

Question 1

A)

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 |

B)

| 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 |

C)

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 |

D)

| | | State | | | | | | | | | | | | | |
|------|-----------|---------|--------|--------|------|------|------|------|--------|--------|--------|------|------|------|------|
| | | Alabama | | | | | | | Alaska | | | | | | |
| | | Mean | Median | StdDev | Min | Max | P25 | P75 | Mean | Median | StdDev | Min | Max | P25 | P75 |
| Year | | | | | | | | | | | | | | | |
| 2002 | Magnitude | . | . | . | . | . | . | . | 6.63 | 6.70 | 1.30 | 5.30 | 7.90 | 5.30 | 7.90 |
| 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 | . | . | . | . | . | . | . | . | . | . | . | . | . | . |

| | | State | | | | | | | | | | | | | |
|------|-----------|----------|--------|--------|------|------|------|------|------------|--------|--------|------|------|------|------|
| | | Arkansas | | | | | | | California | | | | | | |
| | | Mean | Median | StdDev | Min | Max | P25 | P75 | Mean | Median | StdDev | Min | Max | P25 | P75 |
| Year | | | | | | | | | | | | | | | |
| 2002 | Magnitude | . | . | . | . | . | . | . | 4.52 | 4.70 | 0.64 | 3.60 | 5.30 | 3.90 | 4.90 |
| 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 |

Homework 2

| | | | | | | | | | | | | | | | |
|------|-----------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 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 | . | . | . | . | . | . | . |

| | | 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 | . | . | . | . | . | . | . |

[illegible]

[illegible][illegible][illegible]

[illegible][illegible]

| | | State | | | | | | | | | | | | | |
|------|-----------|----------|--------|--------|------|------|------|------|------|--------|--------|------|------|------|------|
| | | New York | | | | | | | Ohio | | | | | | |
| | | Mean | Median | StdDev | Min | Max | P25 | P75 | Mean | Median | StdDev | Min | Max | P25 | P75 |
| Year | | | | | | | | | | | | | | | |
| 2002 | Magnitude | 4.20 | 4.20 | 1.27 | 3.30 | 5.10 | 3.30 | 5.10 | . | . | . | . | . | . | . |
| 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 |

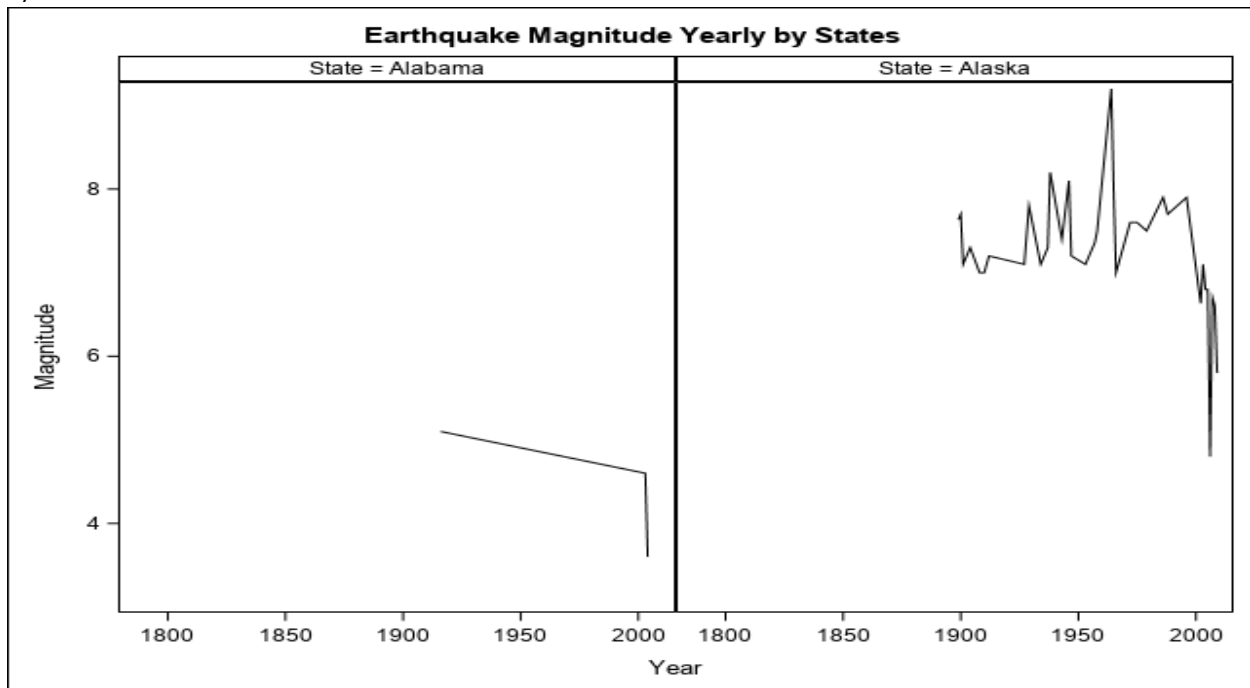
| | | State | | | | | | | | | | | | | |
|------|-----------|----------|--------|--------|------|------|------|------|--------|--------|--------|------|------|------|------|
| | | Oklahoma | | | | | | | Oregon | | | | | | |
| | | Mean | Median | StdDev | Min | Max | P25 | P75 | Mean | Median | StdDev | Min | Max | P25 | P75 |
| Year | | | | | | | | | | | | | | | |
| 2002 | Magnitude | . | . | . | . | . | . | . | 4.50 | 4.50 | . | 4.50 | 4.50 | 4.50 | 4.50 |
| 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 | . | . | . | . | . | . | . |

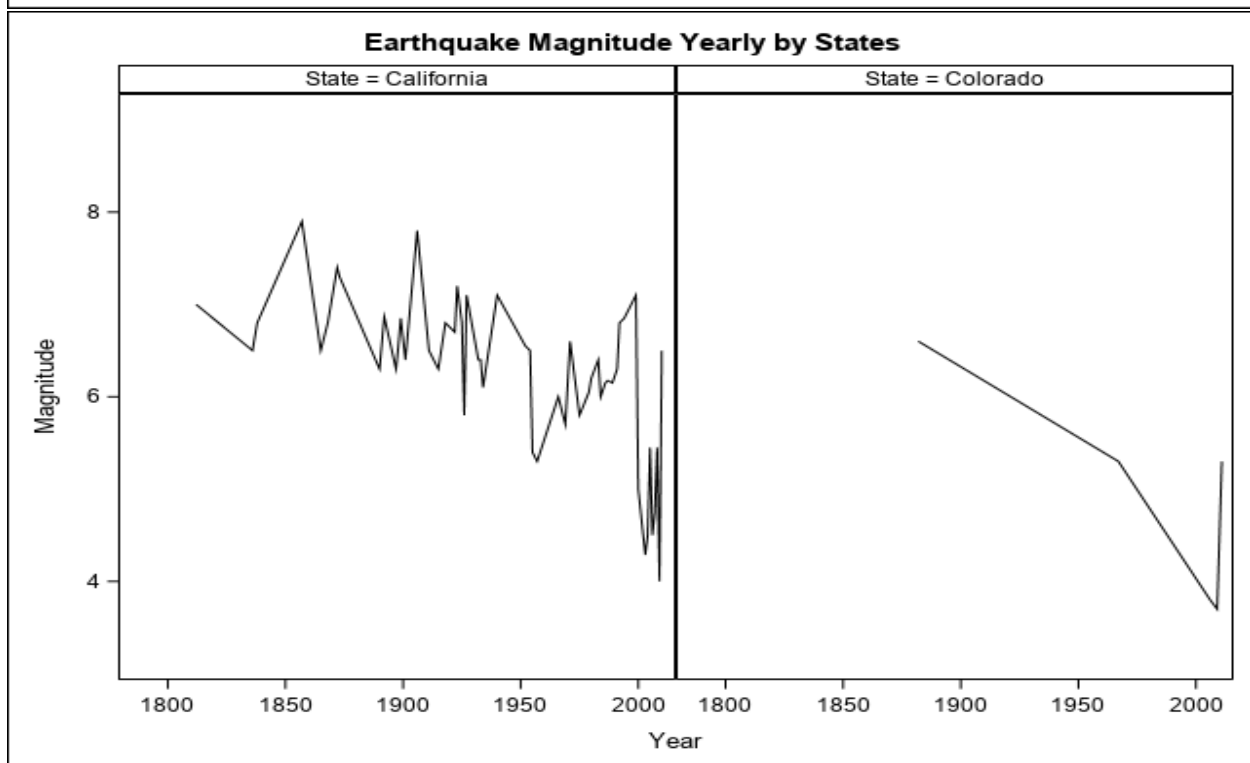
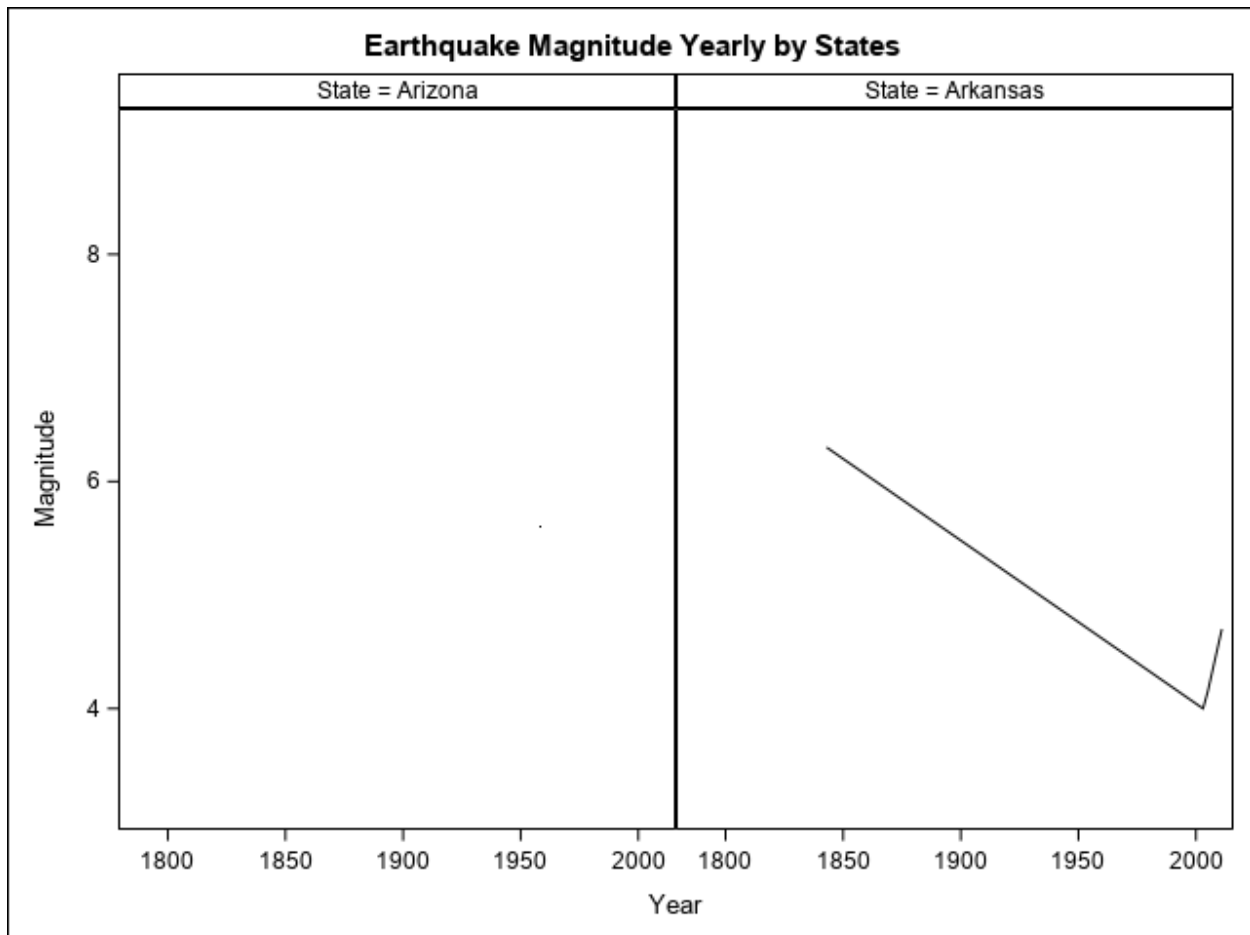
| | | State | | | | | | | | | | | | | |
|------|-----------|----------------|--------|--------|------|------|------|------|--------------|--------|--------|------|------|------|------|
| | | South Carolina | | | | | | | South Dakota | | | | | | |
| | | Mean | Median | StdDev | Min | Max | P25 | P75 | Mean | Median | StdDev | Min | Max | P25 | P75 |
| Year | | | | | | | | | | | | | | | |
| 2002 | Magnitude | 4.40 | 4.40 | . | 4.40 | 4.40 | 4.40 | 4.40 | . | . | . | . | . | . | . |
| 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 | . | . | . | . | . | . | . | . | . | . | . | . | . | . |

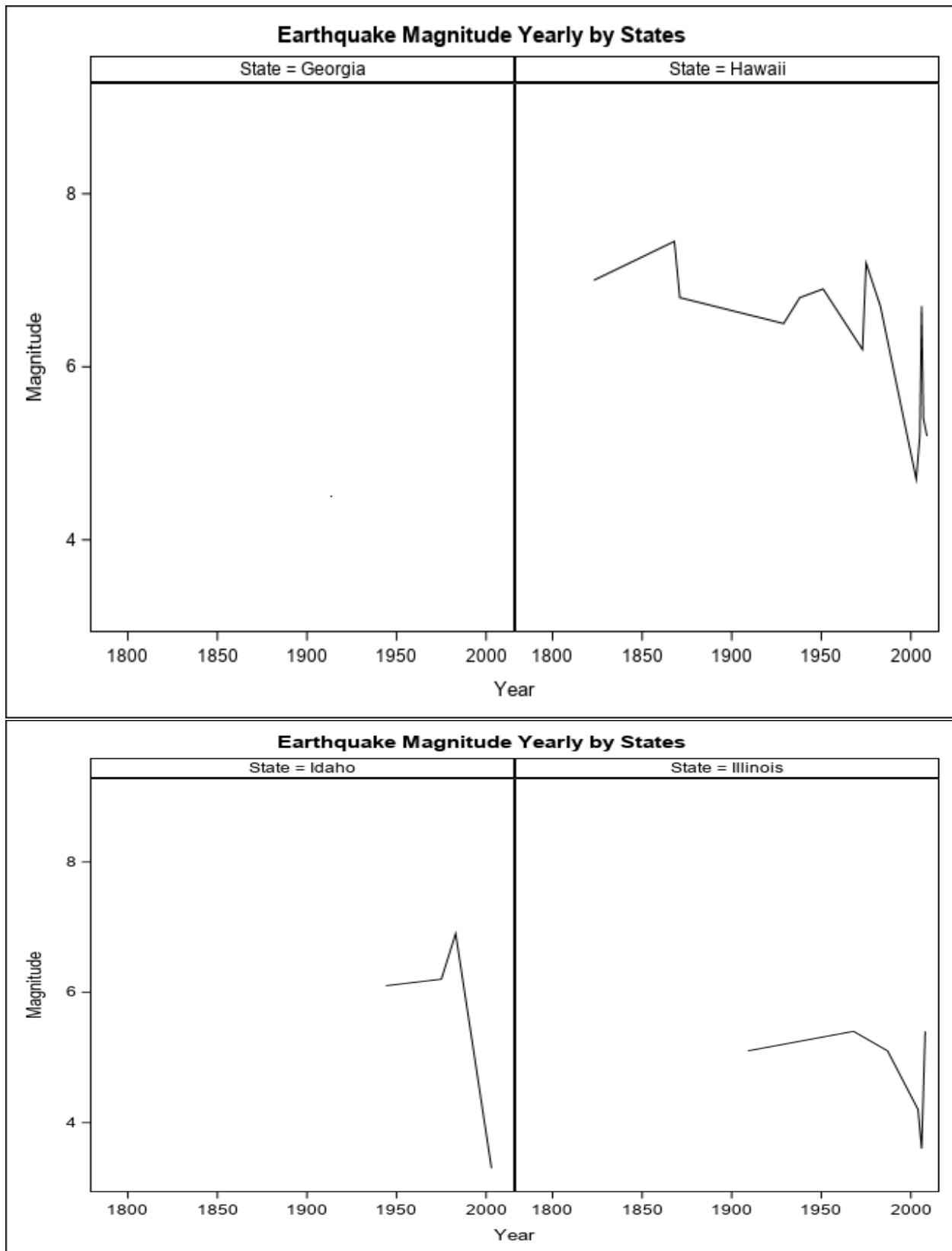
| | | State | | | | | | | | | | | | | |
|------|-----------|----------|--------|--------|------|------|------|------|------------|--------|--------|------|------|------|------|
| | | Virginia | | | | | | | Washington | | | | | | |
| | | Mean | Median | StdDev | Min | Max | P25 | P75 | Mean | Median | StdDev | Min | Max | P25 | P75 |
| Year | | | | | | | | | | | | | | | |
| 2002 | Magnitude | . | . | . | . | . | . | . | 3.90 | 3.90 | 0.28 | 3.70 | 4.10 | 3.70 | 4.10 |
| 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 | . | . | . | . | . | . | . |

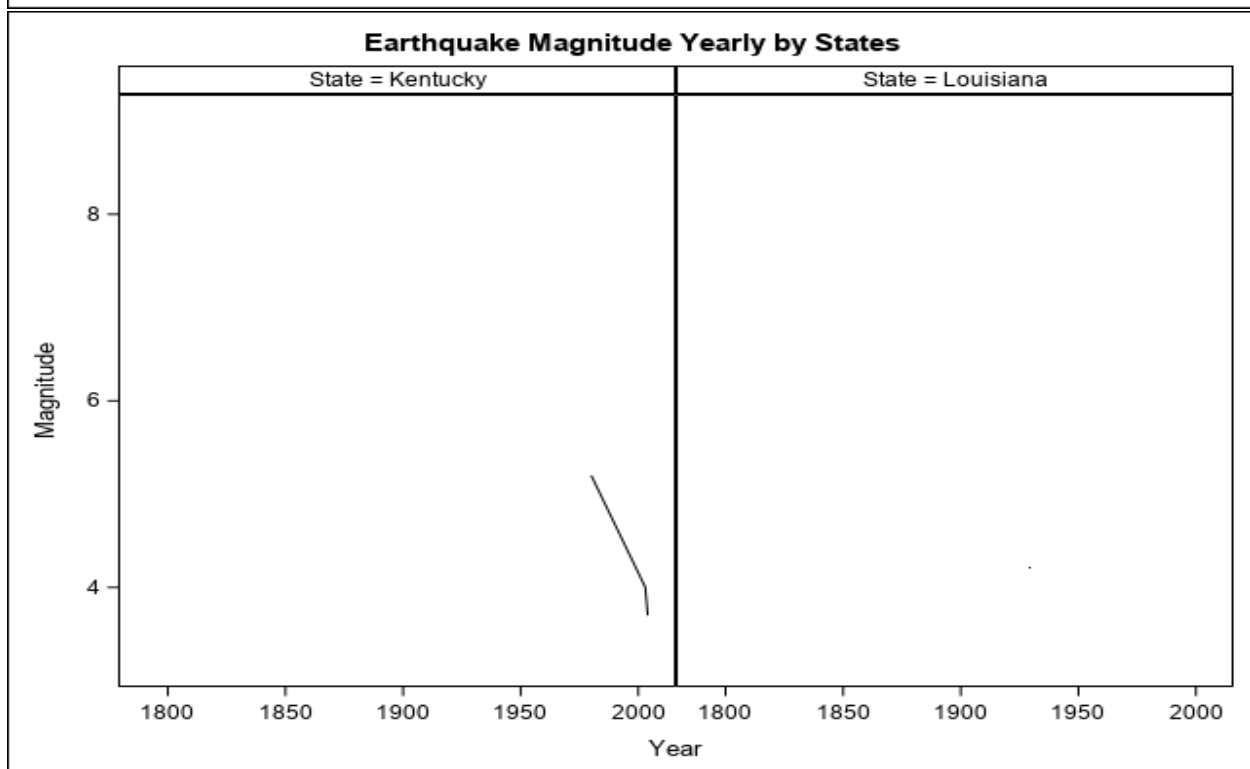
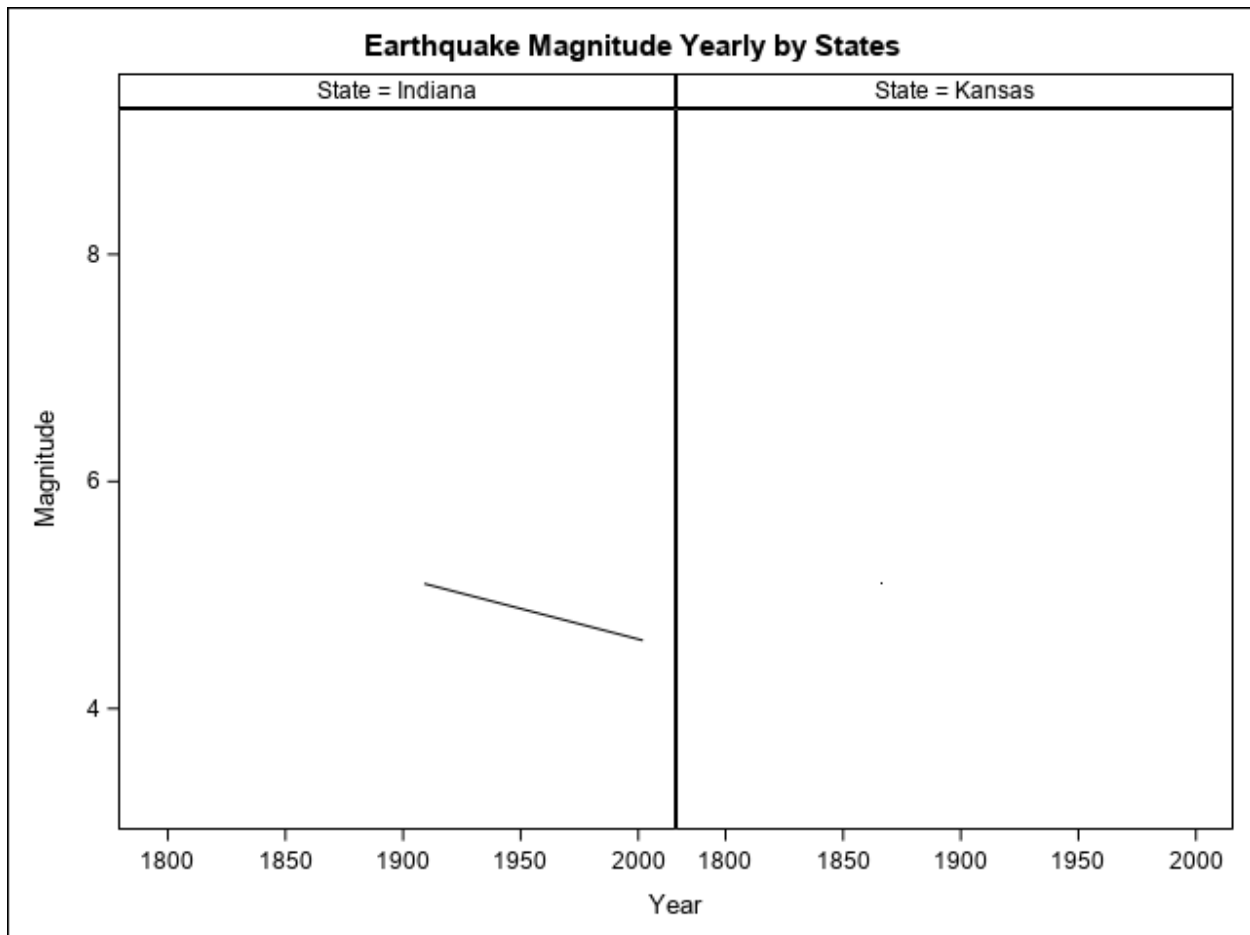
| | | State | | | | | | |
|------|-----------|---------|--------|--------|------|------|------|------|
| | | Wyoming | | | | | | |
| | | Mean | Median | StdDev | Min | Max | P25 | P75 |
| Year | | | | | | | | |
| 2002 | Magnitude | 4.20 | 4.20 | . | 4.20 | 4.20 | 4.20 | 4.20 |
| 2003 | Magnitude | 4.50 | 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 | . | . | . | . | . | . | . |

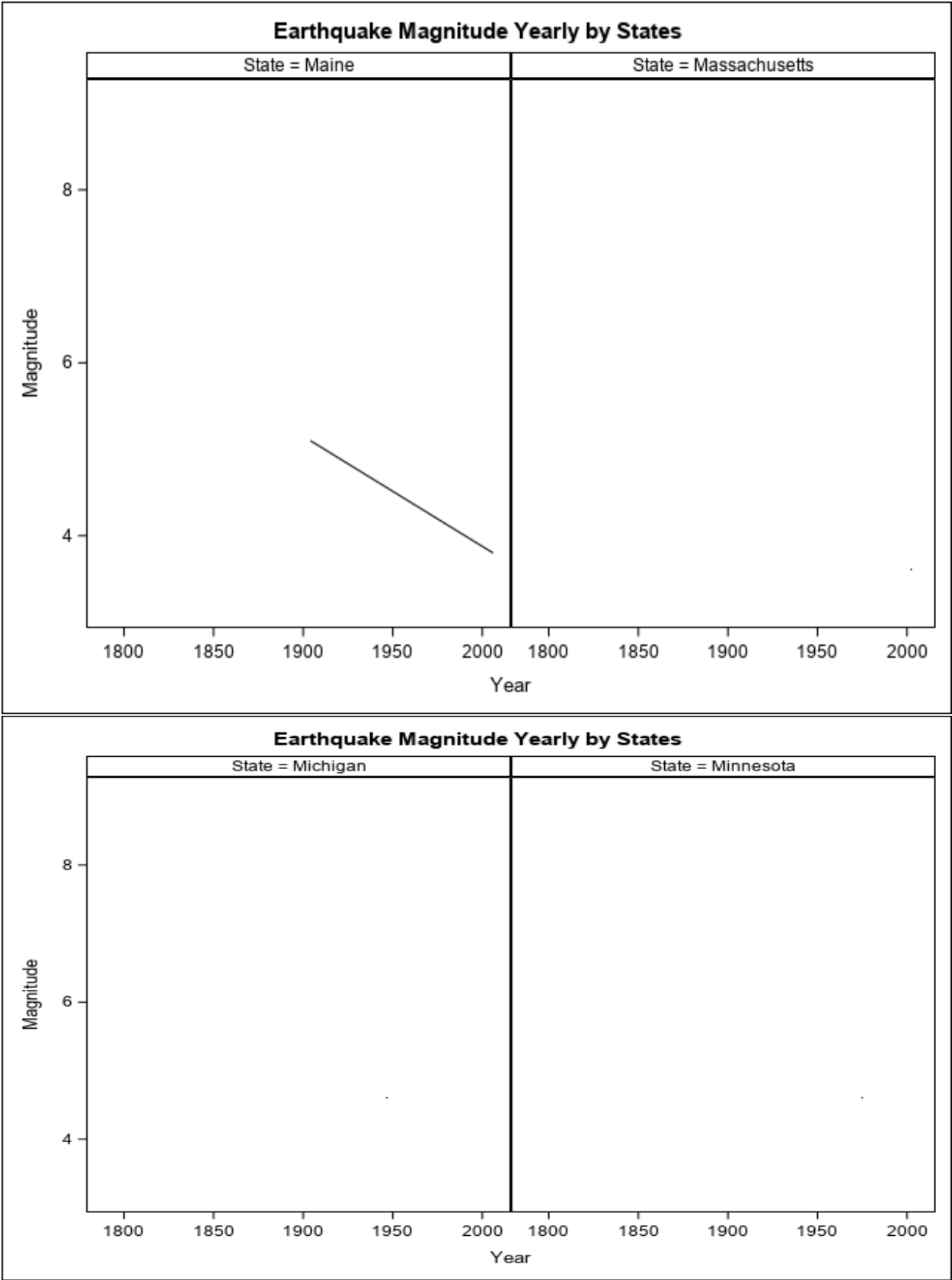
E)

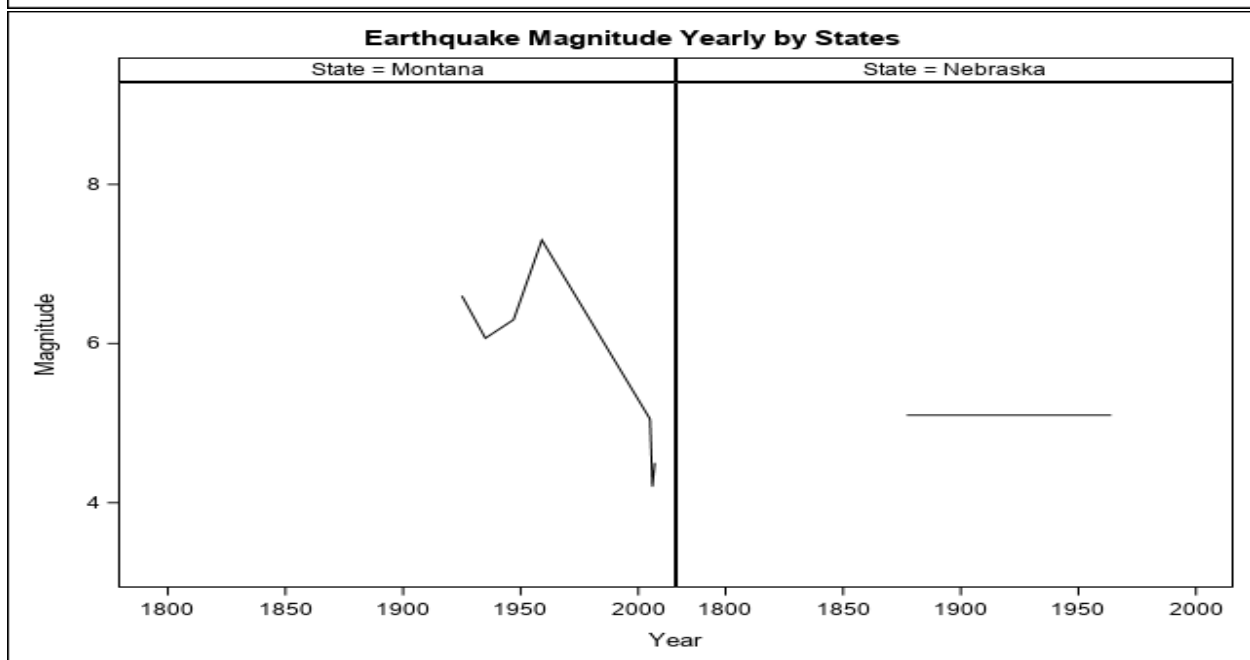
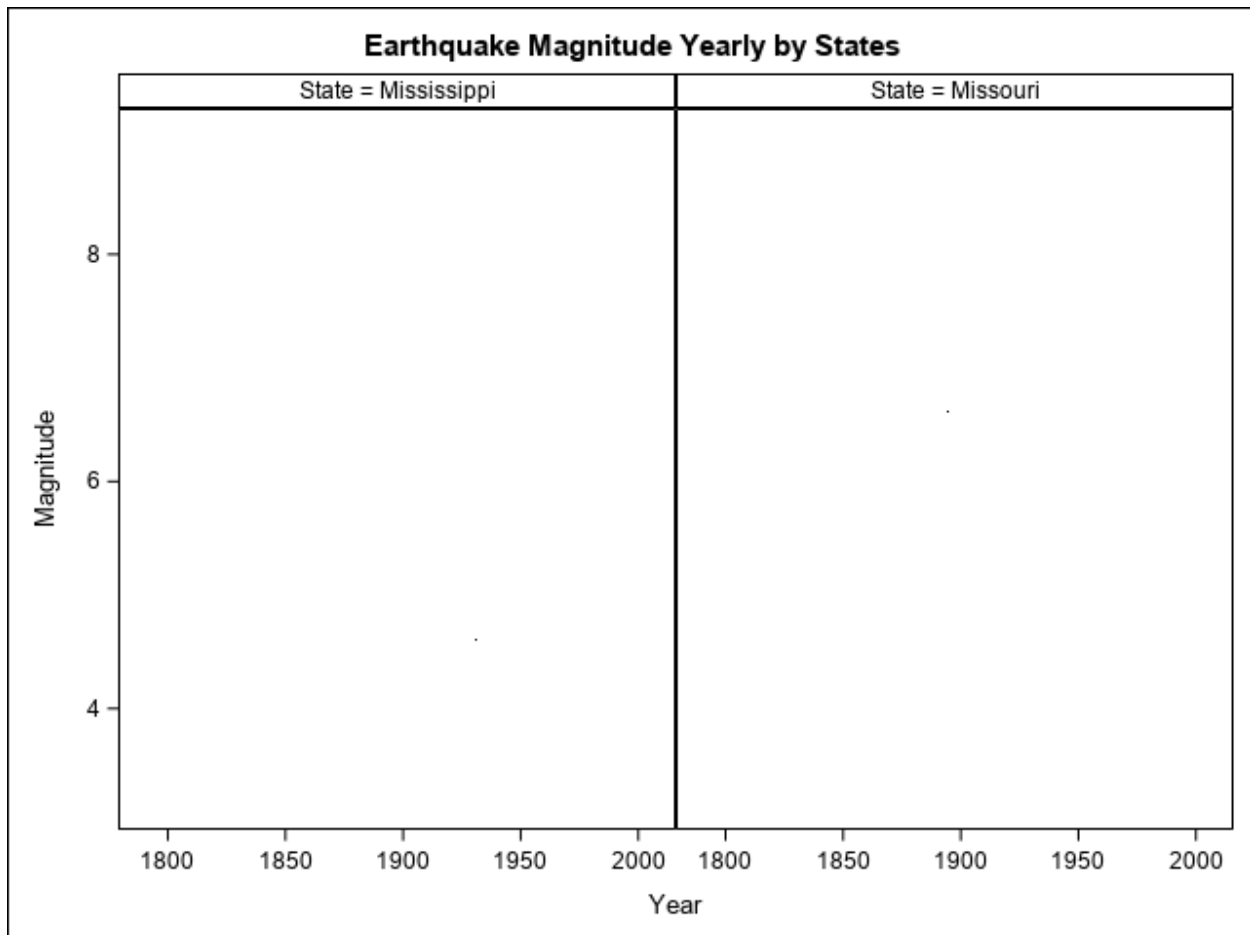


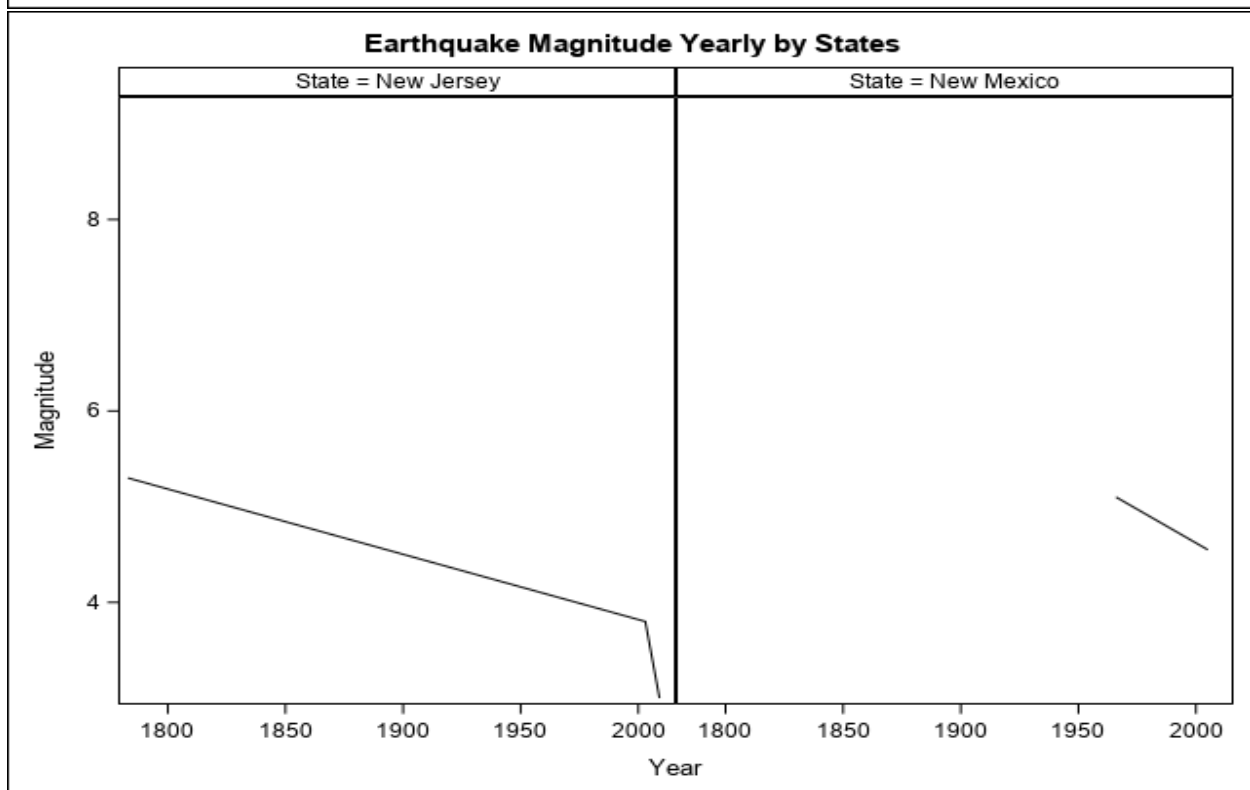
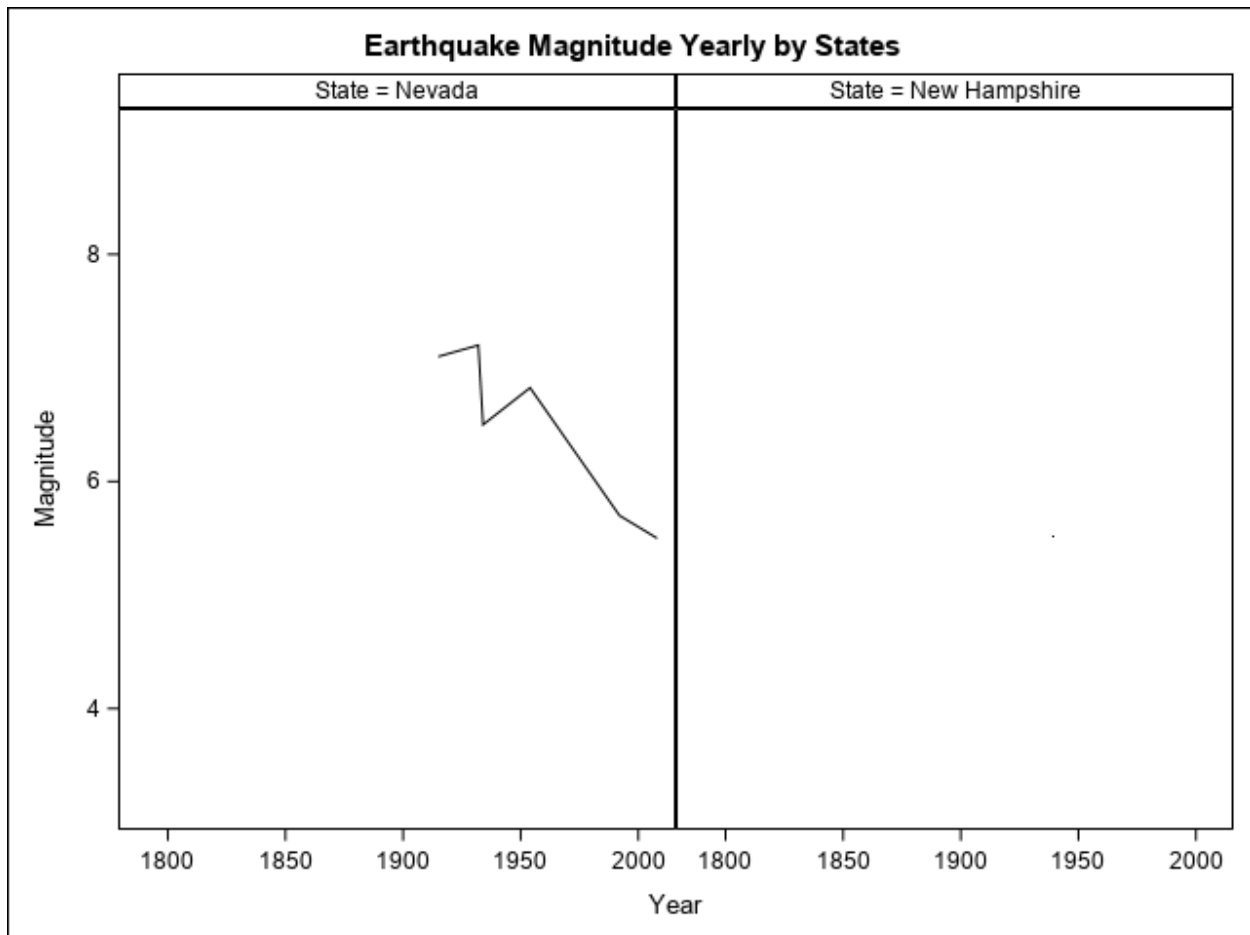


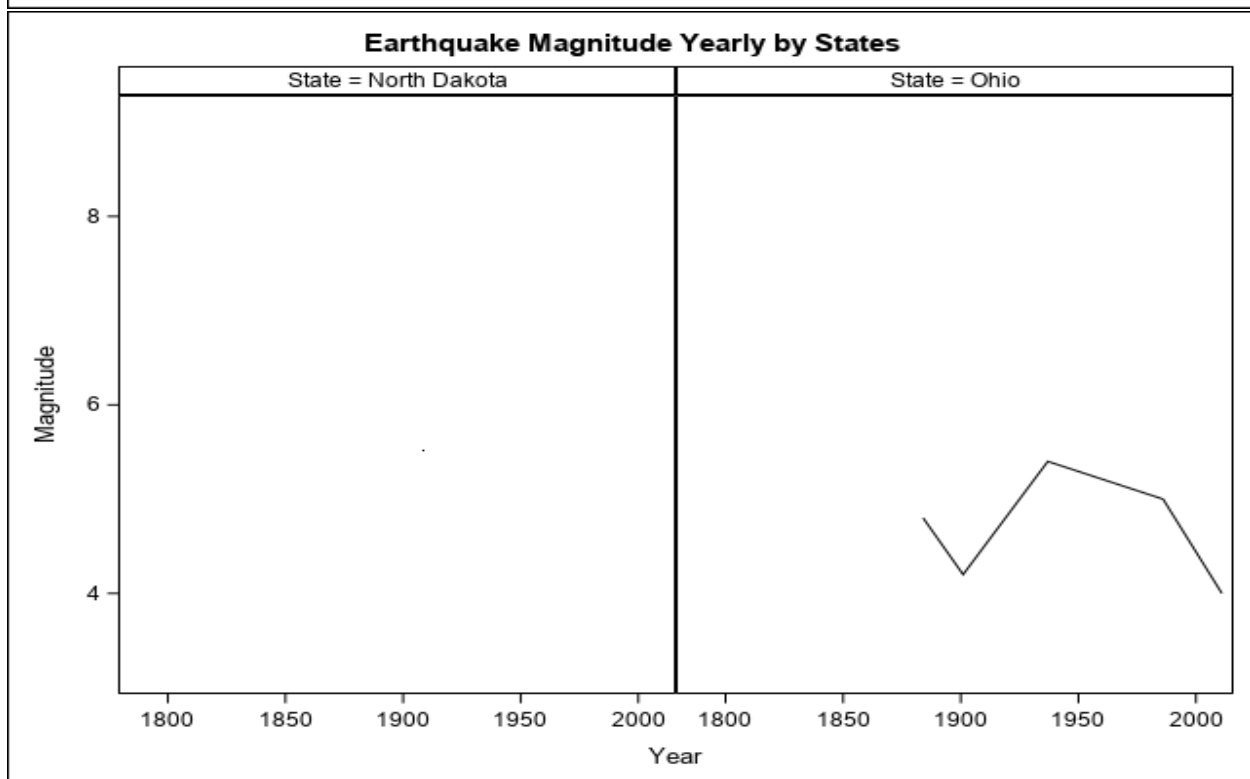
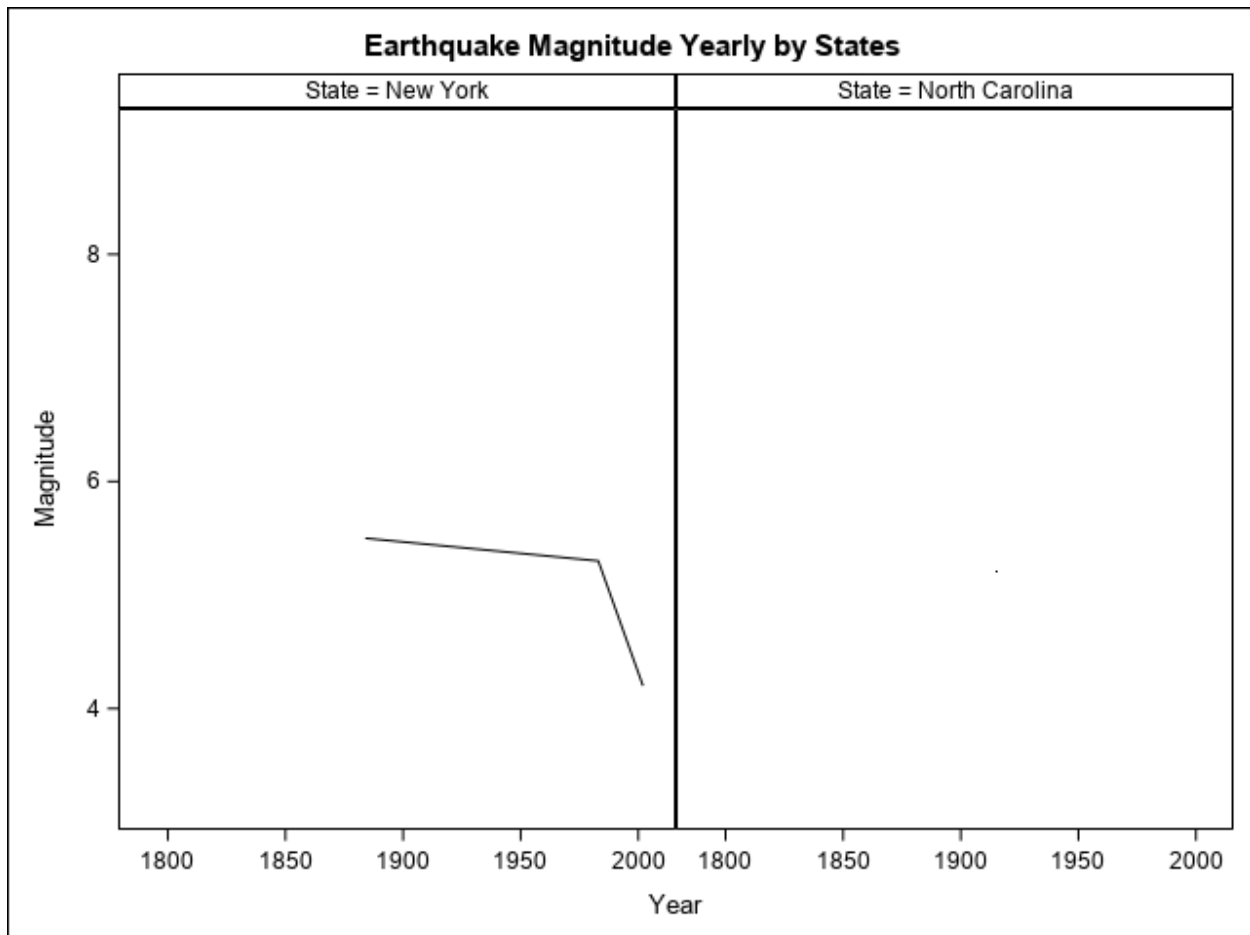


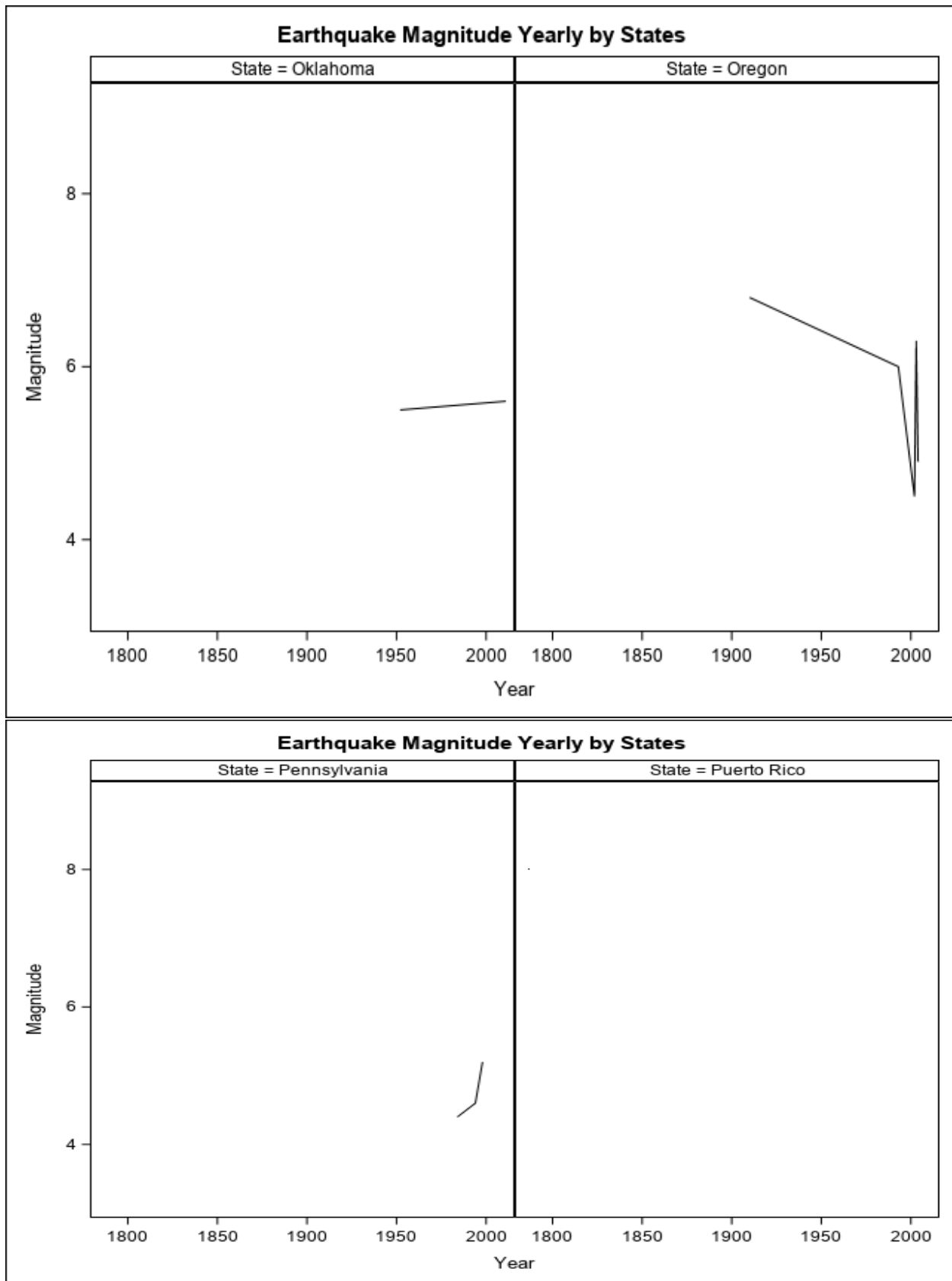


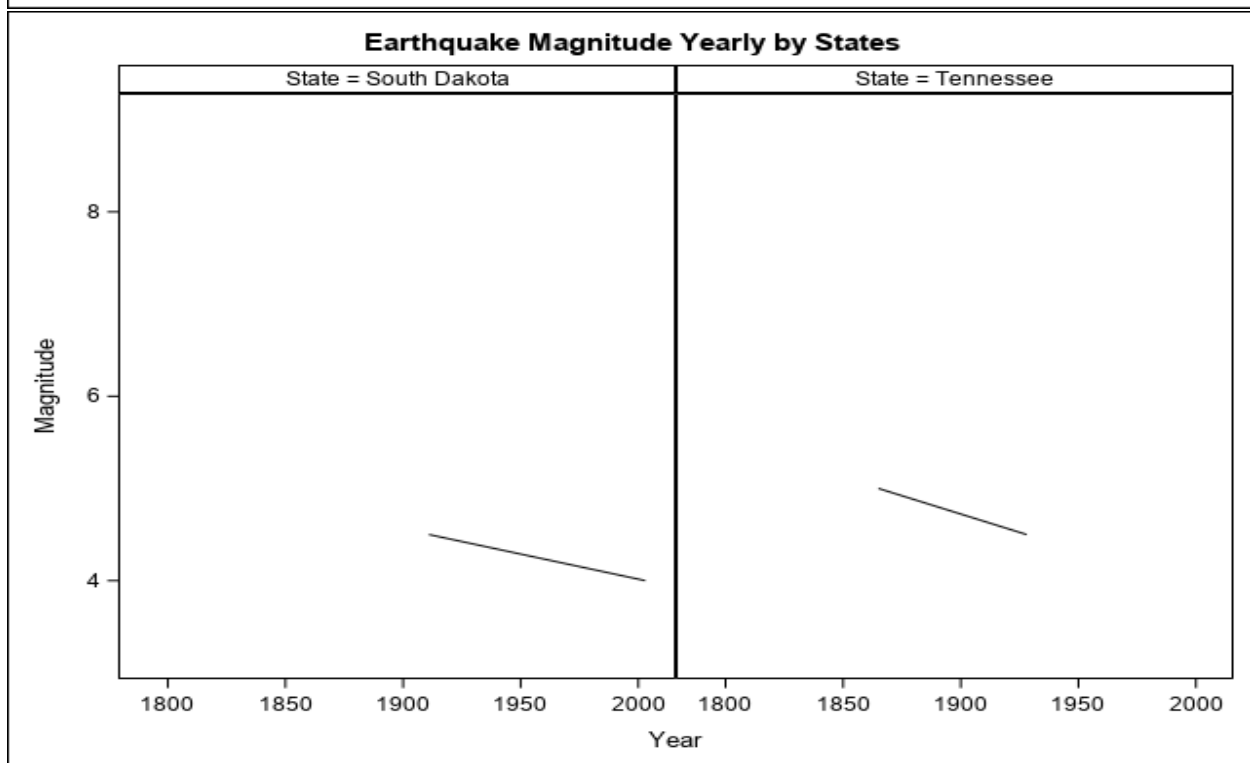
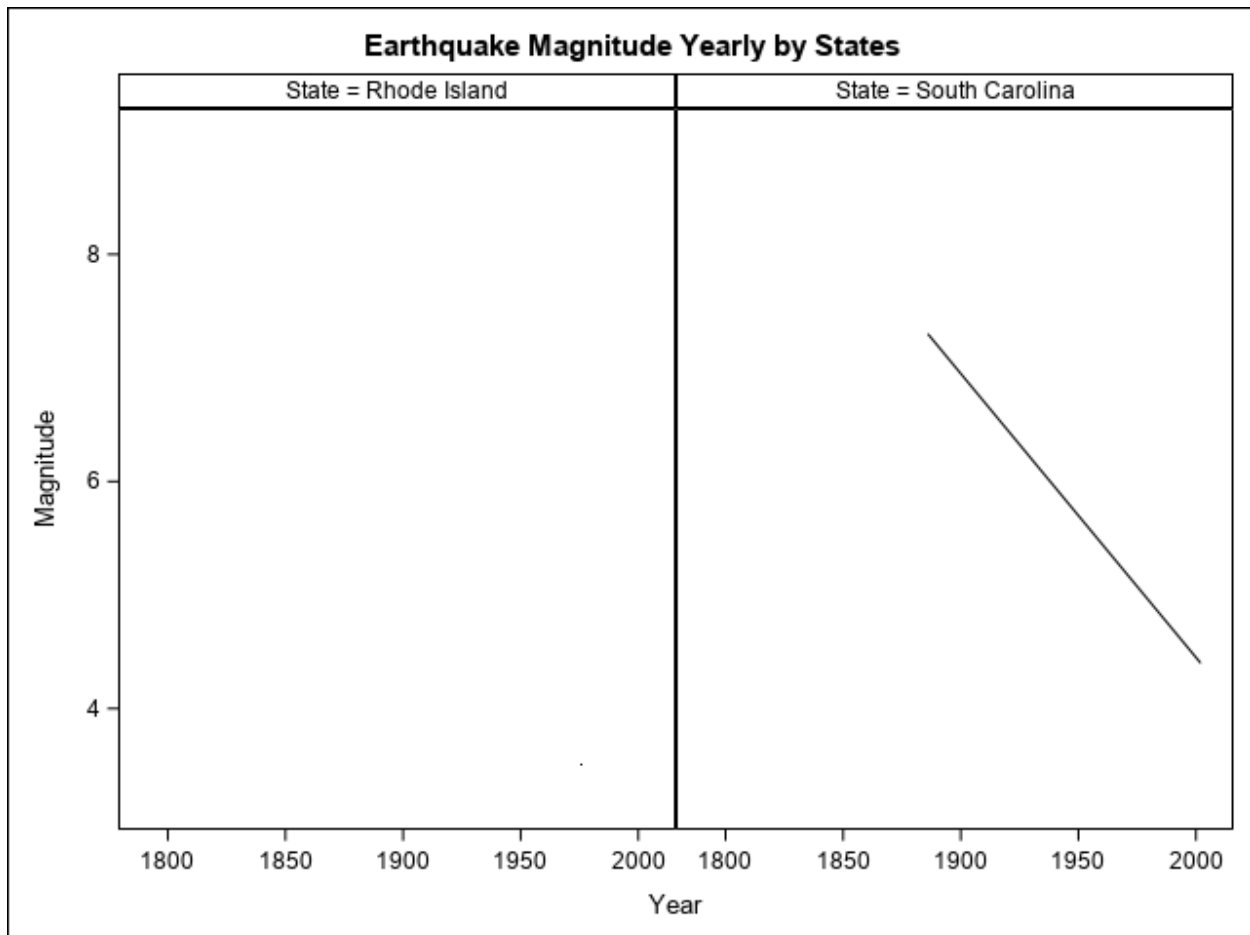


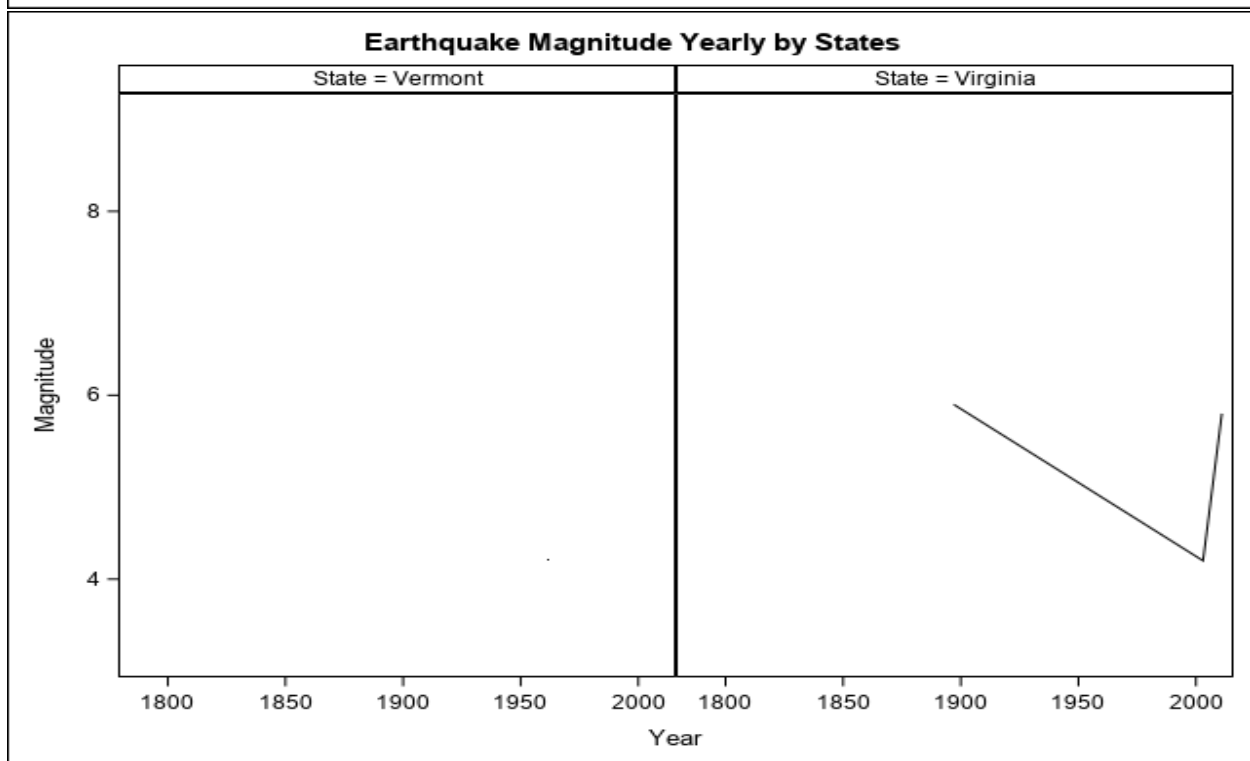
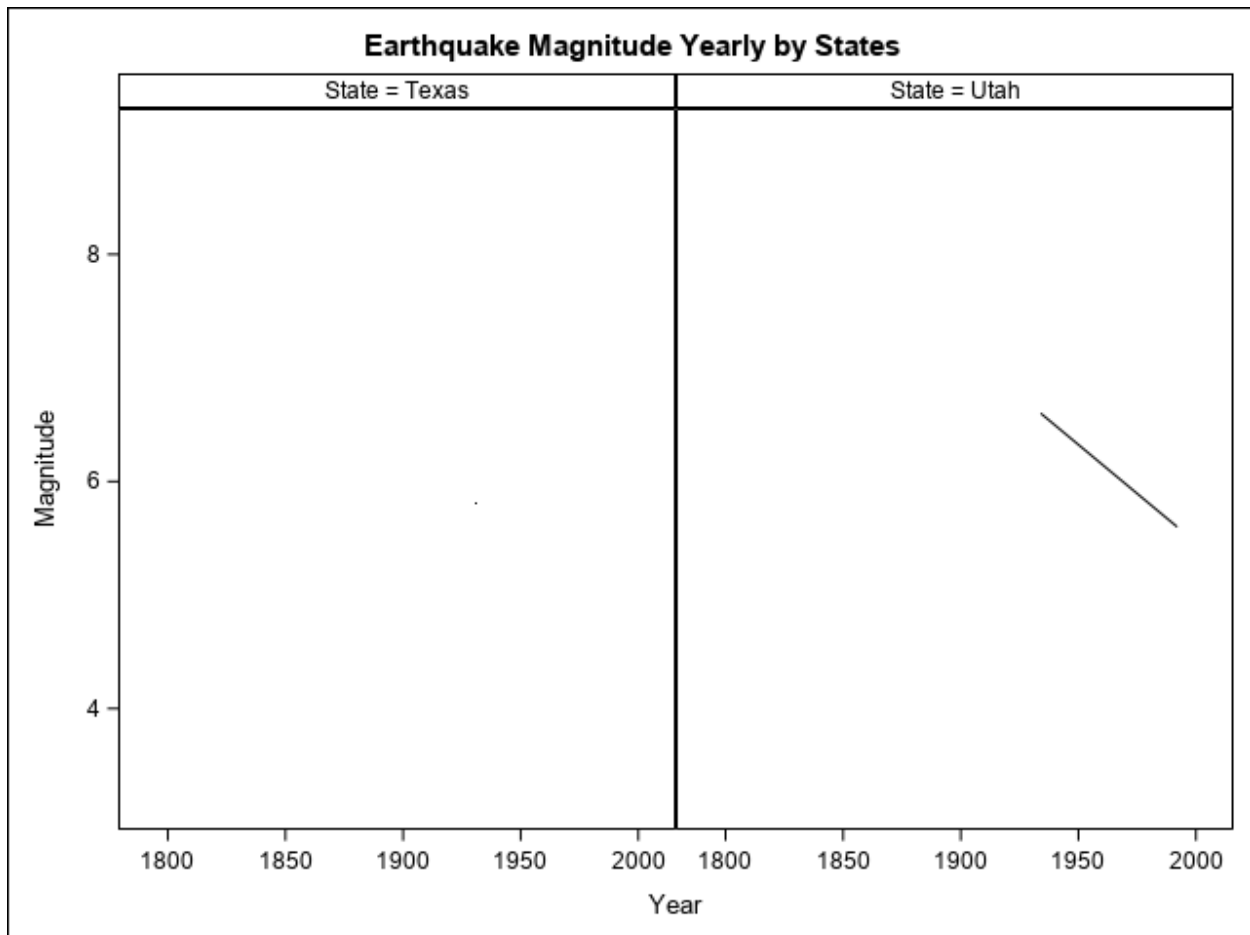


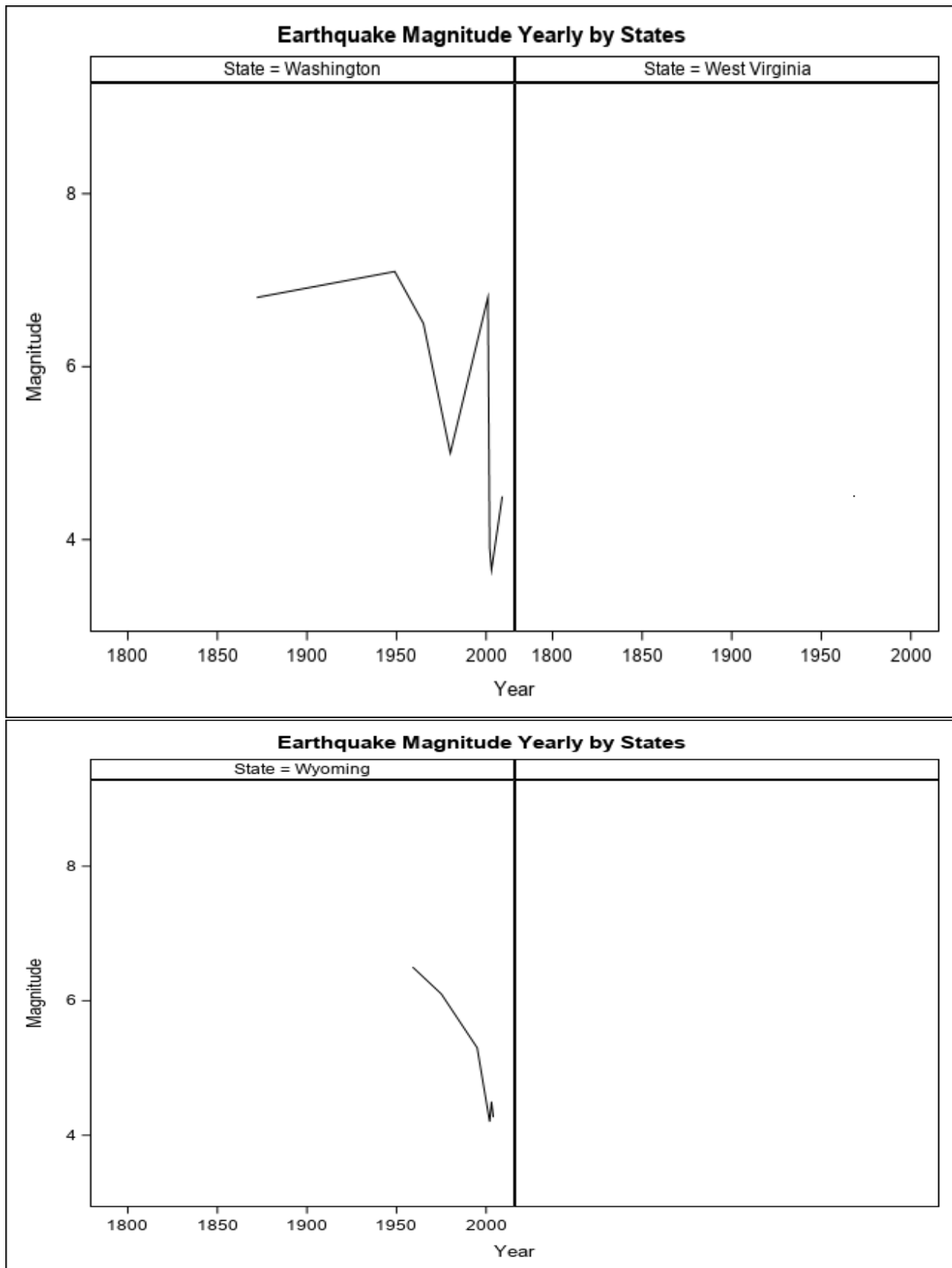












F)

| 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 |

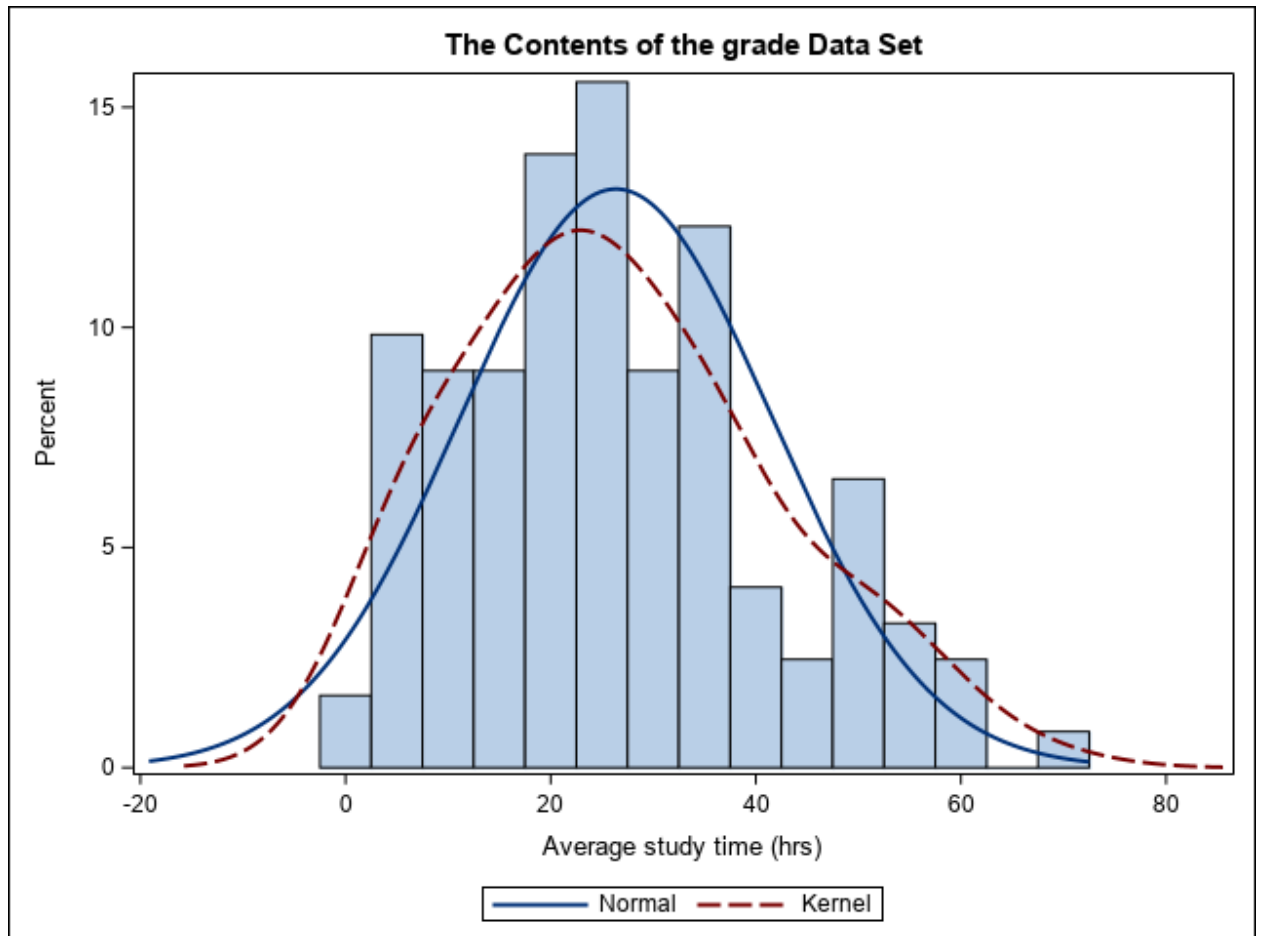
H0 : The average magnitude of earthquakes in California is equal to that of Alaska

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)

A)



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)

| VIEWTABLE: Clasdata.Vite | | | | | | | | | | | | | | | |
|--------------------------|----|-------|--------|-----------|--------|-----|-----|------|-----|-----|---------|-------|--|--|--|
| | ID | Visit | Strata | Treatment | Plaque | HDL | LDL | Trig | SBP | DBP | Alcohol | Smoke | | | |
| 1 | 1 | 0 | 1 | 0 | 0.8073 | 42 | 127 | 149 | 106 | 70 | 1 | 0 | | | |
| 2 | 1 | 1 | 1 | 0 | 0.758 | 44 | 143 | 49 | 131 | 109 | 2 | 0 | | | |
| 3 | 1 | 2 | 1 | 0 | 0.8098 | 40 | 158 | 98 | 136 | 87 | 2 | 0 | | | |
| 4 | 2 | 0 | 1 | 0 | 0.7576 | 39 | 138 | 211 | 157 | 100 | 1 | 6 | | | |
| 5 | 2 | 1 | 1 | 0 | 0.6866 | 46 | 147 | 29 | 154 | 108 | 2 | 6 | | | |
| 6 | 2 | 2 | 1 | 0 | 0.8231 | 53 | 161 | 177 | 65 | 70 | 3 | 6 | | | |
| 7 | 3 | 0 | 1 | 0 | 0.7522 | 53 | 133 | 163 | 169 | 106 | 1 | 0 | | | |
| 8 | 3 | 1 | 1 | 0 | 0.7857 | 36 | 146 | 198 | 172 | 91 | 2 | 0 | | | |
| 9 | 3 | 2 | 1 | 0 | 0.8031 | 39 | 119 | 140 | 140 | 90 | 3 | 0 | | | |
| 10 | 4 | 0 | 1 | 0 | 0.8163 | 46 | 139 | 247 | 142 | 103 | 0 | 0 | | | |
| 11 | 4 | 1 | 1 | 0 | 0.6004 | 46 | 139 | 47 | 131 | 93 | 0 | 0 | | | |
| 12 | 4 | 2 | 1 | 0 | 0.9694 | 40 | 150 | 153 | 164 | 96 | 0 | 0 | | | |
| 13 | 5 | 0 | 1 | 0 | 0.7977 | 47 | 152 | 182 | 163 | 101 | 0 | 3 | | | |
| 14 | 5 | 1 | 1 | 0 | 0.9573 | 45 | 145 | 90 | 73 | 89 | 0 | 5 | | | |
| 15 | 5 | 2 | 1 | 0 | 0.7973 | 41 | 142 | 133 | 150 | 59 | 0 | 0 | | | |
| 16 | 6 | 0 | 1 | 0 | 0.818 | 46 | 147 | 326 | 145 | 101 | 0 | 0 | | | |
| 17 | 6 | 1 | 1 | 0 | 0.8699 | 48 | 154 | 90 | 123 | 74 | 0 | 0 | | | |
| 18 | 6 | 2 | 1 | 0 | 0.8396 | 48 | 138 | 250 | 135 | 88 | 0 | 0 | | | |
| 19 | 7 | 0 | 1 | 0 | 0.8747 | 48 | 136 | 178 | 148 | 98 | 2 | 0 | | | |
| 20 | 7 | 1 | 1 | 0 | 0.9285 | 46 | 150 | 213 | 141 | 108 | 3 | 0 | | | |
| 21 | 7 | 2 | 1 | 0 | 0.7459 | 35 | 120 | 206 | 154 | 85 | 3 | 0 | | | |
| 22 | 8 | 0 | 1 | 0 | 0.8679 | 55 | 142 | 105 | 136 | 87 | 0 | 0 | | | |
| 23 | 8 | 1 | 1 | 0 | 0.7639 | 41 | 154 | 54 | 99 | 112 | 0 | 0 | | | |
| 24 | 8 | 2 | 1 | 0 | 0.8181 | 46 | 159 | 163 | 185 | 83 | 0 | 0 | | | |
| 25 | 9 | 0 | 1 | 0 | 0.8258 | 51 | 167 | 304 | 176 | 99 | 1 | 0 | | | |
| 26 | 9 | 1 | 1 | 0 | 0.8427 | 48 | 135 | 313 | 146 | 91 | 1 | 0 | | | |
| 27 | 9 | 2 | 1 | 0 | 0.7831 | 41 | 112 | 152 | 180 | 75 | 1 | 0 | | | |
| 28 | 10 | 0 | 1 | 0 | 0.748 | 55 | 126 | 202 | 90 | 81 | 0 | 6 | | | |
| 29 | 10 | 1 | 1 | 0 | 0.8058 | 48 | 139 | 276 | 146 | 126 | 0 | 7 | | | |
| 30 | 10 | 2 | 1 | 0 | 0.9249 | 38 | 141 | 47 | 68 | 95 | 0 | 7 | | | |
| 31 | 11 | 0 | 1 | 0 | 0.8798 | 53 | 137 | 169 | 105 | 84 | 0 | 10 | | | |
| 32 | 11 | 1 | 1 | 0 | 0.8043 | 45 | 128 | 81 | 97 | 84 | 0 | 10 | | | |
| 33 | 11 | 2 | 1 | 0 | 0.7729 | 48 | 150 | 205 | 119 | 79 | 0 | 10 | | | |
| 34 | 12 | 0 | 1 | 0 | 0.782 | 46 | 138 | 326 | 143 | 60 | 0 | 0 | | | |

B)

| | | | |
|----------------------------|---------------------------|-----------------------------|------|
| 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 |

C) 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.

D) 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.

E) 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 | | | |

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

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

| 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 | | |

| 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 | | | |

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

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

| 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 | | |

| 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 | | | |

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

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

| 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 | | |

| 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 | | | |

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

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

| 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 | | |

| 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 | | | |

| 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 |

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

| 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 | | |

| 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 | | | |

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

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

| 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 | | |

| 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 | | | |

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

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

| 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 | | |

| 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 | | | |

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

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

| 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 | | |

| 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 | | | |

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

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

| 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 | | |

| 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 | | | |

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

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

| 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 | | |

| 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 | | | |

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

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

| 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 | | |

| 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 | | | |

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

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

| 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 | | |

| 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 | | | |

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

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

| 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 | | |

| 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 | | | |

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

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

| 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 | | |

| 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 | | | |

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

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

| 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 | | |

| 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 | | | |

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

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

| 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 | | . | | |

| 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 | . | . | | | |

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

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

| 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 | | |

| 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 | | | |

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

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

Alcohol

| 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 | | |

| 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 | | | |

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

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

| 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 | | |

| 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 | | | |

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

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

| 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 | | |

| 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 | | | |

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

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

| 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 | | |

| 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 | | | |

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

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

| 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 | | |

| 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 | | | |

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

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

| 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 | | |

| 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 | | | |

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

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

| 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 | | |

| 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 | | | |

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

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

| 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 | | . | | . | | |

| 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 | | . | . | | | |

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

| 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 .