| 1. R 2. M 3. St 4. C 5. C 6. M 7. C | res of change in y_i $(i = 1,, k)^a$ ange Hean-over-time tandard deviation (SD) Coefficient of variation (CV) Change Hean change per time unit Change relative to the first score Change relative to the mean over time thope of the linear model $y_i = a + bt_i + \epsilon_i$ | Formula |
|--|---|--|
| 1. R 2. M 3. St 4. C 5. C 6. M 7. C | Lange Hean-over-time tandard deviation (SD) Coefficient of variation (CV) Change Hean change per time unit Change relative to the first score Change relative to the mean over time Hope of the linear model $y_i = a + bt_i + \epsilon_i$ | $\bar{y} = \frac{1}{k} \sum_{i=1}^{k} y_{i}$ $s_{y} = \sqrt{\frac{1}{k-1} (y_{i} - \bar{y})^{2}}$ $100 \times \frac{s_{y}}{\bar{y}}$ $y_{k} - y_{1}$ $\frac{y_{k} - y_{1}}{t_{k} - t_{1} + 1}$ $\frac{y_{k} - y_{1}}{y_{k} - y_{1}}$ $\frac{y_{1}}{\bar{y}}$ |
| 3. St 4. C 5. C 6. M 7. C | tandard deviation (SD) Coefficient of variation (CV) Change Hean change per time unit Change relative to the first score Change relative to the mean over time Hope of the linear model $y_i = a + bt_i + \epsilon_i$ | $s_{y} = \sqrt{\frac{1}{k-1}(y_{i} - \bar{y})^{2}}$ $100 \times \frac{s_{y}}{\bar{y}}$ $y_{k} - y_{1}$ $\frac{y_{k} - y_{1}}{t_{k} - t_{1} + 1}$ $\frac{y_{k} - y_{1}}{y_{1}}$ $\frac{y_{1}}{\bar{y}}$ |
| C C M C | Coefficient of variation (CV) Change Hean change per time unit Change relative to the first score Change relative to the mean over time Hope of the linear model $y_i = a + bt_i + \epsilon_i$ | $s_{y} = \sqrt{\frac{1}{k-1}(y_{i} - \bar{y})^{2}}$ $100 \times \frac{s_{y}}{\bar{y}}$ $y_{k} - y_{1}$ $\frac{y_{k} - y_{1}}{t_{k} - t_{1} + 1}$ $\frac{y_{k} - y_{1}}{y_{1}}$ $\frac{y_{1}}{\bar{y}}$ |
| 5. C6. M7. C | Change Hean change per time unit Change relative to the first score Change relative to the mean over time Hope of the linear model $y_i = a + bt_i + \epsilon_i$ | $100 \times \frac{y_k}{\bar{y}}$ $y_k - y_1$ $\frac{y_k - y_1}{t_k - t_1 + 1}$ $\frac{y_k - y_1}{y_k - y_1}$ $\frac{y_1}{\bar{y}}$ |
| 6. M 7. C | Hean change per time unit Change relative to the first score Change relative to the mean over time Hope of the linear model $y_i = a + bt_i + \epsilon_i$ | $rac{y_k - y_1}{t_k - t_1 + 1} \ rac{y_k - y_1}{y_k - y_1} \ rac{y_1}{ar{y}}$ |
| 7. C | Thange relative to the first score Thange relative to the mean over time lope of the linear model $y_i = a + bt_i + \epsilon_i$ | $\frac{\overline{y_1}}{\underline{y_k - y_1}}$ \overline{y} |
| | Thange relative to the mean over time lope of the linear model $y_i = a + bt_i + \epsilon_i$ | $\frac{\overline{y_1}}{\underline{y_k - y_1}}$ \overline{y} |
| - 0 | lope of the linear model $y_i = a + bt_i + \epsilon_i$ | $b = \frac{\sum_{i=1}^{k} (y_i - \bar{y})(t_i - \bar{t})}{\sum_{i=1}^{k} (y_i - \bar{y})^2}$ |
| 8. C | | $b = \frac{\sum_{i=1}^{k} (y_i - \bar{y})(t_i - \bar{t})}{\sum_{i=1}^{k} (t_i - \bar{t})^2}$ |
| 9. Sl | | $\sum_{i=1}^{n} (t_i - t)^2$ |
| | ² :Proportion of variance explained by the linear model $t_i = a + bt_i + \epsilon_i$ | $R^{2} = b^{2} \times \frac{\sum_{i=1}^{k} (t_{i} - \bar{t})^{2}}{\sum_{i=1}^{k} (y_{i} - \bar{y})^{2}}$ |
| Measur | res of change in $\Delta_{1,i} = y_{i+1} - y_i \ (i = 1,, k)^*$ | |
| 11. M | Iaximum of the first differences | $\max \Delta_{1,i}$ |
| 12. S | D of the first differences | $s_{\Delta_1} = \frac{1}{k-2} \sum_{i=1}^{k-1} (\Delta_{1,i} - \bar{\Delta}_1)^2$ |
| 13. S | D of the first differences per time unit | where $\bar{\Delta}_1 = \frac{1}{k-1} \sum_{i=1}^{k-1} \Delta_{1,i}$ $s_{\Delta'_1} = \frac{1}{k-2} \sum_{i=1}^{k-1} (\Delta'_{1,i} - \bar{\Delta}'_1)^2$ where $\Delta'_1 = \frac{\Delta_{1,i}}{t_{i+1}-t_i}$ |
| 14. M | Iean of the absolute first differences | $ \Delta_1 = \frac{1}{k-1} \sum_{i=1}^{k-1} \Delta_{1,i} $ |
| 15. M | faximum of the absolute first differences | $\max \Delta_{1,i} $ |
| | atio of the maximum absolute first difference to the nean-over-time | $\frac{(\max \Delta_{1,i})}{\bar{y}}$ |
| | atio of the maximum absolute first difference to the ope | $rac{(\max \Delta_{1,i})}{b}$ |
| | atio of the SD of the first differences to the slope | $\frac{s_{\Delta_1}}{b}$ |
| Measures of change in $\Delta_{2,i} = \Delta_{1,i+1}\Delta_{1,i}$ $(i = 1,,k)^*$ | | |
| | Iean of the second differences | $\bar{\Delta}_2 = \frac{1}{k-2} \sum_{i=1}^{k-2} \Delta_{2.i}$ |
| 20. M | lean of the absolute second differences | $\bar{\Delta}_2 = \frac{1}{k-2} \sum_{i=1}^{k-2} \Delta_{2,i} \Delta_2 = \frac{1}{k-2} \sum_{i=1}^{k-2} \Delta_{2,i} $ |
| 21. M | faximum of the absolute second differences | $\max \Delta_{1,i}$ |
| | atio of the maximum absolute second difference to the nean-over-time | $\frac{(\max \Delta_{2,i})}{\bar{y}}$ |
| 23. R | atio of the maximum absolute second difference to nean absolute first difference | $\frac{(\max \Delta_{2,i})}{ \bar{\Delta}_1 }$ |
| 24. R | atio of the mean absolute second difference to the nean absolute first differece | $\frac{(\bar{\Delta}_{2,i})}{ \bar{\Delta}_1 }$ |

ak may vary from subject to subject.