Generic SPSS code Linear regression Models

|  |  |  |  |
| --- | --- | --- | --- |
| **Variable** | **Role** | **Parameter  (also see methods)** | **Variable name in data file** |
| Depression | Dependent / Predictor | Depression score (PHQ-9) | H1\_PHQ9 |
| Alpha diversity | Dependent / Predictor | Shannon | shannon |
| Relative abundance | Predictor | Counts ranked | RZOTU[number] |
| Beta Diversity | Predictor | PCoA Bray Curtis  PCoA Weighted Unifrac | PC[# 1-20]BC  PC[#1-20] |
| Ethnicity | Covariate model 1 | Ethnic group dummy coded (Regression)  Variable level (ANOVA) | Eth\_1 to Eth\_6  H1\_EtnTotaal |
| Sex | Covariate model 1 | female 0, male 1 | H1\_geslacht |
| Age | Covariate model 1 | Years | H1\_lft |
| Education | Covariate model 1 | Educational attainment | H1\_opleid |
| Smoker | Covariate model 2 | 0 no, 1 yes | current\_smoker |
| Physical Activity | Covariate model 2 | Squash total score | H1\_Squash\_totscor |
| Alcohol | Covariate model 2 | AUDIT Alcohol consumption | H1\_Auditalcohol |
| Body mass Index | Covariate model 2 | BMI | H1\_LO\_BMI |
| Diagnosed with gastro-intestinal Disorder | Covariate model 3 | 0 no, 1 yes | darmstoornis\_diagnose |
| Diabetes | Covariate model 3 | 0 no, 1 yes | H1\_Diabetes\_SelfGlucMedHba1c |
| Diarrhea in past week | Covariate model 3 | 0 no, 1 yes | Diarr\_week |
| Antibiotic used in past 2 weeks | Covariate model 3 | 0 no, 1 yes | antibiotica\_2wk |
| Proton pump inhibitor use | Covariate model 3 | 0 no, 1 yes | PPI |
| \*Ranked score was used | | | |

**Generic SPSS code Linear regression Models 1 - 3**

REGRESSION

/MISSING LISTWISE

/STATISTICS COEFF OUTS CI(95) R ANOVA CHANGE ZPP

/CRITERIA=PIN(.05) POUT(.10)

/NOORIGIN

/DEPENDENT [Dependent variable]

/METHOD=ENTER [Predictor variable]

/METHOD=ENTER [Covariate list Model 1]

/METHOD=ENTER [Covariate list Model 2]

/METHOD=ENTER [Covariate list Model 3]

/SCATTERPLOT=([Dependent variable] ,\*ZRESID)

/RESIDUALS HISTOGRAM(ZRESID) NORMPROB(ZRESID).

**Generic SPSS code ANOVA (testing interaction ethnicity by alpha diverity or relative abundcances)**

UNIANOVA H1\_PHQ9\_sumscore BY H1\_EtnTotaal H1\_geslacht WITH shannon H1\_lft

/METHOD=SSTYPE(3)

/INTERCEPT=INCLUDE

/PRINT ETASQ DESCRIPTIVE PARAMETER

/CRITERIA=ALPHA(.05)

/DESIGN=H1\_EtnTotaal\*shannon H1\_EtnTotaal shannon H1\_geslacht H1\_lft.

**SPSS code Linear regression forward selection PcoA**

REGRESSION

/MISSING LISTWISE

/STATISTICS COEFF OUTS CI(95) R ANOVA CHANGE ZPP

/CRITERIA=PIN(.05) POUT(.10)

/NOORIGIN

/DEPENDENT H1\_PHQ9\_sumscore

/METHOD=FORWARD

PC01BC PC02BC PC03BC PC04BC PC05BC PC06BC PC07BC PC08BC PC09BC PC010BC PC011BC PC012BC

PC013BC PC014BC PC015BC PC016BC PC017BC PC018BC PC019BC PC020BC .

**Retained:** Weighted UniFrac PC02 PC03 PC07 PC011 PC014 PC019

Bray-Curtis PC02BC PC03BC PC04BC PC05BC PC014BC PC016BC PC018BC

**Generic SPSS code Linear regression Models Beta-Diversity**

REGRESSION

/MISSING LISTWISE

/STATISTICS COEFF OUTS CI(95) R ANOVA CHANGE ZPP

/CRITERIA=PIN(.05) POUT(.10)

/NOORIGIN

/DEPENDENT [Dependent variable]

/METHOD=ENTER [Ethicity or Empty]

/METHOD=ENTER [Covariate list Model 1 -3]

/METHOD=ENTER [retained principal components Beta-diversity]

/SCATTERPLOT=([Dependent variable] ,\*ZRESID)

/RESIDUALS HISTOGRAM(ZRESID) NORMPROB(ZRESID).