```
DATASET ACTIVATE DataSet1.
DESCRIPTIVES VARIABLES=pain age STAI_trait pain_cat cortisol_serum mindfulness
  /STATISTICS=MEAN STDDEV VARIANCE RANGE MIN MAX KURTOSIS SKEWNESS.

FREQUENCIES VARIABLES=Sex_new
  /ORDER=ANALYSIS.

EXAMINE VARIABLES=pain age STAI_trait pain_cat cortisol_serum mindfulness Sex_new
  /PLOT BOXPLOT HISTOGRAM NPPLOT
  /COMPARE GROUPS
  /STATISTICS DESCRIPTIVES
  /CINTERVAL 95
  /MISSING LISTWISE
  /NOTOTAL.

* Chart Builder.
GGRAPH
  /GRAPHDATASET NAME="graphdataset" VARIABLES=age pain MISSING=LISTWISE
REPORTMISSING=NO
  /GRAPHSPEC SOURCE=INLINE
  /FITLINE TOTAL=YES.
BEGIN GPL
  SOURCE: s=userSource(id("graphdataset"))
  DATA: age=col(source(s), name("age"))
  DATA: pain=col(source(s), name("pain"))
  GUIDE: axis(dim(1), label("age"))
  GUIDE: axis(dim(2), label("pain"))
  GUIDE: text.title(label("Simple Scatter with Fit Line of pain by age"))
  ELEMENT: point(position(age*pain))
END GPL.

* Chart Builder.
GGRAPH
  /GRAPHDATASET NAME="graphdataset" VARIABLES=STAI_trait pain MISSING=LISTWISE
REPORTMISSING=NO
  /GRAPHSPEC SOURCE=INLINE
  /FITLINE TOTAL=YES.
BEGIN GPL
  SOURCE: s=userSource(id("graphdataset"))
  DATA: STAI_trait=col(source(s), name("STAI_trait"))
  DATA: pain=col(source(s), name("pain"))
  GUIDE: axis(dim(1), label("STAI_trait"))
  GUIDE: axis(dim(2), label("pain"))
  GUIDE: text.title(label("Simple Scatter with Fit Line of pain by STAI_trait"))
  ELEMENT: point(position(STAI_trait*pain))
END GPL.
```

```
REGRESSION
  /MISSING LISTWISE
  /STATISTICS COEFF OUTS CI(95) R ANOVA COLLIN TOL CHANGE
  /CRITERIA=PIN(.05) POUT(.10)
  /NOORIGIN
  /DEPENDENT pain
  /METHOD=ENTER age Sex_new
  /METHOD=ENTER STAI_trait pain_cat cortisol_serum mindfulness
  /SCATTERPLOT=(*ZRESID ,*ZPRED)
  /RESIDUALS HISTOGRAM(ZRESID) NORMPROB(ZRESID)
  /SAVE PRED COOK RESID.

* Chart Builder.
GGRAPH
  /GRAPHDATASET NAME="graphdataset" VARIABLES=ID COO_2 MISSING=LISTWISE
REPORTMISSING=NO
  /GRAPHSPEC SOURCE=INLINE
  /FITLINE TOTAL=YES.
BEGIN GPL
  SOURCE: s=userSource(id("graphdataset"))
  DATA: ID=col(source(s), name("ID"), unit.category())
  DATA: COO_2=col(source(s), name("COO_2"))
  GUIDE: axis(dim(1), label("ID"))
  GUIDE: axis(dim(2), label("Cook's Distance"))
  GUIDE: text.title(label("Simple Scatter with Fit Line of Cook's Distance by ID"))
  SCALE: linear(dim(2), include(0))
  ELEMENT: point(position(ID*COO_2))
END GPL.

DESCRIPTIVES VARIABLES=RES_2
  /STATISTICS=MEAN STDDEV VARIANCE RANGE MIN MAX KURTOSIS SKEWNESS.

EXAMINE VARIABLES=RES_2
  /PLOT BOXPLOT HISTOGRAM NPPLOT
  /COMPARE GROUPS
  /STATISTICS DESCRIPTIVES
  /CINTERVAL 95
  /MISSING LISTWISE
  /NOTOTAL.

* Curve Estimation.
TSET NEWVAR=NONE.
CURVEFIT
  /VARIABLES=pain WITH pain_cat
  /CONSTANT
  /MODEL=LINEAR QUADRATIC CUBIC
  /PLOT FIT.
```

```
COMPUTE res_sq=RES_2 * RES_2.
EXECUTE.

REGRESSION
  /MISSING LISTWISE
  /STATISTICS COEFF OUTS CI(95) R ANOVA COLLIN TOL CHANGE
  /CRITERIA=PIN(.05) POUT(.10)
  /NOORIGIN
  /DEPENDENT res_sq
  /METHOD=ENTER age Sex_new
  /METHOD=ENTER STAI_trait pain_cat cortisol_serum mindfulness
  /SCATTERPLOT=(*ZRESID ,*ZPRED)
  /RESIDUALS HISTOGRAM(ZRESID) NORMPROB(ZRESID).

* Chart Builder.
GGRAPH
  /GRAPHDATASET NAME="graphdataset" VARIABLES=ZPR_1 pain MISSING=LISTWISE
REPORTMISSING=NO
  /GRAPHSPEC SOURCE=INLINE
  /FITLINE TOTAL=NO.
BEGIN GPL
  SOURCE: s=userSource(id("graphdataset"))
  DATA: ZPR_1=col(source(s), name("ZPR_1"))
  DATA: pain=col(source(s), name("pain"))
  GUIDE: axis(dim(1), label("Standardized Predicted Value"))
  GUIDE: axis(dim(2), label("pain"))
  GUIDE: text.title(label("Simple Scatter of pain by Standardized Predicted Value"))
  ELEMENT: point(position(ZPR_1*pain))
END GPL.

REGRESSION
/MISSING LISTWISE
/STATISTICS COEFF OUTS CI(95) R ANOVA SELECTION
/CRITERIA=PIN(.05) POUT(.10)
/NOORIGIN
/DEPENDENT pain
/METHOD=ENTER age Sex_new
/METHOD=ENTER STAI_trait pain_cat cortisol_serum mindfulness
```