 |
| Hawaii | 1 | 1 | 5.20 | . | 5.20 | 5.20 | 5.20 | 5.20 | 5.20 |
| New Jersey | 1 | 1 | 3.00 | . | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 |
| Washington | 1 | 1 | 4.50 | . | 4.50 | 4.50 | 4.50 | 4.50 | 4.50 |
| 2010 | California | 1 | 1 | 6.50 | . | 6.50 | 6.50 | 6.50 | 6.50 | 6.50 |
| 2011 | Arkansas | 1 | 1 | 4.70 | . | 4.70 | 4.70 | 4.70 | 4.70 | 4.70 |
| Colorado | 1 | 1 | 5.30 | . | 5.30 | 5.30 | 5.30 | 5.30 | 5.30 |
| Ohio | 1 | 1 | 4.00 | . | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| Oklahoma | 1 | 1 | 5.60 | . | 5.60 | 5.60 | 5.60 | 5.60 | 5.60 |
| Virginia | 1 | 1 | 5.80 | . | 5.80 | 5.80 | 5.80 | 5.80 | 5.80 |

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**Year=2002**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Analysis Variable : Magnitude Magnitude** | | | | | | | | | |
| **State** | **N Obs** | **N** | **Mean** | **Std Dev** | **Minimum** | **25th Pctl** | **Median** | **75th Pctl** | **Maximum** |
| Alaska | 3 | 3 | 6.63 | 1.30 | 5.30 | 5.30 | 6.70 | 7.90 | 7.90 |
| California | 6 | 6 | 4.52 | 0.64 | 3.60 | 3.90 | 4.70 | 4.90 | 5.30 |
| Indiana | 1 | 1 | 4.60 | . | 4.60 | 4.60 | 4.60 | 4.60 | 4.60 |
| New York | 2 | 2 | 4.20 | 1.27 | 3.30 | 3.30 | 4.20 | 5.10 | 5.10 |
| Oregon | 1 | 1 | 4.50 | . | 4.50 | 4.50 | 4.50 | 4.50 | 4.50 |
| South Carolina | 1 | 1 | 4.40 | . | 4.40 | 4.40 | 4.40 | 4.40 | 4.40 |
| Washington | 2 | 2 | 3.90 | 0.28 | 3.70 | 3.70 | 3.90 | 4.10 | 4.10 |
| Wyoming | 1 | 1 | 4.20 | . | 4.20 | 4.20 | 4.20 | 4.20 | 4.20 |

**Year=2003**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Analysis Variable : Magnitude Magnitude** | | | | | | | | | |
| **State** | **N Obs** | **N** | **Mean** | **Std Dev** | **Minimum** | **25th Pctl** | **Median** | **75th Pctl** | **Maximum** |
| Alabama | 1 | 1 | 4.60 | . | 4.60 | 4.60 | 4.60 | 4.60 | 4.60 |
| Alaska | 4 | 4 | 7.10 | 0.51 | 6.60 | 6.75 | 7.00 | 7.45 | 7.80 |
| Arkansas | 1 | 1 | 4.00 | . | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| California | 15 | 15 | 4.29 | 0.88 | 3.40 | 3.60 | 4.00 | 4.70 | 6.60 |
| Hawaii | 1 | 1 | 4.70 | . | 4.70 | 4.70 | 4.70 | 4.70 | 4.70 |
| Idaho | 1 | 1 | 3.30 | . | 3.30 | 3.30 | 3.30 | 3.30 | 3.30 |
| Kentucky | 1 | 1 | 4.00 | . | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| Massachusetts | 1 | 1 | 3.60 | . | 3.60 | 3.60 | 3.60 | 3.60 | 3.60 |
| New Jersey | 1 | 1 | 3.80 | . | 3.80 | 3.80 | 3.80 | 3.80 | 3.80 |
| Oregon | 1 | 1 | 6.30 | . | 6.30 | 6.30 | 6.30 | 6.30 | 6.30 |
| South Dakota | 1 | 1 | 4.00 | . | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| Virginia | 2 | 2 | 4.20 | 0.42 | 3.90 | 3.90 | 4.20 | 4.50 | 4.50 |
| Washington | 2 | 2 | 3.65 | 0.07 | 3.60 | 3.60 | 3.65 | 3.70 | 3.70 |
| Wyoming | 1 | 1 | 4.50 | . | 4.50 | 4.50 | 4.50 | 4.50 | 4.50 |

**Year=2004**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Analysis Variable : Magnitude Magnitude** | | | | | | | | | |
| **State** | **N Obs** | **N** | **Mean** | **Std Dev** | **Minimum** | **25th Pctl** | **Median** | **75th Pctl** | **Maximum** |
| Alabama | 1 | 1 | 3.60 | . | 3.60 | 3.60 | 3.60 | 3.60 | 3.60 |
| Alaska | 1 | 1 | 6.80 | . | 6.80 | 6.80 | 6.80 | 6.80 | 6.80 |
| California | 2 | 2 | 4.50 | 2.12 | 3.00 | 3.00 | 4.50 | 6.00 | 6.00 |
| Illinois | 1 | 1 | 4.20 | . | 4.20 | 4.20 | 4.20 | 4.20 | 4.20 |
| Kentucky | 1 | 1 | 3.70 | . | 3.70 | 3.70 | 3.70 | 3.70 | 3.70 |
| Oregon | 1 | 1 | 4.90 | . | 4.90 | 4.90 | 4.90 | 4.90 | 4.90 |
| Wyoming | 3 | 3 | 4.27 | 0.64 | 3.80 | 3.80 | 4.00 | 5.00 | 5.00 |

**Year=2005**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Analysis Variable : Magnitude Magnitude** | | | | | | | | | |
| **State** | **N Obs** | **N** | **Mean** | **Std Dev** | **Minimum** | **25th Pctl** | **Median** | **75th Pctl** | **Maximum** |
| Alaska | 1 | 1 | 6.80 | . | 6.80 | 6.80 | 6.80 | 6.80 | 6.80 |
| Arkansas | 2 | 2 | 4.15 | 0.07 | 4.10 | 4.10 | 4.15 | 4.20 | 4.20 |
| California | 6 | 6 | 5.45 | 1.19 | 4.10 | 4.70 | 5.05 | 6.60 | 7.20 |
| Hawaii | 2 | 2 | 5.20 | 0.14 | 5.10 | 5.10 | 5.20 | 5.30 | 5.30 |
| Montana | 2 | 2 | 5.05 | 0.78 | 4.50 | 4.50 | 5.05 | 5.60 | 5.60 |
| New Mexico | 2 | 2 | 4.55 | 0.64 | 4.10 | 4.10 | 4.55 | 5.00 | 5.00 |

**Year=2006**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Analysis Variable : Magnitude Magnitude** | | | | | | | | | |
| **State** | **N Obs** | **N** | **Mean** | **Std Dev** | **Minimum** | **25th Pctl** | **Median** | **75th Pctl** | **Maximum** |
| Alaska | 1 | 1 | 4.80 | . | 4.80 | 4.80 | 4.80 | 4.80 | 4.80 |
| California | 1 | 1 | 4.50 | . | 4.50 | 4.50 | 4.50 | 4.50 | 4.50 |
| Colorado | 1 | 1 | 3.80 | . | 3.80 | 3.80 | 3.80 | 3.80 | 3.80 |
| Hawaii | 1 | 1 | 6.70 | . | 6.70 | 6.70 | 6.70 | 6.70 | 6.70 |
| Illinois | 1 | 1 | 3.60 | . | 3.60 | 3.60 | 3.60 | 3.60 | 3.60 |
| Maine | 1 | 1 | 3.80 | . | 3.80 | 3.80 | 3.80 | 3.80 | 3.80 |
| Montana | 1 | 1 | 4.20 | . | 4.20 | 4.20 | 4.20 | 4.20 | 4.20 |

**Year=2007**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Analysis Variable : Magnitude Magnitude** | | | | | | | | | |
| **State** | **N Obs** | **N** | **Mean** | **Std Dev** | **Minimum** | **25th Pctl** | **Median** | **75th Pctl** | **Maximum** |
| Alaska | 4 | 4 | 6.70 | 0.36 | 6.40 | 6.45 | 6.60 | 6.95 | 7.20 |
| California | 5 | 5 | 4.74 | 0.62 | 4.20 | 4.30 | 4.40 | 5.20 | 5.60 |
| Hawaii | 1 | 1 | 5.40 | . | 5.40 | 5.40 | 5.40 | 5.40 | 5.40 |
| Montana | 1 | 1 | 4.50 | . | 4.50 | 4.50 | 4.50 | 4.50 | 4.50 |

**Year=2008**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Analysis Variable : Magnitude Magnitude** | | | | | | | | | |
| **State** | **N Obs** | **N** | **Mean** | **Std Dev** | **Minimum** | **25th Pctl** | **Median** | **75th Pctl** | **Maximum** |
| Alaska | 2 | 2 | 6.60 | 0.00 | 6.60 | 6.60 | 6.60 | 6.60 | 6.60 |
| California | 2 | 2 | 5.45 | 0.07 | 5.40 | 5.40 | 5.45 | 5.50 | 5.50 |
| Illinois | 1 | 1 | 5.40 | . | 5.40 | 5.40 | 5.40 | 5.40 | 5.40 |
| Nevada | 2 | 2 | 5.50 | 0.71 | 5.00 | 5.00 | 5.50 | 6.00 | 6.00 |

**Year=2009**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Analysis Variable : Magnitude Magnitude** | | | | | | | | | |
| **State** | **N Obs** | **N** | **Mean** | **Std Dev** | **Minimum** | **25th Pctl** | **Median** | **75th Pctl** | **Maximum** |
| Alaska | 1 | 1 | 5.80 | . | 5.80 | 5.80 | 5.80 | 5.80 | 5.80 |
| California | 6 | 6 | 4.00 | 0.56 | 3.50 | 3.50 | 3.90 | 4.50 | 4.70 |
| Colorado | 1 | 1 | 3.70 | . | 3.70 | 3.70 | 3.70 | 3.70 | 3.70 |
| Hawaii | 1 | 1 | 5.20 | . | 5.20 | 5.20 | 5.20 | 5.20 | 5.20 |
| New Jersey | 1 | 1 | 3.00 | . | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 |
| Washington | 1 | 1 | 4.50 | . | 4.50 | 4.50 | 4.50 | 4.50 | 4.50 |

**Year=2010**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Analysis Variable : Magnitude Magnitude** | | | | | | | | | |
| **State** | **N Obs** | **N** | **Mean** | **Std Dev** | **Minimum** | **25th Pctl** | **Median** | **75th Pctl** | **Maximum** |
| California | 1 | 1 | 6.50 | . | 6.50 | 6.50 | 6.50 | 6.50 | 6.50 |

**Year=2011**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Analysis Variable : Magnitude Magnitude** | | | | | | | | | |
| **State** | **N Obs** | **N** | **Mean** | **Std Dev** | **Minimum** | **25th Pctl** | **Median** | **75th Pctl** | **Maximum** |
| Arkansas | 1 | 1 | 4.70 | . | 4.70 | 4.70 | 4.70 | 4.70 | 4.70 |
| Colorado | 1 | 1 | 5.30 | . | 5.30 | 5.30 | 5.30 | 5.30 | 5.30 |
| Ohio | 1 | 1 | 4.00 | . | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| Oklahoma | 1 | 1 | 5.60 | . | 5.60 | 5.60 | 5.60 | 5.60 | 5.60 |
| Virginia | 1 | 1 | 5.80 | . | 5.80 | 5.80 | 5.80 | 5.80 | 5.80 |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | **State** | | | | | | | | | | | | | |
| **Alabama** | | | | | | | **Alaska** | | | | | | |
| **Mean** | **Median** | **StdDev** | **Min** | **Max** | **P25** | **P75** | **Mean** | **Median** | **StdDev** | **Min** | **Max** | **P25** | **P75** |
| **Year** |  | . | . | . | . | . | . | . | 6.63 | 6.70 | 1.30 | 5.30 | 7.90 | 5.30 | 7.90 |
| **2002** | **Magnitude** |
| **2003** | **Magnitude** | 4.60 | 4.60 | . | 4.60 | 4.60 | 4.60 | 4.60 | 7.10 | 7.00 | 0.51 | 6.60 | 7.80 | 6.75 | 7.45 |
| **2004** | **Magnitude** | 3.60 | 3.60 | . | 3.60 | 3.60 | 3.60 | 3.60 | 6.80 | 6.80 | . | 6.80 | 6.80 | 6.80 | 6.80 |
| **2005** | **Magnitude** | . | . | . | . | . | . | . | 6.80 | 6.80 | . | 6.80 | 6.80 | 6.80 | 6.80 |
| **2006** | **Magnitude** | . | . | . | . | . | . | . | 4.80 | 4.80 | . | 4.80 | 4.80 | 4.80 | 4.80 |
| **2007** | **Magnitude** | . | . | . | . | . | . | . | 6.70 | 6.60 | 0.36 | 6.40 | 7.20 | 6.45 | 6.95 |
| **2008** | **Magnitude** | . | . | . | . | . | . | . | 6.60 | 6.60 | 0.00 | 6.60 | 6.60 | 6.60 | 6.60 |
| **2009** | **Magnitude** | . | . | . | . | . | . | . | 5.80 | 5.80 | . | 5.80 | 5.80 | 5.80 | 5.80 |
| **2010** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2011** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |

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|  | | **State** | | | | | | | | | | | | | |
| **Arkansas** | | | | | | | **California** | | | | | | |
| **Mean** | **Median** | **StdDev** | **Min** | **Max** | **P25** | **P75** | **Mean** | **Median** | **StdDev** | **Min** | **Max** | **P25** | **P75** |
| **Year** |  | . | . | . | . | . | . | . | 4.52 | 4.70 | 0.64 | 3.60 | 5.30 | 3.90 | 4.90 |
| **2002** | **Magnitude** |
| **2003** | **Magnitude** | 4.00 | 4.00 | . | 4.00 | 4.00 | 4.00 | 4.00 | 4.29 | 4.00 | 0.88 | 3.40 | 6.60 | 3.60 | 4.70 |
| **2004** | **Magnitude** | . | . | . | . | . | . | . | 4.50 | 4.50 | 2.12 | 3.00 | 6.00 | 3.00 | 6.00 |
| **2005** | **Magnitude** | 4.15 | 4.15 | 0.07 | 4.10 | 4.20 | 4.10 | 4.20 | 5.45 | 5.05 | 1.19 | 4.10 | 7.20 | 4.70 | 6.60 |
| **2006** | **Magnitude** | . | . | . | . | . | . | . | 4.50 | 4.50 | . | 4.50 | 4.50 | 4.50 | 4.50 |
| **2007** | **Magnitude** | . | . | . | . | . | . | . | 4.74 | 4.40 | 0.62 | 4.20 | 5.60 | 4.30 | 5.20 |
| **2008** | **Magnitude** | . | . | . | . | . | . | . | 5.45 | 5.45 | 0.07 | 5.40 | 5.50 | 5.40 | 5.50 |
| **2009** | **Magnitude** | . | . | . | . | . | . | . | 4.00 | 3.90 | 0.56 | 3.50 | 4.70 | 3.50 | 4.50 |
| **2010** | **Magnitude** | . | . | . | . | . | . | . | 6.50 | 6.50 | . | 6.50 | 6.50 | 6.50 | 6.50 |
| **2011** | **Magnitude** | 4.70 | 4.70 | . | 4.70 | 4.70 | 4.70 | 4.70 | . | . | . | . | . | . | . |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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|  | | **State** | | | | | | | | | | | | | |
| **Colorado** | | | | | | | **Hawaii** | | | | | | |
| **Mean** | **Median** | **StdDev** | **Min** | **Max** | **P25** | **P75** | **Mean** | **Median** | **StdDev** | **Min** | **Max** | **P25** | **P75** |
| **Year** |  | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2002** | **Magnitude** |
| **2003** | **Magnitude** | . | . | . | . | . | . | . | 4.70 | 4.70 | . | 4.70 | 4.70 | 4.70 | 4.70 |
| **2004** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2005** | **Magnitude** | . | . | . | . | . | . | . | 5.20 | 5.20 | 0.14 | 5.10 | 5.30 | 5.10 | 5.30 |
| **2006** | **Magnitude** | 3.80 | 3.80 | . | 3.80 | 3.80 | 3.80 | 3.80 | 6.70 | 6.70 | . | 6.70 | 6.70 | 6.70 | 6.70 |
| **2007** | **Magnitude** | . | . | . | . | . | . | . | 5.40 | 5.40 | . | 5.40 | 5.40 | 5.40 | 5.40 |
| **2008** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2009** | **Magnitude** | 3.70 | 3.70 | . | 3.70 | 3.70 | 3.70 | 3.70 | 5.20 | 5.20 | . | 5.20 | 5.20 | 5.20 | 5.20 |
| **2010** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2011** | **Magnitude** | 5.30 | 5.30 | . | 5.30 | 5.30 | 5.30 | 5.30 | . | . | . | . | . | . | . |

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|  | | **State** | | | | | | | | | | | | | |
| **Idaho** | | | | | | | **Illinois** | | | | | | |
| **Mean** | **Median** | **StdDev** | **Min** | **Max** | **P25** | **P75** | **Mean** | **Median** | **StdDev** | **Min** | **Max** | **P25** | **P75** |
| **Year** |  | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2002** | **Magnitude** |
| **2003** | **Magnitude** | 3.30 | 3.30 | . | 3.30 | 3.30 | 3.30 | 3.30 | . | . | . | . | . | . | . |
| **2004** | **Magnitude** | . | . | . | . | . | . | . | 4.20 | 4.20 | . | 4.20 | 4.20 | 4.20 | 4.20 |
| **2005** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2006** | **Magnitude** | . | . | . | . | . | . | . | 3.60 | 3.60 | . | 3.60 | 3.60 | 3.60 | 3.60 |
| **2007** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2008** | **Magnitude** | . | . | . | . | . | . | . | 5.40 | 5.40 | . | 5.40 | 5.40 | 5.40 | 5.40 |
| **2009** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2010** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2011** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |

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|  | | **State** | | | | | | | | | | | | | |
| **Indiana** | | | | | | | **Kentucky** | | | | | | |
| **Mean** | **Median** | **StdDev** | **Min** | **Max** | **P25** | **P75** | **Mean** | **Median** | **StdDev** | **Min** | **Max** | **P25** | **P75** |
| **Year** |  | 4.60 | 4.60 | . | 4.60 | 4.60 | 4.60 | 4.60 | . | . | . | . | . | . | . |
| **2002** | **Magnitude** |
| **2003** | **Magnitude** | . | . | . | . | . | . | . | 4.00 | 4.00 | . | 4.00 | 4.00 | 4.00 | 4.00 |
| **2004** | **Magnitude** | . | . | . | . | . | . | . | 3.70 | 3.70 | . | 3.70 | 3.70 | 3.70 | 3.70 |
| **2005** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2006** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2007** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2008** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2009** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2010** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2011** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |

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|  | | **State** | | | | | | | | | | | | | |
| **Maine** | | | | | | | **Massachusetts** | | | | | | |
| **Mean** | **Median** | **StdDev** | **Min** | **Max** | **P25** | **P75** | **Mean** | **Median** | **StdDev** | **Min** | **Max** | **P25** | **P75** |
| **Year** |  | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2002** | **Magnitude** |
| **2003** | **Magnitude** | . | . | . | . | . | . | . | 3.60 | 3.60 | . | 3.60 | 3.60 | 3.60 | 3.60 |
| **2004** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2005** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2006** | **Magnitude** | 3.80 | 3.80 | . | 3.80 | 3.80 | 3.80 | 3.80 | . | . | . | . | . | . | . |
| **2007** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2008** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2009** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2010** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2011** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |

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|  | | **State** | | | | | | | | | | | | | |
| **Montana** | | | | | | | **Nevada** | | | | | | |
| **Mean** | **Median** | **StdDev** | **Min** | **Max** | **P25** | **P75** | **Mean** | **Median** | **StdDev** | **Min** | **Max** | **P25** | **P75** |
| **Year** |  | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2002** | **Magnitude** |
| **2003** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2004** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2005** | **Magnitude** | 5.05 | 5.05 | 0.78 | 4.50 | 5.60 | 4.50 | 5.60 | . | . | . | . | . | . | . |
| **2006** | **Magnitude** | 4.20 | 4.20 | . | 4.20 | 4.20 | 4.20 | 4.20 | . | . | . | . | . | . | . |
| **2007** | **Magnitude** | 4.50 | 4.50 | . | 4.50 | 4.50 | 4.50 | 4.50 | . | . | . | . | . | . | . |
| **2008** | **Magnitude** | . | . | . | . | . | . | . | 5.50 | 5.50 | 0.71 | 5.00 | 6.00 | 5.00 | 6.00 |
| **2009** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2010** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2011** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |

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|  | | **State** | | | | | | | | | | | | | |
| **New Jersey** | | | | | | | **New Mexico** | | | | | | |
| **Mean** | **Median** | **StdDev** | **Min** | **Max** | **P25** | **P75** | **Mean** | **Median** | **StdDev** | **Min** | **Max** | **P25** | **P75** |
| **Year** |  | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2002** | **Magnitude** |
| **2003** | **Magnitude** | 3.80 | 3.80 | . | 3.80 | 3.80 | 3.80 | 3.80 | . | . | . | . | . | . | . |
| **2004** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2005** | **Magnitude** | . | . | . | . | . | . | . | 4.55 | 4.55 | 0.64 | 4.10 | 5.00 | 4.10 | 5.00 |
| **2006** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2007** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2008** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2009** | **Magnitude** | 3.00 | 3.00 | . | 3.00 | 3.00 | 3.00 | 3.00 | . | . | . | . | . | . | . |
| **2010** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2011** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | **State** | | | | | | | | | | | | | |
| **New York** | | | | | | | **Ohio** | | | | | | |
| **Mean** | **Median** | **StdDev** | **Min** | **Max** | **P25** | **P75** | **Mean** | **Median** | **StdDev** | **Min** | **Max** | **P25** | **P75** |
| **Year** |  | 4.20 | 4.20 | 1.27 | 3.30 | 5.10 | 3.30 | 5.10 | . | . | . | . | . | . | . |
| **2002** | **Magnitude** |
| **2003** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2004** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2005** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2006** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2007** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2008** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2009** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2010** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2011** | **Magnitude** | . | . | . | . | . | . | . | 4.00 | 4.00 | . | 4.00 | 4.00 | 4.00 | 4.00 |

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|  | | **State** | | | | | | | | | | | | | |
| **Oklahoma** | | | | | | | **Oregon** | | | | | | |
| **Mean** | **Median** | **StdDev** | **Min** | **Max** | **P25** | **P75** | **Mean** | **Median** | **StdDev** | **Min** | **Max** | **P25** | **P75** |
| **Year** |  | . | . | . | . | . | . | . | 4.50 | 4.50 | . | 4.50 | 4.50 | 4.50 | 4.50 |
| **2002** | **Magnitude** |
| **2003** | **Magnitude** | . | . | . | . | . | . | . | 6.30 | 6.30 | . | 6.30 | 6.30 | 6.30 | 6.30 |
| **2004** | **Magnitude** | . | . | . | . | . | . | . | 4.90 | 4.90 | . | 4.90 | 4.90 | 4.90 | 4.90 |
| **2005** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2006** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2007** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2008** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2009** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2010** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2011** | **Magnitude** | 5.60 | 5.60 | . | 5.60 | 5.60 | 5.60 | 5.60 | . | . | . | . | . | . | . |

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|  | | **State** | | | | | | | | | | | | | |
| **South Carolina** | | | | | | | **South Dakota** | | | | | | |
| **Mean** | **Median** | **StdDev** | **Min** | **Max** | **P25** | **P75** | **Mean** | **Median** | **StdDev** | **Min** | **Max** | **P25** | **P75** |
| **Year** |  | 4.40 | 4.40 | . | 4.40 | 4.40 | 4.40 | 4.40 | . | . | . | . | . | . | . |
| **2002** | **Magnitude** |
| **2003** | **Magnitude** | . | . | . | . | . | . | . | 4.00 | 4.00 | . | 4.00 | 4.00 | 4.00 | 4.00 |
| **2004** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2005** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2006** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2007** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2008** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2009** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2010** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2011** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |

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|  | | **State** | | | | | | | | | | | | | |
| **Virginia** | | | | | | | **Washington** | | | | | | |
| **Mean** | **Median** | **StdDev** | **Min** | **Max** | **P25** | **P75** | **Mean** | **Median** | **StdDev** | **Min** | **Max** | **P25** | **P75** |
| **Year** |  | . | . | . | . | . | . | . | 3.90 | 3.90 | 0.28 | 3.70 | 4.10 | 3.70 | 4.10 |
| **2002** | **Magnitude** |
| **2003** | **Magnitude** | 4.20 | 4.20 | 0.42 | 3.90 | 4.50 | 3.90 | 4.50 | 3.65 | 3.65 | 0.07 | 3.60 | 3.70 | 3.60 | 3.70 |
| **2004** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2005** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2006** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2007** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2008** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2009** | **Magnitude** | . | . | . | . | . | . | . | 4.50 | 4.50 | . | 4.50 | 4.50 | 4.50 | 4.50 |
| **2010** | **Magnitude** | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| **2011** | **Magnitude** | 5.80 | 5.80 | . | 5.80 | 5.80 | 5.80 | 5.80 | . | . | . | . | . | . | . |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | **State** | | | | | | |
| **Wyoming** | | | | | | |
| **Mean** | **Median** | **StdDev** | **Min** | **Max** | **P25** | **P75** |
| **Year** |  | 4.20 | 4.20 | . | 4.20 | 4.20 | 4.20 | 4.20 |
| **2002** | **Magnitude** |
| **2003** | **Magnitude** | 4.50 | 4.50 | . | 4.50 | 4.50 | 4.50 | 4.50 |
| **2004** | **Magnitude** | 4.27 | 4.00 | 0.64 | 3.80 | 5.00 | 3.80 | 5.00 |
| **2005** | **Magnitude** | . | . | . | . | . | . | . |
| **2006** | **Magnitude** | . | . | . | . | . | . | . |
| **2007** | **Magnitude** | . | . | . | . | . | . | . |
| **2008** | **Magnitude** | . | . | . | . | . | . | . |
| **2009** | **Magnitude** | . | . | . | . | . | . | . |
| **2010** | **Magnitude** | . | . | . | . | . | . | . |
| **2011** | **Magnitude** | . | . | . | . | . | . | . |

E) A screenshot of a social media post

Description automatically generatedA screenshot of a social media post

Description automatically generatedA screenshot of a social media post

Description automatically generatedA screenshot of a social media post

Description automatically generatedA screenshot of a social media post

Description automatically generatedA screenshot of a social media post

Description automatically generatedA screenshot of a social media post

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Description automatically generated

F)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **State** | **Method** | **N** | **Mean** | **Std Dev** | **Std Err** | **Minimum** | **Maximum** |
| **Alaska** |  | 53 | 7.2453 | 0.7544 | 0.1036 | 4.8000 | 9.2000 |
| **California** |  | 116 | 5.7638 | 1.1931 | 0.1108 | 3.0000 | 7.9000 |
| **Diff (1-2)** | **Pooled** |  | 1.4815 | 1.0758 | 0.1784 |  |  |
| **Diff (1-2)** | **Satterthwaite** |  | 1.4815 |  | 0.1517 |  |  |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **State** | **Method** | **Mean** | **95% CL Mean** | | **Std Dev** | **95% CL Std Dev** | |
| **Alaska** |  | 7.2453 | 7.0374 | 7.4532 | 0.7544 | 0.6332 | 0.9334 |
| **California** |  | 5.7638 | 5.5444 | 5.9832 | 1.1931 | 1.0568 | 1.3700 |
| **Diff (1-2)** | **Pooled** | 1.4815 | 1.1293 | 1.8336 | 1.0758 | 0.9718 | 1.2050 |
| **Diff (1-2)** | **Satterthwaite** | 1.4815 | 1.1818 | 1.7812 |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Method** | **Variances** | **DF** | **t Value** | **Pr > |t|** |
| **Pooled** | Equal | 167 | 8.31 | <.0001 |
| **Satterthwaite** | Unequal | 150.12 | 9.77 | <.0001 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Equality of Variances** | | | | |
| **Method** | **Num DF** | **Den DF** | **F Value** | **Pr > F** |
| **Folded F** | 115 | 52 | 2.50 | 0.0003 |

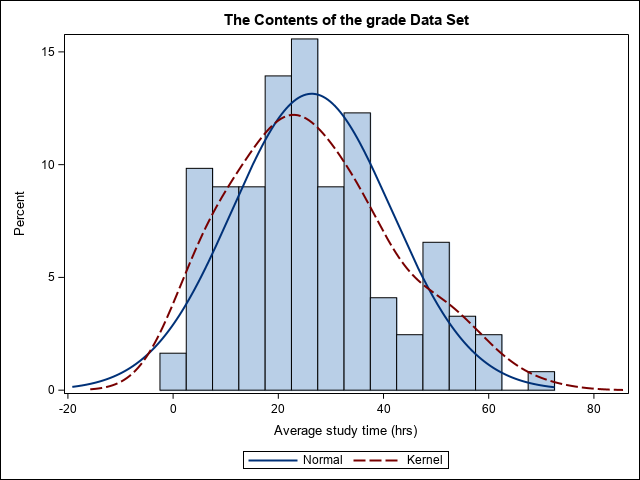
H0 : The average magnitude of earthquakes in California is equal to that of Alaska

H1: Different

Mean of Alaska is 7.2453 while mean of California is 5.7638 . The standard deviation is not equal so we will use the test of unequal variances. The pvalues is 0.0001 which is less than 0.05. Therefore we reject the null . Statistically we can say that the average magnitude of earthquakes in California is not equal to that of Alaska.

Question 2)





The histogram plot shows that the average study time is not normally distributed. The graph is left skewed that means most student’s study time is less than or equal to mean.

B)

|  |  |
| --- | --- |
| **3 Variables:** | AveTime GPA Units |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Simple Statistics** | | | | | | | |
| **Variable** | **N** | **Mean** | **Std Dev** | **Sum** | **Minimum** | **Maximum** | **Label** |
| **AveTime** | 58 | 29.68670 | 14.46548 | 1722 | 0.77286 | 69.00683 | Average study time (hrs) |
| **GPA** | 58 | 3.30138 | 0.39409 | 191.48000 | 2.42000 | 3.94000 | GPA |
| **Units** | 58 | 13.79310 | 3.15538 | 800.00000 | 9.00000 | 19.00000 | Number of units enrolled |

|  |  |  |  |
| --- | --- | --- | --- |
| **Pearson Correlation Coefficients, N = 58 Prob > |r| under H0: Rho=0** | | | |
|  | **AveTime** | **GPA** | **Units** |
| **AveTime Average study time (hrs)** | 1.00000 | -0.34324 0.0083 | 0.42598 0.0009 |
| **GPA GPA** | -0.34324 0.0083 | 1.00000 | -0.15327 0.2507 |
| **Units Number of units enrolled** | 0.42598 0.0009 | -0.15327 0.2507 | 1.00000 |

|  |  |
| --- | --- |
| **3 Variables:** | AveTime GPA Units |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Simple Statistics** | | | | | | | |
| **Variable** | **N** | **Mean** | **Std Dev** | **Sum** | **Minimum** | **Maximum** | **Label** |
| **AveTime** | 64 | 23.35490 | 15.28746 | 1495 | 1.67731 | 56.33695 | Average study time (hrs) |
| **GPA** | 64 | 3.10125 | 0.44941 | 198.48000 | 1.93000 | 3.91000 | GPA |
| **Units** | 64 | 13.87500 | 3.07834 | 888.00000 | 9.00000 | 19.00000 | Number of units enrolled |

|  |  |  |  |
| --- | --- | --- | --- |
| **Pearson Correlation Coefficients, N = 64 Prob > |r| under H0: Rho=0** | | | |
|  | **AveTime** | **GPA** | **Units** |
| **AveTime Average study time (hrs)** | 1.00000 | 0.10981 0.3877 | 0.34493 0.0053 |
| **GPA GPA** | 0.10981 0.3877 | 1.00000 | -0.01170 0.9269 |
| **Units Number of units enrolled** | 0.34493 0.0053 | -0.01170 0.9269 | 1.00000 |

Section 1

The correlation coefficient of Average Study time and GPA is -0.3432 . It is negatively correlated and the correlation is statistically significant(p-value = 0.0083).Therefore,the null hypothesis (H0: no correlation between two variables), is rejected.

The correlation coefficient of Average Study time and Units is 0.4259 . It is positively correlated and the correlation is statistically significant (p- value= 0.0009). Therefore,the null hypothesis (H0: no correlation between two variables), is rejected.

The correlation coefficient of GPA and Units is -0.15327. It is negatively correlated and the correlation is statistically insignificant (p- value= 0.2507). Therefore,the null hypothesis (H0: no correlation between two variables), is not rejected.

Section 2

The correlation coefficient of Average Study time and GPA is 0.10981 . It is positively correlated and the correlation is statistically insignificant (p-value = 0.38).Therefore,the null hypothesis (H0: no correlation between two variables), is not rejected.

The correlation coefficient of Average Study time and Units is 0.34493. It is positively correlated and the correlation is statistically significant (p- value= 0.0053). Therefore,the null hypothesis (H0: no correlation between two variables), is rejected.

The correlation coefficient of GPA and Units is -0.01170. It is negatively correlated and the correlation is statistically insignificant (p- value= 0.9269). Therefore, the null hypothesis (H0: no correlation between two variables), is not rejected.

Question 3)



A screenshot of a computer

Description automatically generated



|  |  |  |  |
| --- | --- | --- | --- |
| **Data Set Name** | WORK.VITA | **Observations** | 1500 |
| **Member Type** | DATA | **Variables** | 12 |
| **Engine** | V9 | **Indexes** | 0 |
| **Created** | 09/15/2020 11:50:13 | **Observation Length** | 96 |
| **Last Modified** | 09/15/2020 11:50:13 | **Deleted Observations** | 0 |
| **Protection** |  | **Compressed** | NO |
| **Data Set Type** |  | **Sorted** | NO |
| **Label** |  |  |  |
| **Data Representation** | WINDOWS\_64 |  |  |
| **Encoding** | wlatin1 Western (Windows) |  |  |

|  |  |
| --- | --- |
| **Engine/Host Dependent Information** | |
| **Data Set Page Size** | 65536 |
| **Number of Data Set Pages** | 3 |
| **First Data Page** | 1 |
| **Max Obs per Page** | 681 |
| **Obs in First Data Page** | 655 |
| **Number of Data Set Repairs** | 0 |
| **ExtendObsCounter** | YES |
| **Filename** | E:\SAS Temporary Files\cxk190003\\_TD71128\_SMVSASCLASSC\_\vita.sas7bdat |
| **Release Created** | 9.0401M6 |
| **Host Created** | X64\_SRV19 |
| **Owner Name** | CAMPUS\cxk190003 |
| **File Size** | 256KB |
| **File Size (bytes)** | 262144 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Alphabetic List of Variables and Attributes** | | | | |
| **#** | **Variable** | **Type** | **Len** | **Label** |
| **11** | Alcohol | Num | 8 | Number of alcoholic drinks per day |
| **10** | DBP | Num | 8 | Diastolic blood pressure (mm/Mg) |
| **6** | HDL | Num | 8 | HDL cholesterol (mg/DL) |
| **1** | ID | Num | 8 | Subject ID |
| **7** | LDL | Num | 8 | LDL cholesterol (mg/DL) |
| **5** | Plaque | Num | 8 | Plaque measurement (mm) |
| **9** | SBP | Num | 8 | Systolic blood pressure (mm/Mg) |
| **12** | Smoke | Num | 8 | Number of cigarettes smoked per day |
| **3** | Strata | Num | 8 | Strata 1=baseline plaque 0.60mm+ and 2=baseline plaque below 0.60mm |
| **4** | Treatment | Num | 8 | 0=placebo and 1=vitamin E |
| **8** | Trig | Num | 8 | triglycerides mg/dL |
| **2** | Visit | Num | 8 | 0=baseline, 1=first year, and 2=second year |

Long to Wide format

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Obs** | **ID** | **Treatment** | **\_NAME\_** | **\_LABEL\_** | **plaque0** | **plaque1** | **plaque2** |
| **1** | 1 | 0 | Plaque | Plaque measurement (mm) | 0.8073 | 0.7580 | 0.8098 |
| **2** | 2 | 0 | Plaque | Plaque measurement (mm) | 0.7576 | 0.6866 | 0.8231 |
| **3** | 3 | 0 | Plaque | Plaque measurement (mm) | 0.7522 | 0.7857 | 0.8031 |
| **4** | 4 | 0 | Plaque | Plaque measurement (mm) | 0.8163 | 0.6004 | 0.9694 |
| **5** | 5 | 0 | Plaque | Plaque measurement (mm) | 0.7977 | 0.9573 | 0.7973 |
| **6** | 6 | 0 | Plaque | Plaque measurement (mm) | 0.8180 | 0.8699 | 0.8396 |
| **7** | 7 | 0 | Plaque | Plaque measurement (mm) | 0.8747 | 0.9285 | 0.7459 |
| **8** | 8 | 0 | Plaque | Plaque measurement (mm) | 0.8679 | 0.7639 | 0.8181 |
| **9** | 9 | 0 | Plaque | Plaque measurement (mm) | 0.8258 | 0.8427 | 0.7831 |
| **10** | 10 | 0 | Plaque | Plaque measurement (mm) | 0.7480 | 0.8058 | 0.9249 |
| **11** | 11 | 0 | Plaque | Plaque measurement (mm) | 0.8798 | 0.8043 | 0.7729 |
| **12** | 12 | 0 | Plaque | Plaque measurement (mm) | 0.7820 | 0.7425 | 0.7648 |
| **13** | 13 | 0 | Plaque | Plaque measurement (mm) | 0.8861 | 0.6375 | 0.7867 |
| **14** | 14 | 0 | Plaque | Plaque measurement (mm) | 0.7743 | 0.7877 | 0.9378 |
| **15** | 15 | 0 | Plaque | Plaque measurement (mm) | 0.8831 | 0.7128 | 0.9132 |
| **16** | 16 | 0 | Plaque | Plaque measurement (mm) | 0.8635 | 0.8794 | 0.7312 |
| **17** | 17 | 0 | Plaque | Plaque measurement (mm) | 0.8619 | 0.7524 | 0.8108 |
| **18** | 18 | 0 | Plaque | Plaque measurement (mm) | 0.7084 | 0.6270 | 0.7100 |
| **19** | 19 | 0 | Plaque | Plaque measurement (mm) | 0.9107 | 0.7476 | 0.8777 |
| **20** | 20 | 0 | Plaque | Plaque measurement (mm) | 0.8402 | 0.6602 | 0.7794 |

1. Without placebo group

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **N** | **Mean** | **Std Dev** | **Std Err** | **Minimum** | **Maximum** |
| 250 | 0.0298 | 0.1182 | 0.00748 | -0.2590 | 0.3351 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Mean** | **95% CL Mean** | | **Std Dev** | **95% CL Std Dev** | |
| 0.0298 | 0.0150 | 0.0445 | 0.1182 | 0.1087 | 0.1296 |

|  |  |  |
| --- | --- | --- |
| **DF** | **t Value** | **Pr > |t|** |
| 249 | 3.98 | <.0001 |
|  |  |  |

H0 : There is no difference in plaque level before treatment and after the second visit

The mean of the plaque is 0.0298 without placebo treatment group. The p-value is 0.001(<0.05). Therefore we can say that the mean is statistically different.

1. With placebo group

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **N** | **Mean** | **Std Dev** | **Std Err** | **Minimum** | **Maximum** |
| 125 | 0.0182 | 0.1015 | 0.00908 | -0.2709 | 0.2577 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Mean** | **95% CL Mean** | | **Std Dev** | **95% CL Std Dev** | |
| 0.0182 | 0.000234 | 0.0362 | 0.1015 | 0.0903 | 0.1159 |

|  |  |  |
| --- | --- | --- |
| **DF** | **t Value** | **Pr > |t|** |
| 124 | 2.01 | 0.0471 |

H0 : There is no difference in plaque level before treatment and after the second visit

The mean of the plaque is 0.0182 with placebo treatment group. The p-value is 0.0471(<0.05). Therefore, we can say that the mean is statistically different.

1. The mean without placebo group is more statistically significant as compared to the mean with placebo group. The p-value of the mean (without placebo) is 0.001 (<0.01) which is even valid for 99% confidence interval.

f)

**Smoke**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Treatment** | **Method** | **N** | **Mean** | **Std Dev** | **Std Err** | **Minimum** | **Maximum** |
| **0** |  | 491 | 0.6245 | 0.1770 | 0.00799 | 0.2490 | 0.9897 |
| **1** |  | 567 | 0.6397 | 0.1631 | 0.00685 | 0.2624 | 1.0808 |
| **Diff (1-2)** | **Pooled** |  | -0.0152 | 0.1697 | 0.0105 |  |  |
| **Diff (1-2)** | **Satterthwaite** |  | -0.0152 |  | 0.0105 |  |  |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Treatment** | **Method** | **Mean** | **95% CL Mean** | | **Std Dev** | **95% CL Std Dev** | |
| **0** |  | 0.6245 | 0.6088 | 0.6402 | 0.1770 | 0.1666 | 0.1889 |
| **1** |  | 0.6397 | 0.6263 | 0.6532 | 0.1631 | 0.1541 | 0.1732 |
| **Diff (1-2)** | **Pooled** | -0.0152 | -0.0358 | 0.00530 | 0.1697 | 0.1628 | 0.1773 |
| **Diff (1-2)** | **Satterthwaite** | -0.0152 | -0.0359 | 0.00542 |  |  |  |

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| --- | --- | --- | --- | --- |
| **Method** | **Variances** | **DF** | **t Value** | **Pr > |t|** |
| **Pooled** | Equal | 1056 | -1.46 | 0.1458 |
| **Satterthwaite** | Unequal | 1005 | -1.45 | 0.1482 |

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| --- | --- | --- | --- | --- |
| **Equality of Variances** | | | | |
| **Method** | **Num DF** | **Den DF** | **F Value** | **Pr > F** |
| **Folded F** | 490 | 566 | 1.18 | 0.0599 |

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| --- | --- | --- | --- | --- | --- | --- | --- |
| **Treatment** | **Method** | **N** | **Mean** | **Std Dev** | **Std Err** | **Minimum** | **Maximum** |
| **0** |  | 8 | 0.5332 | 0.1378 | 0.0487 | 0.3527 | 0.7977 |
| **1** |  | 13 | 0.4905 | 0.1126 | 0.0312 | 0.3382 | 0.7643 |
| **Diff (1-2)** | **Pooled** |  | 0.0428 | 0.1225 | 0.0550 |  |  |
| **Diff (1-2)** | **Satterthwaite** |  | 0.0428 |  | 0.0579 |  |  |

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| --- | --- | --- | --- | --- | --- | --- | --- |
| **Treatment** | **Method** | **Mean** | **95% CL Mean** | | **Std Dev** | **95% CL Std Dev** | |
| **0** |  | 0.5332 | 0.4181 | 0.6484 | 0.1378 | 0.0911 | 0.2804 |
| **1** |  | 0.4905 | 0.4224 | 0.5585 | 0.1126 | 0.0807 | 0.1858 |
| **Diff (1-2)** | **Pooled** | 0.0428 | -0.0724 | 0.1579 | 0.1225 | 0.0931 | 0.1789 |
| **Diff (1-2)** | **Satterthwaite** | 0.0428 | -0.0825 | 0.1681 |  |  |  |

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| --- | --- | --- | --- | --- |
| **Method** | **Variances** | **DF** | **t Value** | **Pr > |t|** |
| **Pooled** | Equal | 19 | 0.78 | 0.4465 |
| **Satterthwaite** | Unequal | 12.684 | 0.74 | 0.4731 |

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| **Equality of Variances** | | | | |
| **Method** | **Num DF** | **Den DF** | **F Value** | **Pr > F** |
| **Folded F** | 7 | 12 | 1.50 | 0.5137 |

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| --- | --- | --- | --- | --- | --- | --- | --- |
| **Treatment** | **Method** | **N** | **Mean** | **Std Dev** | **Std Err** | **Minimum** | **Maximum** |
| **0** |  | 14 | 0.7333 | 0.1807 | 0.0483 | 0.4214 | 0.9312 |
| **1** |  | 8 | 0.4715 | 0.0929 | 0.0329 | 0.3212 | 0.5670 |
| **Diff (1-2)** | **Pooled** |  | 0.2617 | 0.1557 | 0.0690 |  |  |
| **Diff (1-2)** | **Satterthwaite** |  | 0.2617 |  | 0.0584 |  |  |

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| --- | --- | --- | --- | --- | --- | --- | --- |
| **Treatment** | **Method** | **Mean** | **95% CL Mean** | | **Std Dev** | **95% CL Std Dev** | |
| **0** |  | 0.7333 | 0.6289 | 0.8376 | 0.1807 | 0.1310 | 0.2912 |
| **1** |  | 0.4715 | 0.3939 | 0.5492 | 0.0929 | 0.0614 | 0.1891 |
| **Diff (1-2)** | **Pooled** | 0.2617 | 0.1178 | 0.4057 | 0.1557 | 0.1191 | 0.2249 |
| **Diff (1-2)** | **Satterthwaite** | 0.2617 | 0.1398 | 0.3836 |  |  |  |

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| --- | --- | --- | --- | --- |
| **Method** | **Variances** | **DF** | **t Value** | **Pr > |t|** |
| **Pooled** | Equal | 20 | 3.79 | 0.0011 |
| **Satterthwaite** | Unequal | 19.901 | 4.48 | 0.0002 |

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| **Equality of Variances** | | | | |
| **Method** | **Num DF** | **Den DF** | **F Value** | **Pr > F** |
| **Folded F** | 13 | 7 | 3.78 | 0.0851 |

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| **Treatment** | **Method** | **N** | **Mean** | **Std Dev** | **Std Err** | **Minimum** | **Maximum** |
| **0** |  | 13 | 0.6669 | 0.1649 | 0.0457 | 0.4639 | 0.9573 |
| **1** |  | 12 | 0.5508 | 0.1932 | 0.0558 | 0.2209 | 0.8725 |
| **Diff (1-2)** | **Pooled** |  | 0.1162 | 0.1790 | 0.0717 |  |  |
| **Diff (1-2)** | **Satterthwaite** |  | 0.1162 |  | 0.0721 |  |  |

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| --- | --- | --- | --- | --- | --- | --- | --- |
| **Treatment** | **Method** | **Mean** | **95% CL Mean** | | **Std Dev** | **95% CL Std Dev** | |
| **0** |  | 0.6669 | 0.5673 | 0.7666 | 0.1649 | 0.1182 | 0.2722 |
| **1** |  | 0.5508 | 0.4280 | 0.6735 | 0.1932 | 0.1369 | 0.3281 |
| **Diff (1-2)** | **Pooled** | 0.1162 | -0.0321 | 0.2644 | 0.1790 | 0.1391 | 0.2511 |
| **Diff (1-2)** | **Satterthwaite** | 0.1162 | -0.0335 | 0.2659 |  |  |  |

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| --- | --- | --- | --- | --- |
| **Method** | **Variances** | **DF** | **t Value** | **Pr > |t|** |
| **Pooled** | Equal | 23 | 1.62 | 0.1186 |
| **Satterthwaite** | Unequal | 21.749 | 1.61 | 0.1216 |

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| --- | --- | --- | --- | --- |
| **Equality of Variances** | | | | |
| **Method** | **Num DF** | **Den DF** | **F Value** | **Pr > F** |
| **Folded F** | 11 | 12 | 1.37 | 0.5928 |

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| --- | --- | --- | --- | --- | --- | --- | --- |
| **Treatment** | **Method** | **N** | **Mean** | **Std Dev** | **Std Err** | **Minimum** | **Maximum** |
| **0** |  | 25 | 0.6076 | 0.1618 | 0.0324 | 0.3755 | 0.8809 |
| **1** |  | 14 | 0.5513 | 0.1668 | 0.0446 | 0.2835 | 0.8729 |
| **Diff (1-2)** | **Pooled** |  | 0.0562 | 0.1635 | 0.0546 |  |  |
| **Diff (1-2)** | **Satterthwaite** |  | 0.0562 |  | 0.0551 |  |  |

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| --- | --- | --- | --- | --- | --- | --- | --- |
| **Treatment** | **Method** | **Mean** | **95% CL Mean** | | **Std Dev** | **95% CL Std Dev** | |
| **0** |  | 0.6076 | 0.5408 | 0.6743 | 0.1618 | 0.1263 | 0.2250 |
| **1** |  | 0.5513 | 0.4550 | 0.6476 | 0.1668 | 0.1209 | 0.2687 |
| **Diff (1-2)** | **Pooled** | 0.0562 | -0.0544 | 0.1668 | 0.1635 | 0.1333 | 0.2116 |
| **Diff (1-2)** | **Satterthwaite** | 0.0562 | -0.0569 | 0.1694 |  |  |  |

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| --- | --- | --- | --- | --- |
| **Method** | **Variances** | **DF** | **t Value** | **Pr > |t|** |
| **Pooled** | Equal | 37 | 1.03 | 0.3097 |
| **Satterthwaite** | Unequal | 26.34 | 1.02 | 0.3166 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Equality of Variances** | | | | |
| **Method** | **Num DF** | **Den DF** | **F Value** | **Pr > F** |
| **Folded F** | 13 | 24 | 1.06 | 0.8623 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Treatment** | **Method** | **N** | **Mean** | **Std Dev** | **Std Err** | **Minimum** | **Maximum** |
| **0** |  | 12 | 0.7407 | 0.1912 | 0.0552 | 0.3934 | 0.9326 |
| **1** |  | 6 | 0.5919 | 0.1054 | 0.0430 | 0.4620 | 0.7332 |
| **Diff (1-2)** | **Pooled** |  | 0.1488 | 0.1692 | 0.0846 |  |  |
| **Diff (1-2)** | **Satterthwaite** |  | 0.1488 |  | 0.0700 |  |  |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Treatment** | **Method** | **Mean** | **95% CL Mean** | | **Std Dev** | **95% CL Std Dev** | |
| **0** |  | 0.7407 | 0.6192 | 0.8622 | 0.1912 | 0.1355 | 0.3247 |
| **1** |  | 0.5919 | 0.4813 | 0.7026 | 0.1054 | 0.0658 | 0.2586 |
| **Diff (1-2)** | **Pooled** | 0.1488 | -0.0305 | 0.3281 | 0.1692 | 0.1260 | 0.2575 |
| **Diff (1-2)** | **Satterthwaite** | 0.1488 | 0.000164 | 0.2974 |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Method** | **Variances** | **DF** | **t Value** | **Pr > |t|** |
| **Pooled** | Equal | 16 | 1.76 | 0.0976 |
| **Satterthwaite** | Unequal | 15.686 | 2.13 | 0.0498 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Equality of Variances** | | | | |
| **Method** | **Num DF** | **Den DF** | **F Value** | **Pr > F** |
| **Folded F** | 11 | 5 | 3.29 | 0.1990 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Treatment** | **Method** | **N** | **Mean** | **Std Dev** | **Std Err** | **Minimum** | **Maximum** |
| **0** |  | 8 | 0.7030 | 0.1623 | 0.0574 | 0.4989 | 0.8978 |
| **1** |  | 15 | 0.7126 | 0.2259 | 0.0583 | 0.3039 | 1.0405 |
| **Diff (1-2)** | **Pooled** |  | -0.00962 | 0.2069 | 0.0906 |  |  |
| **Diff (1-2)** | **Satterthwaite** |  | -0.00962 |  | 0.0818 |  |  |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Treatment** | **Method** | **Mean** | **95% CL Mean** | | **Std Dev** | **95% CL Std Dev** | |
| **0** |  | 0.7030 | 0.5673 | 0.8387 | 0.1623 | 0.1073 | 0.3303 |
| **1** |  | 0.7126 | 0.5875 | 0.8377 | 0.2259 | 0.1654 | 0.3563 |
| **Diff (1-2)** | **Pooled** | -0.00962 | -0.1980 | 0.1788 | 0.2069 | 0.1592 | 0.2957 |
| **Diff (1-2)** | **Satterthwaite** | -0.00962 | -0.1810 | 0.1617 |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Method** | **Variances** | **DF** | **t Value** | **Pr > |t|** |
| **Pooled** | Equal | 21 | -0.11 | 0.9164 |
| **Satterthwaite** | Unequal | 18.87 | -0.12 | 0.9077 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Equality of Variances** | | | | |
| **Method** | **Num DF** | **Den DF** | **F Value** | **Pr > F** |
| **Folded F** | 14 | 7 | 1.94 | 0.3837 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Treatment** | **Method** | **N** | **Mean** | **Std Dev** | **Std Err** | **Minimum** | **Maximum** |
| **0** |  | 4 | 0.6331 | 0.1295 | 0.0647 | 0.4941 | 0.7805 |
| **1** |  | 4 | 0.5862 | 0.0990 | 0.0495 | 0.4799 | 0.7148 |
| **Diff (1-2)** | **Pooled** |  | 0.0469 | 0.1153 | 0.0815 |  |  |
| **Diff (1-2)** | **Satterthwaite** |  | 0.0469 |  | 0.0815 |  |  |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Treatment** | **Method** | **Mean** | **95% CL Mean** | | **Std Dev** | **95% CL Std Dev** | |
| **0** |  | 0.6331 | 0.4271 | 0.8391 | 0.1295 | 0.0734 | 0.4828 |
| **1** |  | 0.5862 | 0.4286 | 0.7437 | 0.0990 | 0.0561 | 0.3692 |
| **Diff (1-2)** | **Pooled** | 0.0469 | -0.1525 | 0.2464 | 0.1153 | 0.0743 | 0.2538 |
| **Diff (1-2)** | **Satterthwaite** | 0.0469 | -0.1559 | 0.2497 |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Method** | **Variances** | **DF** | **t Value** | **Pr > |t|** |
| **Pooled** | Equal | 6 | 0.58 | 0.5857 |
| **Satterthwaite** | Unequal | 5.6143 | 0.58 | 0.5871 |

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| **Equality of Variances** | | | | |
| **Method** | **Num DF** | **Den DF** | **F Value** | **Pr > F** |
| **Folded F** | 3 | 3 | 1.71 | 0.6701 |

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| **Treatment** | **Method** | **N** | **Mean** | **Std Dev** | **Std Err** | **Minimum** | **Maximum** |
| **0** |  | 36 | 0.7365 | 0.1698 | 0.0283 | 0.2992 | 0.9811 |
| **1** |  | 27 | 0.6404 | 0.1612 | 0.0310 | 0.3234 | 0.9517 |
| **Diff (1-2)** | **Pooled** |  | 0.0961 | 0.1662 | 0.0423 |  |  |
| **Diff (1-2)** | **Satterthwaite** |  | 0.0961 |  | 0.0420 |  |  |

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| **Treatment** | **Method** | **Mean** | **95% CL Mean** | | **Std Dev** | **95% CL Std Dev** | |
| **0** |  | 0.7365 | 0.6790 | 0.7939 | 0.1698 | 0.1377 | 0.2215 |
| **1** |  | 0.6404 | 0.5766 | 0.7042 | 0.1612 | 0.1270 | 0.2210 |
| **Diff (1-2)** | **Pooled** | 0.0961 | 0.0114 | 0.1807 | 0.1662 | 0.1412 | 0.2020 |
| **Diff (1-2)** | **Satterthwaite** | 0.0961 | 0.0120 | 0.1801 |  |  |  |

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| **Method** | **Variances** | **DF** | **t Value** | **Pr > |t|** |
| **Pooled** | Equal | 61 | 2.27 | 0.0267 |
| **Satterthwaite** | Unequal | 57.627 | 2.29 | 0.0259 |

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| **Equality of Variances** | | | | |
| **Method** | **Num DF** | **Den DF** | **F Value** | **Pr > F** |
| **Folded F** | 35 | 26 | 1.11 | 0.7934 |

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| **Treatment** | **Method** | **N** | **Mean** | **Std Dev** | **Std Err** | **Minimum** | **Maximum** |
| **0** |  | 13 | 0.6653 | 0.1913 | 0.0531 | 0.3534 | 0.9594 |
| **1** |  | 15 | 0.5582 | 0.1611 | 0.0416 | 0.3593 | 0.8856 |
| **Diff (1-2)** | **Pooled** |  | 0.1071 | 0.1757 | 0.0666 |  |  |
| **Diff (1-2)** | **Satterthwaite** |  | 0.1071 |  | 0.0674 |  |  |

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| **Treatment** | **Method** | **Mean** | **95% CL Mean** | | **Std Dev** | **95% CL Std Dev** | |
| **0** |  | 0.6653 | 0.5497 | 0.7809 | 0.1913 | 0.1372 | 0.3158 |
| **1** |  | 0.5582 | 0.4690 | 0.6474 | 0.1611 | 0.1180 | 0.2541 |
| **Diff (1-2)** | **Pooled** | 0.1071 | -0.0297 | 0.2440 | 0.1757 | 0.1384 | 0.2408 |
| **Diff (1-2)** | **Satterthwaite** | 0.1071 | -0.0322 | 0.2464 |  |  |  |

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| **Method** | **Variances** | **DF** | **t Value** | **Pr > |t|** |
| **Pooled** | Equal | 26 | 1.61 | 0.1197 |
| **Satterthwaite** | Unequal | 23.633 | 1.59 | 0.1254 |

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| **Equality of Variances** | | | | |
| **Method** | **Num DF** | **Den DF** | **F Value** | **Pr > F** |
| **Folded F** | 12 | 14 | 1.41 | 0.5344 |

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| **Treatment** | **Method** | **N** | **Mean** | **Std Dev** | **Std Err** | **Minimum** | **Maximum** |
| **0** |  | 18 | 0.6705 | 0.2011 | 0.0474 | 0.4174 | 0.9725 |
| **1** |  | 11 | 0.6026 | 0.1418 | 0.0427 | 0.4425 | 0.8667 |
| **Diff (1-2)** | **Pooled** |  | 0.0679 | 0.1814 | 0.0694 |  |  |
| **Diff (1-2)** | **Satterthwaite** |  | 0.0679 |  | 0.0638 |  |  |

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| **Treatment** | **Method** | **Mean** | **95% CL Mean** | | **Std Dev** | **95% CL Std Dev** | |
| **0** |  | 0.6705 | 0.5705 | 0.7705 | 0.2011 | 0.1509 | 0.3014 |
| **1** |  | 0.6026 | 0.5073 | 0.6978 | 0.1418 | 0.0991 | 0.2488 |
| **Diff (1-2)** | **Pooled** | 0.0679 | -0.0745 | 0.2103 | 0.1814 | 0.1434 | 0.2469 |
| **Diff (1-2)** | **Satterthwaite** | 0.0679 | -0.0632 | 0.1990 |  |  |  |

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| **Method** | **Variances** | **DF** | **t Value** | **Pr > |t|** |
| **Pooled** | Equal | 27 | 0.98 | 0.3367 |
| **Satterthwaite** | Unequal | 26.31 | 1.06 | 0.2971 |

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| **Equality of Variances** | | | | |
| **Method** | **Num DF** | **Den DF** | **F Value** | **Pr > F** |
| **Folded F** | 17 | 10 | 2.01 | 0.2617 |

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| **Treatment** | **Method** | **N** | **Mean** | **Std Dev** | **Std Err** | **Minimum** | **Maximum** |
| **0** |  | 5 | 0.6146 | 0.2292 | 0.1025 | 0.4254 | 0.9512 |
| **1** |  | 3 | 0.4987 | 0.2383 | 0.1376 | 0.2902 | 0.7585 |
| **Diff (1-2)** | **Pooled** |  | 0.1159 | 0.2323 | 0.1696 |  |  |
| **Diff (1-2)** | **Satterthwaite** |  | 0.1159 |  | 0.1716 |  |  |

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| **Treatment** | **Method** | **Mean** | **95% CL Mean** | | **Std Dev** | **95% CL Std Dev** | |
| **0** |  | 0.6146 | 0.3301 | 0.8992 | 0.2292 | 0.1373 | 0.6586 |
| **1** |  | 0.4987 | -0.0933 | 1.0907 | 0.2383 | 0.1241 | 1.4978 |
| **Diff (1-2)** | **Pooled** | 0.1159 | -0.2992 | 0.5310 | 0.2323 | 0.1497 | 0.5115 |
| **Diff (1-2)** | **Satterthwaite** | 0.1159 | -0.3520 | 0.5839 |  |  |  |

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| **Method** | **Variances** | **DF** | **t Value** | **Pr > |t|** |
| **Pooled** | Equal | 6 | 0.68 | 0.5199 |
| **Satterthwaite** | Unequal | 4.1904 | 0.68 | 0.5348 |

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| **Equality of Variances** | | | | |
| **Method** | **Num DF** | **Den DF** | **F Value** | **Pr > F** |
| **Folded F** | 2 | 4 | 1.08 | 0.8427 |

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| **Treatment** | **Method** | **N** | **Mean** | **Std Dev** | **Std Err** | **Minimum** | **Maximum** |
| **0** |  | 4 | 0.5291 | 0.2094 | 0.1047 | 0.3628 | 0.8203 |
| **1** |  | 4 | 0.5864 | 0.1970 | 0.0985 | 0.3751 | 0.7585 |
| **Diff (1-2)** | **Pooled** |  | -0.0574 | 0.2033 | 0.1438 |  |  |
| **Diff (1-2)** | **Satterthwaite** |  | -0.0574 |  | 0.1438 |  |  |

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| **Treatment** | **Method** | **Mean** | **95% CL Mean** | | **Std Dev** | **95% CL Std Dev** | |
| **0** |  | 0.5291 | 0.1959 | 0.8622 | 0.2094 | 0.1186 | 0.7808 |
| **1** |  | 0.5864 | 0.2729 | 0.8999 | 0.1970 | 0.1116 | 0.7346 |
| **Diff (1-2)** | **Pooled** | -0.0574 | -0.4091 | 0.2944 | 0.2033 | 0.1310 | 0.4477 |
| **Diff (1-2)** | **Satterthwaite** | -0.0574 | -0.4094 | 0.2947 |  |  |  |

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| **Method** | **Variances** | **DF** | **t Value** | **Pr > |t|** |
| **Pooled** | Equal | 6 | -0.40 | 0.7037 |
| **Satterthwaite** | Unequal | 5.9779 | -0.40 | 0.7038 |

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| **Equality of Variances** | | | | |
| **Method** | **Num DF** | **Den DF** | **F Value** | **Pr > F** |
| **Folded F** | 3 | 3 | 1.13 | 0.9226 |

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| **Treatment** | **Method** | **N** | **Mean** | **Std Dev** | **Std Err** | **Minimum** | **Maximum** |
| **0** |  | 6 | 0.6779 | 0.1736 | 0.0709 | 0.5021 | 0.9479 |
| **1** |  | 12 | 0.6438 | 0.1876 | 0.0542 | 0.3590 | 0.9648 |
| **Diff (1-2)** | **Pooled** |  | 0.0341 | 0.1834 | 0.0917 |  |  |
| **Diff (1-2)** | **Satterthwaite** |  | 0.0341 |  | 0.0892 |  |  |

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| **Treatment** | **Method** | **Mean** | **95% CL Mean** | | **Std Dev** | **95% CL Std Dev** | |
| **0** |  | 0.6779 | 0.4957 | 0.8601 | 0.1736 | 0.1084 | 0.4258 |
| **1** |  | 0.6438 | 0.5246 | 0.7630 | 0.1876 | 0.1329 | 0.3186 |
| **Diff (1-2)** | **Pooled** | 0.0341 | -0.1603 | 0.2284 | 0.1834 | 0.1366 | 0.2791 |
| **Diff (1-2)** | **Satterthwaite** | 0.0341 | -0.1626 | 0.2307 |  |  |  |

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| **Method** | **Variances** | **DF** | **t Value** | **Pr > |t|** |
| **Pooled** | Equal | 16 | 0.37 | 0.7150 |
| **Satterthwaite** | Unequal | 10.862 | 0.38 | 0.7099 |

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| **Equality of Variances** | | | | |
| **Method** | **Num DF** | **Den DF** | **F Value** | **Pr > F** |
| **Folded F** | 11 | 5 | 1.17 | 0.9218 |

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| **Treatment** | **Method** | **N** | **Mean** | **Std Dev** | **Std Err** | **Minimum** | **Maximum** |
| **0** |  | 11 | 0.6016 | 0.1582 | 0.0477 | 0.3786 | 0.8680 |
| **1** |  | 5 | 0.6053 | 0.1332 | 0.0596 | 0.4319 | 0.7649 |
| **Diff (1-2)** | **Pooled** |  | -0.00377 | 0.1515 | 0.0817 |  |  |
| **Diff (1-2)** | **Satterthwaite** |  | -0.00377 |  | 0.0763 |  |  |

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| **Treatment** | **Method** | **Mean** | **95% CL Mean** | | **Std Dev** | **95% CL Std Dev** | |
| **0** |  | 0.6016 | 0.4953 | 0.7078 | 0.1582 | 0.1105 | 0.2776 |
| **1** |  | 0.6053 | 0.4399 | 0.7708 | 0.1332 | 0.0798 | 0.3829 |
| **Diff (1-2)** | **Pooled** | -0.00377 | -0.1790 | 0.1715 | 0.1515 | 0.1109 | 0.2389 |
| **Diff (1-2)** | **Satterthwaite** | -0.00377 | -0.1757 | 0.1682 |  |  |  |

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| **Method** | **Variances** | **DF** | **t Value** | **Pr > |t|** |
| **Pooled** | Equal | 14 | -0.05 | 0.9639 |
| **Satterthwaite** | Unequal | 9.2487 | -0.05 | 0.9617 |

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| **Equality of Variances** | | | | |
| **Method** | **Num DF** | **Den DF** | **F Value** | **Pr > F** |
| **Folded F** | 10 | 4 | 1.41 | 0.7926 |

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| **Treatment** | **Method** | **N** | **Mean** | **Std Dev** | **Std Err** | **Minimum** | **Maximum** |
| **0** |  | 9 | 0.5079 | 0.1458 | 0.0486 | 0.3838 | 0.8047 |
| **1** |  | 11 | 0.5984 | 0.2303 | 0.0694 | 0.2872 | 0.9904 |
| **Diff (1-2)** | **Pooled** |  | -0.0904 | 0.1973 | 0.0887 |  |  |
| **Diff (1-2)** | **Satterthwaite** |  | -0.0904 |  | 0.0848 |  |  |

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| **Treatment** | **Method** | **Mean** | **95% CL Mean** | | **Std Dev** | **95% CL Std Dev** | |
| **0** |  | 0.5079 | 0.3959 | 0.6200 | 0.1458 | 0.0985 | 0.2794 |
| **1** |  | 0.5984 | 0.4437 | 0.7531 | 0.2303 | 0.1609 | 0.4041 |
| **Diff (1-2)** | **Pooled** | -0.0904 | -0.2767 | 0.0958 | 0.1973 | 0.1490 | 0.2917 |
| **Diff (1-2)** | **Satterthwaite** | -0.0904 | -0.2692 | 0.0883 |  |  |  |

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| **Method** | **Variances** | **DF** | **t Value** | **Pr > |t|** |
| **Pooled** | Equal | 18 | -1.02 | 0.3213 |
| **Satterthwaite** | Unequal | 17.077 | -1.07 | 0.3009 |

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| **Equality of Variances** | | | | |
| **Method** | **Num DF** | **Den DF** | **F Value** | **Pr > F** |
| **Folded F** | 10 | 8 | 2.49 | 0.2084 |

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| **Treatment** | **Method** | **N** | **Mean** | **Std Dev** | **Std Err** | **Minimum** | **Maximum** |
| **0** |  | 10 | 0.6101 | 0.1822 | 0.0576 | 0.3143 | 0.8697 |
| **1** |  | 10 | 0.5114 | 0.1147 | 0.0363 | 0.4112 | 0.7992 |
| **Diff (1-2)** | **Pooled** |  | 0.0987 | 0.1523 | 0.0681 |  |  |
| **Diff (1-2)** | **Satterthwaite** |  | 0.0987 |  | 0.0681 |  |  |

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| **Treatment** | **Method** | **Mean** | **95% CL Mean** | | **Std Dev** | **95% CL Std Dev** | |
| **0** |  | 0.6101 | 0.4797 | 0.7405 | 0.1822 | 0.1254 | 0.3327 |
| **1** |  | 0.5114 | 0.4293 | 0.5935 | 0.1147 | 0.0789 | 0.2095 |
| **Diff (1-2)** | **Pooled** | 0.0987 | -0.0444 | 0.2418 | 0.1523 | 0.1151 | 0.2252 |
| **Diff (1-2)** | **Satterthwaite** | 0.0987 | -0.0463 | 0.2437 |  |  |  |

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| **Method** | **Variances** | **DF** | **t Value** | **Pr > |t|** |
| **Pooled** | Equal | 18 | 1.45 | 0.1644 |
| **Satterthwaite** | Unequal | 15.166 | 1.45 | 0.1676 |

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| **Equality of Variances** | | | | |
| **Method** | **Num DF** | **Den DF** | **F Value** | **Pr > F** |
| **Folded F** | 9 | 9 | 2.52 | 0.1842 |

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| **Treatment** | **Method** | **N** | **Mean** | **Std Dev** | **Std Err** | **Minimum** | **Maximum** |
| **0** |  | 7 | 0.6104 | 0.1285 | 0.0486 | 0.4971 | 0.7937 |
| **1** |  | 3 | 0.5184 | 0.1931 | 0.1115 | 0.3360 | 0.7206 |
| **Diff (1-2)** | **Pooled** |  | 0.0920 | 0.1473 | 0.1016 |  |  |
| **Diff (1-2)** | **Satterthwaite** |  | 0.0920 |  | 0.1216 |  |  |

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| **Treatment** | **Method** | **Mean** | **95% CL Mean** | | **Std Dev** | **95% CL Std Dev** | |
| **0** |  | 0.6104 | 0.4916 | 0.7292 | 0.1285 | 0.0828 | 0.2829 |
| **1** |  | 0.5184 | 0.0388 | 0.9980 | 0.1931 | 0.1005 | 1.2133 |
| **Diff (1-2)** | **Pooled** | 0.0920 | -0.1424 | 0.3264 | 0.1473 | 0.0995 | 0.2822 |
| **Diff (1-2)** | **Satterthwaite** | 0.0920 | -0.3112 | 0.4953 |  |  |  |

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| **Method** | **Variances** | **DF** | **t Value** | **Pr > |t|** |
| **Pooled** | Equal | 8 | 0.91 | 0.3917 |
| **Satterthwaite** | Unequal | 2.7976 | 0.76 | 0.5077 |

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| **Equality of Variances** | | | | |
| **Method** | **Num DF** | **Den DF** | **F Value** | **Pr > F** |
| **Folded F** | 2 | 6 | 2.26 | 0.3714 |

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| **Treatment** | **Method** | **N** | **Mean** | **Std Dev** | **Std Err** | **Minimum** | **Maximum** |
| **0** |  | 23 | 0.6624 | 0.1801 | 0.0376 | 0.3703 | 0.9198 |
| **1** |  | 4 | 0.7004 | 0.1158 | 0.0579 | 0.5564 | 0.8393 |
| **Diff (1-2)** | **Pooled** |  | -0.0380 | 0.1736 | 0.0941 |  |  |
| **Diff (1-2)** | **Satterthwaite** |  | -0.0380 |  | 0.0690 |  |  |

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| **Treatment** | **Method** | **Mean** | **95% CL Mean** | | **Std Dev** | **95% CL Std Dev** | |
| **0** |  | 0.6624 | 0.5845 | 0.7403 | 0.1801 | 0.1393 | 0.2549 |
| **1** |  | 0.7004 | 0.5161 | 0.8847 | 0.1158 | 0.0656 | 0.4318 |
| **Diff (1-2)** | **Pooled** | -0.0380 | -0.2317 | 0.1557 | 0.1736 | 0.1362 | 0.2397 |
| **Diff (1-2)** | **Satterthwaite** | -0.0380 | -0.2075 | 0.1315 |  |  |  |

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| **Method** | **Variances** | **DF** | **t Value** | **Pr > |t|** |
| **Pooled** | Equal | 25 | -0.40 | 0.6896 |
| **Satterthwaite** | Unequal | 5.9115 | -0.55 | 0.6019 |

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| **Equality of Variances** | | | | |
| **Method** | **Num DF** | **Den DF** | **F Value** | **Pr > F** |
| **Folded F** | 22 | 3 | 2.42 | 0.5101 |

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| **Treatment** | **Method** | **N** | **Mean** | **Std Dev** | **Std Err** | **Minimum** | **Maximum** |
| **0** |  | 10 | 0.7022 | 0.1569 | 0.0496 | 0.4304 | 0.9185 |
| **1** |  | 1 | 0.7766 | . | . | 0.7766 | 0.7766 |
| **Diff (1-2)** | **Pooled** |  | -0.0744 | 0.1569 | 0.1645 |  |  |
| **Diff (1-2)** | **Satterthwaite** |  | -0.0744 |  | . |  |  |

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| **Treatment** | **Method** | **Mean** | **95% CL Mean** | | **Std Dev** | **95% CL Std Dev** | |
| **0** |  | 0.7022 | 0.5900 | 0.8144 | 0.1569 | 0.1079 | 0.2864 |
| **1** |  | 0.7766 | . | . | . | . | . |
| **Diff (1-2)** | **Pooled** | -0.0744 | -0.4466 | 0.2977 | 0.1569 | 0.1079 | 0.2864 |
| **Diff (1-2)** | **Satterthwaite** | -0.0744 | . | . |  |  |  |

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| **Method** | **Variances** | **DF** | **t Value** | **Pr > |t|** |
| **Pooled** | Equal | 9 | -0.45 | 0.6617 |
| **Satterthwaite** | Unequal | . | . | . |

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| **Equality of Variances** | | | | |
| **Method** | **Num DF** | **Den DF** | **F Value** | **Pr > F** |
| **Folded F** | 9 | 0 | . | . |

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| **Treatment** | **Method** | **N** | **Mean** | **Std Dev** | **Std Err** | **Minimum** | **Maximum** |
| **0** |  | 12 | 0.7015 | 0.1789 | 0.0516 | 0.4188 | 0.9068 |
| **1** |  | 5 | 0.6720 | 0.1769 | 0.0791 | 0.4253 | 0.8620 |
| **Diff (1-2)** | **Pooled** |  | 0.0295 | 0.1784 | 0.0949 |  |  |
| **Diff (1-2)** | **Satterthwaite** |  | 0.0295 |  | 0.0945 |  |  |

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| **Treatment** | **Method** | **Mean** | **95% CL Mean** | | **Std Dev** | **95% CL Std Dev** | |
| **0** |  | 0.7015 | 0.5878 | 0.8151 | 0.1789 | 0.1267 | 0.3037 |
| **1** |  | 0.6720 | 0.4523 | 0.8917 | 0.1769 | 0.1060 | 0.5084 |
| **Diff (1-2)** | **Pooled** | 0.0295 | -0.1729 | 0.2319 | 0.1784 | 0.1318 | 0.2760 |
| **Diff (1-2)** | **Satterthwaite** | 0.0295 | -0.1902 | 0.2492 |  |  |  |

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| **Method** | **Variances** | **DF** | **t Value** | **Pr > |t|** |
| **Pooled** | Equal | 15 | 0.31 | 0.7603 |
| **Satterthwaite** | Unequal | 7.6287 | 0.31 | 0.7633 |

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| **Equality of Variances** | | | | |
| **Method** | **Num DF** | **Den DF** | **F Value** | **Pr > F** |
| **Folded F** | 11 | 4 | 1.02 | 1.0000 |

**Alcohol**

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| **Treatment** | **Method** | **N** | **Mean** | **Std Dev** | **Std Err** | **Minimum** | **Maximum** |
| **0** |  | 497 | 0.6194 | 0.1778 | 0.00798 | 0.2490 | 0.9897 |
| **1** |  | 550 | 0.6363 | 0.1688 | 0.00720 | 0.2209 | 1.0808 |
| **Diff (1-2)** | **Pooled** |  | -0.0169 | 0.1731 | 0.0107 |  |  |
| **Diff (1-2)** | **Satterthwaite** |  | -0.0169 |  | 0.0107 |  |  |

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| **Treatment** | **Method** | **Mean** | **95% CL Mean** | | **Std Dev** | **95% CL Std Dev** | |
| **0** |  | 0.6194 | 0.6037 | 0.6350 | 0.1778 | 0.1674 | 0.1896 |
| **1** |  | 0.6363 | 0.6222 | 0.6504 | 0.1688 | 0.1593 | 0.1794 |
| **Diff (1-2)** | **Pooled** | -0.0169 | -0.0379 | 0.00410 | 0.1731 | 0.1660 | 0.1809 |
| **Diff (1-2)** | **Satterthwaite** | -0.0169 | -0.0380 | 0.00416 |  |  |  |

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| **Method** | **Variances** | **DF** | **t Value** | **Pr > |t|** |
| **Pooled** | Equal | 1045 | -1.58 | 0.1146 |
| **Satterthwaite** | Unequal | 1021 | -1.58 | 0.1156 |

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| **Equality of Variances** | | | | |
| **Method** | **Num DF** | **Den DF** | **F Value** | **Pr > F** |
| **Folded F** | 496 | 549 | 1.11 | 0.2333 |

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| **Treatment** | **Method** | **N** | **Mean** | **Std Dev** | **Std Err** | **Minimum** | **Maximum** |
| **0** |  | 69 | 0.6346 | 0.1791 | 0.0216 | 0.2664 | 0.9378 |
| **1** |  | 55 | 0.5686 | 0.1481 | 0.0200 | 0.3838 | 0.9351 |
| **Diff (1-2)** | **Pooled** |  | 0.0660 | 0.1661 | 0.0300 |  |  |
| **Diff (1-2)** | **Satterthwaite** |  | 0.0660 |  | 0.0294 |  |  |

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| **Treatment** | **Method** | **Mean** | **95% CL Mean** | | **Std Dev** | **95% CL Std Dev** | |
| **0** |  | 0.6346 | 0.5915 | 0.6776 | 0.1791 | 0.1534 | 0.2153 |
| **1** |  | 0.5686 | 0.5286 | 0.6086 | 0.1481 | 0.1247 | 0.1824 |
| **Diff (1-2)** | **Pooled** | 0.0660 | 0.00651 | 0.1254 | 0.1661 | 0.1476 | 0.1899 |
| **Diff (1-2)** | **Satterthwaite** | 0.0660 | 0.00777 | 0.1241 |  |  |  |

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| **Method** | **Variances** | **DF** | **t Value** | **Pr > |t|** |
| **Pooled** | Equal | 122 | 2.20 | 0.0299 |
| **Satterthwaite** | Unequal | 121.82 | 2.24 | 0.0266 |

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| **Equality of Variances** | | | | |
| **Method** | **Num DF** | **Den DF** | **F Value** | **Pr > F** |
| **Folded F** | 68 | 54 | 1.46 | 0.1484 |

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| **Treatment** | **Method** | **N** | **Mean** | **Std Dev** | **Std Err** | **Minimum** | **Maximum** |
| **0** |  | 80 | 0.7015 | 0.1659 | 0.0185 | 0.3527 | 0.9537 |
| **1** |  | 67 | 0.5880 | 0.1543 | 0.0189 | 0.3479 | 0.8657 |
| **Diff (1-2)** | **Pooled** |  | 0.1135 | 0.1607 | 0.0266 |  |  |
| **Diff (1-2)** | **Satterthwaite** |  | 0.1135 |  | 0.0264 |  |  |

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| **Treatment** | **Method** | **Mean** | **95% CL Mean** | | **Std Dev** | **95% CL Std Dev** | |
| **0** |  | 0.7015 | 0.6646 | 0.7384 | 0.1659 | 0.1435 | 0.1965 |
| **1** |  | 0.5880 | 0.5504 | 0.6256 | 0.1543 | 0.1319 | 0.1860 |
| **Diff (1-2)** | **Pooled** | 0.1135 | 0.0609 | 0.1661 | 0.1607 | 0.1441 | 0.1816 |
| **Diff (1-2)** | **Satterthwaite** | 0.1135 | 0.0612 | 0.1658 |  |  |  |

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| **Method** | **Variances** | **DF** | **t Value** | **Pr > |t|** |
| **Pooled** | Equal | 145 | 4.27 | <.0001 |
| **Satterthwaite** | Unequal | 143.37 | 4.29 | <.0001 |

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| **Equality of Variances** | | | | |
| **Method** | **Num DF** | **Den DF** | **F Value** | **Pr > F** |
| **Folded F** | 79 | 66 | 1.16 | 0.5473 |

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| **Treatment** | **Method** | **N** | **Mean** | **Std Dev** | **Std Err** | **Minimum** | **Maximum** |
| **0** |  | 61 | 0.6811 | 0.1769 | 0.0226 | 0.3628 | 0.9285 |
| **1** |  | 33 | 0.6223 | 0.1519 | 0.0264 | 0.4080 | 0.9471 |
| **Diff (1-2)** | **Pooled** |  | 0.0589 | 0.1686 | 0.0364 |  |  |
| **Diff (1-2)** | **Satterthwaite** |  | 0.0589 |  | 0.0348 |  |  |

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| **Treatment** | **Method** | **Mean** | **95% CL Mean** | | **Std Dev** | **95% CL Std Dev** | |
| **0** |  | 0.6811 | 0.6358 | 0.7265 | 0.1769 | 0.1501 | 0.2154 |
| **1** |  | 0.6223 | 0.5684 | 0.6762 | 0.1519 | 0.1222 | 0.2009 |
| **Diff (1-2)** | **Pooled** | 0.0589 | -0.0135 | 0.1312 | 0.1686 | 0.1474 | 0.1971 |
| **Diff (1-2)** | **Satterthwaite** | 0.0589 | -0.0105 | 0.1282 |  |  |  |

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| **Method** | **Variances** | **DF** | **t Value** | **Pr > |t|** |
| **Pooled** | Equal | 92 | 1.62 | 0.1097 |
| **Satterthwaite** | Unequal | 74.725 | 1.69 | 0.0952 |

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| **Equality of Variances** | | | | |
| **Method** | **Num DF** | **Den DF** | **F Value** | **Pr > F** |
| **Folded F** | 60 | 32 | 1.36 | 0.3522 |

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| **Treatment** | **Method** | **N** | **Mean** | **Std Dev** | **Std Err** | **Minimum** | **Maximum** |
| **0** |  | 24 | 0.7066 | 0.1566 | 0.0320 | 0.4159 | 0.9327 |
| **1** |  | 35 | 0.6505 | 0.1768 | 0.0299 | 0.3234 | 1.0405 |
| **Diff (1-2)** | **Pooled** |  | 0.0561 | 0.1690 | 0.0448 |  |  |
| **Diff (1-2)** | **Satterthwaite** |  | 0.0561 |  | 0.0438 |  |  |

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| **Treatment** | **Method** | **Mean** | **95% CL Mean** | | **Std Dev** | **95% CL Std Dev** | |
| **0** |  | 0.7066 | 0.6405 | 0.7728 | 0.1566 | 0.1217 | 0.2197 |
| **1** |  | 0.6505 | 0.5897 | 0.7112 | 0.1768 | 0.1430 | 0.2317 |
| **Diff (1-2)** | **Pooled** | 0.0561 | -0.0335 | 0.1458 | 0.1690 | 0.1429 | 0.2069 |
| **Diff (1-2)** | **Satterthwaite** | 0.0561 | -0.0316 | 0.1439 |  |  |  |

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| **Method** | **Variances** | **DF** | **t Value** | **Pr > |t|** |
| **Pooled** | Equal | 57 | 1.25 | 0.2151 |
| **Satterthwaite** | Unequal | 53.253 | 1.28 | 0.2052 |

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| **Equality of Variances** | | | | |
| **Method** | **Num DF** | **Den DF** | **F Value** | **Pr > F** |
| **Folded F** | 34 | 23 | 1.27 | 0.5490 |

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| **Treatment** | **Method** | **N** | **Mean** | **Std Dev** | **Std Err** | **Minimum** | **Maximum** |
| **0** |  | 13 | 0.6163 | 0.1820 | 0.0505 | 0.3930 | 0.9709 |
| **1** |  | 6 | 0.6571 | 0.1987 | 0.0811 | 0.3355 | 0.8122 |
| **Diff (1-2)** | **Pooled** |  | -0.0408 | 0.1871 | 0.0923 |  |  |
| **Diff (1-2)** | **Satterthwaite** |  | -0.0408 |  | 0.0956 |  |  |

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| **Treatment** | **Method** | **Mean** | **95% CL Mean** | | **Std Dev** | **95% CL Std Dev** | |
| **0** |  | 0.6163 | 0.5063 | 0.7263 | 0.1820 | 0.1305 | 0.3005 |
| **1** |  | 0.6571 | 0.4486 | 0.8657 | 0.1987 | 0.1240 | 0.4874 |
| **Diff (1-2)** | **Pooled** | -0.0408 | -0.2356 | 0.1540 | 0.1871 | 0.1404 | 0.2805 |
| **Diff (1-2)** | **Satterthwaite** | -0.0408 | -0.2568 | 0.1751 |  |  |  |

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| **Method** | **Variances** | **DF** | **t Value** | **Pr > |t|** |
| **Pooled** | Equal | 17 | -0.44 | 0.6640 |
| **Satterthwaite** | Unequal | 9.0561 | -0.43 | 0.6792 |

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| **Equality of Variances** | | | | |
| **Method** | **Num DF** | **Den DF** | **F Value** | **Pr > F** |
| **Folded F** | 5 | 12 | 1.19 | 0.7387 |

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| **Treatment** | **Method** | **N** | **Mean** | **Std Dev** | **Std Err** | **Minimum** | **Maximum** |
| **0** |  | 5 | 0.6783 | 0.1486 | 0.0665 | 0.5045 | 0.8142 |
| **1** |  | 3 | 0.7697 | 0.0965 | 0.0557 | 0.6884 | 0.8763 |
| **Diff (1-2)** | **Pooled** |  | -0.0914 | 0.1335 | 0.0975 |  |  |
| **Diff (1-2)** | **Satterthwaite** |  | -0.0914 |  | 0.0867 |  |  |

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| **Treatment** | **Method** | **Mean** | **95% CL Mean** | | **Std Dev** | **95% CL Std Dev** | |
| **0** |  | 0.6783 | 0.4938 | 0.8628 | 0.1486 | 0.0890 | 0.4270 |
| **1** |  | 0.7697 | 0.5301 | 1.0093 | 0.0965 | 0.0502 | 0.6062 |
| **Diff (1-2)** | **Pooled** | -0.0914 | -0.3299 | 0.1472 | 0.1335 | 0.0860 | 0.2940 |
| **Diff (1-2)** | **Satterthwaite** | -0.0914 | -0.3050 | 0.1222 |  |  |  |

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| **Method** | **Variances** | **DF** | **t Value** | **Pr > |t|** |
| **Pooled** | Equal | 6 | -0.94 | 0.3847 |
| **Satterthwaite** | Unequal | 5.8351 | -1.05 | 0.3335 |

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| **Equality of Variances** | | | | |
| **Method** | **Num DF** | **Den DF** | **F Value** | **Pr > F** |
| **Folded F** | 4 | 2 | 2.37 | 0.6355 |

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| **Treatment** | **Method** | **N** | **Mean** | **Std Dev** | **Std Err** | **Minimum** | **Maximum** |
| **0** |  | 1 | 0.8357 | . | . | 0.8357 | 0.8357 |
| **1** |  | 1 | 0.6833 | . | . | 0.6833 | 0.6833 |
| **Diff (1-2)** | **Pooled** |  | . | . | . |  |  |
| **Diff (1-2)** | **Satterthwaite** |  | . |  | . |  |  |

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| **Treatment** | **Method** | **Mean** | **95% CL Mean** | | **Std Dev** | **95% CL Std Dev** | |
| **0** |  | 0.8357 | . | . | . | . | . |
| **1** |  | 0.6833 | . | . | . | . | . |
| **Diff (1-2)** | **Pooled** | . | . | . | . | . | . |
| **Diff (1-2)** | **Satterthwaite** | . | . | . |  |  |  |

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| --- | --- | --- | --- | --- |
| **Method** | **Variances** | **DF** | **t Value** | **Pr > |t|** |
| **Pooled** | Equal | 0 | . | . |
| **Satterthwaite** | Unequal | . | . | . |

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| **Equality of Variances** | | | | |
| **Method** | **Num DF** | **Den DF** | **F Value** | **Pr > F** |
| **Folded F** | 0 | 0 | . | . |

The p-value for Smoke and Alcohol for different consumption is more than 0.05 . Therefore we cannot reject the null. So we can say that smoke and alcohol in control and treatment groups are perfectly randomized. The overall difference between the control and treatment is almost zero as we expect it .