APPENDIX II
POPS SPSS SCORING ALGORITHM

This appendix contains the SPSS syntax to calculate subscale scores and total scores for both the objective ("PO") and the subjective ("PS") components of the POPS. Using cut-and-paste, the syntax can be inserted into an SPSS syntax file, for immediate use.

It assumes that in the SPSS data file (___.sav) the 26 objective variables are named PO01 through PO26; the base period for frequency/hours variables are named PER09 through PER26; the importance ratings are named PShi01 through PShi26 (hi stands for how important); and the desire for change answers are name PSda01 through PSda26 (da stands for desired activity).

If in the ___.sav file the names of the variables are different, they should be recoded to the names specified here. Alternatively, the variable names can be changed in the syntax provided below; however, that will make exchange and combining of data files more difficult.

variables PER09 through PER26 should be coded as follows:
  1: per day   7: per week   30: per month   9: missing.

variables PO01 through PO08 should be coded as follows:
  0: none   1: some   2: most   3: all   7: not applicable   9: missing.

variables PO09 through PO26 should be coded as follows:
  0: never   1 through 900: reported frequency/hours per day/week/month
  999:   DK/missing

variables PShi01 through PShi26 should be coded as follows:
  0: not imp   1: of little imp   2: moderately important   3: very important
  4: most important   7: not applicable   9: DK/missing.

variables PSda01 through PSda26 should be coded as follows:
  1: more   2: less   3: same   7: not applicable   9: DK/missing.

If codes are different, recoding should be used. Alternatively, the values can be changed in the syntax below.

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*providing variable labels for all variables.


var labels
PER09 'PER09 base period for: work'
 PER10 'PER10 base period for: school'
 PER11 'PER11 base period for: volunteer'
 PER12 'PER12 base period for: private transportation'
 PER13 'PER13 base period for: public transportation'
 PER14 'PER14 base period for: socialize friends'
 PER15 'PER15 base period for: socialize relatives'
 PER16 'PER16 base period for: socialize school/workmates'
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 PER17 'PER17 base period for: visit friends/relatives'
 PER18 'PER18 base period for: sex'
 PER19 'PER19 base period for: meet new people'
 PER20 'PER20 base period for: speak neighbors'
 PER21 'PER21 base period for: speak strangers'
 PER22 'PER22 base period for: movies'
 PER23 'PER23 base period for: restaurants'
 PER24 'PER24 base period for: shopping'
 PER25 'PER25 base period for: church'
 PER26 'PER26 base period for: sports'

PO01 'PO01 share of: shop groceries'
 PO02 'PO02 share of: cook'
 PO03 'PO03 share of: clean house'
 PO04 'PO04 share of: children'
 PO05 'PO05 share of: social arrangements'
 PO06 'PO06 share of: pay bills'
 PO07 'PO07 share of: home repairs'
 PO08 'PO08 share of: yard work'
 PO09 'PO09 frequency of: work'
 PO10 'PO10 frequency of: school'
 PO11 'PO11 frequency of: volunteer'
 PO12 'PO12 frequency of: private transportation'
 PO13 'PO13 frequency of: public transportation'
 PO14 'PO14 frequency of: socialize friends'
 PO15 'PO15 frequency of: socialize relatives'
 PO16 'PO16 frequency of: socialize school/workmates'
 PO17 'PO17 frequency of: visit friends/relatives'
 PO18 'PO18 frequency of: sex'
 PO19 'PO19 frequency of: meet new people'
 PO20 'PO20 frequency of: speak neighbors'
 PO21 'PO21 frequency of: speak strangers'
 PO22 'PO22 frequency of: movies'
 PO23 'PO23 frequency of: restaurants'
 PO24 'PO24 frequency of: shopping'
 PO25 'PO25 frequency of: church'
 PO26 'PO26 frequency of: sports'

PSda01 'PSda01 desired level: shop groceries'
 PSda02 'PSda02 desired level: cook'
 PSda03 'PSda03 desired level: clean house'
 PSda04 'PSda04 desired level: children'
 PSda05 'PSda05 desired level: social arrangements'
 PSda06 'PSda06 desired level: pay bills'
 PSda07 'PSda07 desired level: home repairs'
 PSda08 'PSda08 desired level: yard work'
 PSda09 'PSda09 desired level: work'
 PSda10 'PSda10 desired level: school'
 PSda11 'PSda11 desired level: volunteer'
 PSda12 'PSda12 desired level: private transportation'
 PSda13 'PSda13 desired level: public transportation'
 PSda14 'PSda14 desired level: socialize friends'
 PSda15 'PSda15 desired level: socialize relatives'
 PSda16 'PSda16 desired level: socialize school/workmates'
 PSda17 'PSda17 desired level: visit friends/relatives'
 PSda18 'PSda18 desired level: sex'
 PSda19 'PSda19 desired level: meet new people'
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 PSda20 'PSda20 desired level: speak neighbors'
 PSda21 'PSda21 desired level: speak strangers'
 PSda22 'PSda22 desired level: movies'
 PSda23 'PSda23 desired level: restaurants'
 PSda24 'PSda24 desired level: shopping'
 PSda25 'PSda25 desired level: church'
 PSda26 'PSda26 desired level: sports'

PShi01 'PShi01 importance: shop groceries'
 PShi02 'PShi02 importance: cook'
 PShi03 'PShi03 importance: clean house'
 PShi04 'PShi04 importance: children'
 PShi05 'PShi05 importance: social arrangements'
 PShi06 'PShi06 importance: pay bills'
 PShi07 'PShi07 importance: home repairs'
 PShi08 'PShi08 importance: yard work'
 PShi09 'PShi09 importance: work'
 PShi10 'PShi10 importance: school'
 PShi11 'PShi11 importance: volunteer'
 PShi12 'PShi12 importance: private transportation'
 PShi13 'PShi13 importance: public transportation'
 PShi14 'PShi14 importance: socialize friends'
 PShi15 'PShi15 importance: socialize relatives'
 PShi16 'PShi16 importance: socialize school/workmates'
 PShi17 'PShi17 importance: visit friends/relatives'
 PShi18 'PShi18 importance: sex'
 PShi19 'PShi19 importance: meet new people'
 PShi20 'PShi20 importance: speak neighbors'
 PShi21 'PShi21 importance: speak strangers'
 PShi22 'PShi22 importance: movies'
 PShi23 'PShi23 importance: restaurants'
 PShi24 'PShi24 importance: shopping'
 PShi25 'PShi25 importance: church'
 PShi26 'PShi26 importance: sports'.

*labeling all responses.
value labels
 PER09,    PER10,    PER11,    PER12,    PER13,     PER14,    PER15,
 PER16,    PER17,    PER18,    PER19,    PER20,     PER21,    PER22,
 PER23,    PER24,    PER25,    PER26
  1 '1: per day'   7 '7: per week'   30 '30: per month'   9 '9: missing'.
value labels PO01 PO02 PO03 PO04 PO05 PO06 PO07 PO08
  0 '0: none'    1 '1: some'   2 '2: most'   3 '3: all' 7 '7: NA'   9 '9: DK'.
value labels
 PO09,    PO10,    PO11,    PO12,    PO13,    PO14,    PO15,    PO16,
 PO17,    PO18,    PO19,    PO20,    PO21,    PO22,    PO23,    PO24,
 PO25,    PO26
  0 '0: none/never'   999 '999: DK/missing'.
value labels
 PShi01, PShi02, PShi03, PShi04, PShi05, PShi06, PShi07, PShi08, PShi09,
 PShi10, PShi11, PShi12, PShi13, PShi14, PShi15, PShi16, PShi17, PShi18,
 PShi19, PShi20, PShi21, PShi22, PShi23, PShi24, PShi25, PShi26
  0 '0: not imp'   1 '1: little imp'   2 '2: mod imp'   3 '3: very imp'
  4 '4: most imp'  7 '7: NA'   9 '9: DK'.
value labels
 PSda01, PSda02, PSda03, PSda04, PSda05, PSda06, PSda07, PSda08, PSda09,
 PSda10, PSda11, PSda12, PSda13, PSda14, PSda15, PSda16, PSda17, PSda18,
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 PSda19, PSda20, PSda21, PSda22, PSda23, PSda24, PSda25, PSda26
  1 '1: more'     2 '2: less'    3 '3: same'    7 ‘7: NA’   9 '9: DK/missing'.

*declaring 7, 9, 999 missing.
missing values
 PER09,    PER10,    PER11,    PER12,    PER13,    PER14,    PER15,    PER16,
 PER17,    PER18,    PER19,    PER20,    PER21,    PER22,    PER23,    PER24,
 PER25,    PER26 (9).
missing values
 PO01,    PO02,    PO03,    PO04,    PO05,    PO06,    PO07,    PO08 (7,9).
missing values
 PO09,    PO10,    PO11,    PO12,    PO13,    PO14,    PO15,    PO16,    PO17,
 PO18,    PO19,    PO20,    PO21,    PO22,    PO23,    PO24,    PO25,    PO26
  (999).
missing values
 PSda01, PSda02, PSda03, PSda04, PSda05, PSda06, PSda07, PSda08, PSda09,
 PSda10, PSda11, PSda12, PSda13, PSda14, PSda15, PSda16, PSda17, PSda18,
 PSda19, PSda20, PSda21, PSda22, PSda23, PSda24, PSda25, PSda26 (7,9).
missing values
 PShi01, PShi02, PShi03, PShi04, PShi05, PShi06, PShi07, PShi08, PShi09,
 PShi10, PShi11, PShi12, PShi13, PShi14, PShi15, PShi16, PShi17, PShi18,
 PShi19, PShi20, PShi21, PShi22, PShi23, PShi24, PShi25, PShi26 (7,9).

*---------------------------scoring PO-----------------------------------------.
*part 1: bringing all answers to the standard base for answers.
*the standard base period (per day/week/month) is indicated on the interview
 form. if the participant has reported his/her frequency/hours using another
 base period, the value for frequency/hours need to be changed.

*no base period for PO01 to PO08.

*for PO 12 and 13, the standard period is DAY; if period is WEEK or MONTH,
 frequency/hours is changed to frequency/hours per day. if period is unknown,
 frequency/hours is set to missing.
if (PER12 eq   7) PO12=PO12/7.
if (PER12 eq 30) PO12=PO12/30.
if (PER12 eq   9) PO12=999.

if (PER13 eq   7) PO13=PO13/7.
if (PER13 eq 30) PO13=PO13/30.
if (PER13 eq   9) PO13=999.

*for PO 09, 10, 14, 15, 16, 17, 19, 20, 21, 23, 25, the standard period is WEEK;
 if period is DAY or MONTH, frequency/hours is changed to frequency/hours per
 week. if period is unknown, frequency/hours is set to missing.
if (PER09 eq   1) PO09=PO09 * 7.
if (PER09 eq 30) PO09=PO09/4.3.
if (PER09 eq   9) PO09=999.

if (PER10 eq   1) PO10=PO10 * 7.
if (PER10 eq 30) PO10=PO10/4.3.
if (PER10 eq   9) PO10=999.

if (PER14 eq   1) PO14=PO14 * 7.
if (PER14 eq 30) PO14=PO14/4.3.
if (PER14 eq   9) PO14=999.
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if (PER15 eq   1) PO15=PO15 * 7.
if (PER15 eq 30) PO15=PO15/4.3.
if (PER15 eq   9) PO15=999.

if (PER16 eq   1) PO16=PO16 * 7.
if (PER16 eq 30) PO16=PO16/4.3.
if (PER16 eq   9) PO16=999.

if (PER17 eq   1) PO17=PO17 * 7.
if (PER17 eq 30) PO17=PO17/4.3.
if (PER17 eq   9) PO17=999.

if (PER19 eq   1) PO19=PO19 * 7.
if (PER19 eq 30) PO19=PO19/4.3.
if (PER19 eq   9) PO19=999.

if (PER20 eq   1) PO20=PO20 * 7.
if (PER20 eq 30) PO20=PO20/4.3.
if (PER20 eq   9) PO20=999.

if (PER21 eq   1) PO21=PO21 * 7.
if (PER21 eq 30) PO21=PO21/4.3.
if (PER21 eq   9) PO21=999.

if (PER23 eq   1) PO23=PO23 * 7.
if (PER23 eq 30) PO23=PO23/4.3.
if (PER23 eq   9) PO23=999.

if (PER25 eq   1) PO25=PO25 * 7.
if (PER25 eq 30) PO25=PO25/4.3.
if (PER25 eq   9) PO25=999.

*standard period is MONTH for PO 11, 18, 22, 24, 26; if period is DAY or WEEK,
 frequency/hours is changed to frequency/hours per month. if period is unknown,
 frequency/hours is set to missing.
if (PER11 eq   1) PO11=PO11 * 30.
if (PER11 eq   7) PO11=PO11 * 4.3.
if (PER11 eq   9) PO11=999.

if (PER18 eq   1) PO18=PO18 * 30.
if (PER18 eq   7) PO18=PO18 * 4.3.
if (PER18 eq   9) PO18=999.

if (PER22 eq   1) PO22=PO22 * 30.
if (PER22 eq   7) PO22=PO22 * 4.3.
if (PER22 eq   9) PO22=999.

if (PER24 eq   1) PO24=PO24 * 30.
if (PER24 eq   7) PO24=PO24 * 4.3.

if (PER24 eq   9) PO24=999.

if (PER26 eq   1) PO26=PO26 * 30.
if (PER26 eq   7) PO26=PO26 * 4.3.
if (PER26 eq   9) PO26=999.

*part 2: correcting outliers to maximally 3* standard deviation.
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*the standard deviations used here to identify outliers are based on data for a
 large sample of persons with mild, moderate and severe TBI. (see Brown et al.,
 J Head Trauma Rehabil 2004). it is possible to calculate standard deviations
 for ones own sample and use those values instead.
*0 is never an outlier; only high outliers are recoded.

*no outliers for items 1-8.

*outliers for items 09 through 26.

if (PO09 > 66.5839) PO09= 66.5839.
if (PO10 > 25.9553) PO10= 25.9553.
if (PO11 > 85.7089) PO11= 85.7089.
if (PO12 > 9.3960) PO12= 9.3960.
if (PO13 > 5.8643) PO13= 5.8643.
if (PO14 > 53.6261) PO14=53.6261.
if (PO15 > 28.5254) PO15=28.5254.
if (PO16 > 21.7730) PO16=21.7730.
if (PO17 > 16.8364) PO17=16.8364.
if (PO18 > 22.0240) PO18=22.0240.
if (PO19 > 12.4787) PO19=12.4787.
if (PO20 > 21.4573) PO20= 21.4573.
if (PO21 > 62.7557) PO21= 62.7557.
if (PO22 > 7.0859) PO22= 7.0859.
if (PO23 > 8.1987) PO23= 8.1987.
if (PO24 > 28.8655) PO24= 28.8655.
if (PO25 > 4.5600) PO25= 4.5600.
if (PO26 > 4.8422) PO26= 4.8422.

*part 3: z-scoring.
*the distributions are all changed to one that has mean of 0.00, and standard
 deviation of 1.00. (actual mean and standard deviation one gets may not be
 exactly 0.00 and 1.00 because that would require use of the mean and standard
 deviation of one's own sample, rather than the new york one.
*the means and standard deviations used here to identify outliers are based on
 data for a large sample of persons with mild, moderate and severe TBI. (see
 Brown et al., J Head Trauma Rehabil 2004). it is possible to calculate means
 and standard deviations for ones own sample and use those values instead.

*no z-scoring for items 1 through 8.


COMPUTE zPO09=(PO09-10.7541)/16.8636.
COMPUTE zPO10=(PO10-1.9707)/5.3809.
COMPUTE zPO11=(PO11-4.1008)/11.4733.
COMPUTE zPO12=(PO12-1.7459)/2.4187.
COMPUTE zPO13=(PO13-1.6054)/1.8252.
COMPUTE zPO14=(PO14-6.4717)/8.3609.
COMPUTE zPO15=(PO15-3.7846)/4.3664.
COMPUTE zPO16=(PO16-1.9800)/3.7931.
COMPUTE zPO17=(PO17-2.2815)/2.5389.
COMPUTE zPO18=(PO18-2.3663)/4.0130.
COMPUTE zPO19=(PO19-2.1732)/2.4525.
COMPUTE zPO20=(PO20-3.7455)/4.6437.
COMPUTE zPO21=(PO21-6.4948)/10.4013.
COMPUTE zPO22=(PO22-1.0087)/1.3991.
COMPUTE zPO23=(PO23-1.8189)/1.7947.
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COMPUTE zPO24=(PO24-3.6784)/5.1614.
COMPUTE zPO25=(PO25-.8016)/1.1258.
COMPUTE zPO26=(PO26-.3279)/.8435.

*part 4: weighting.
*note that PO01 through PO08 are weighted without z-scoring.
compute wPO01=PO01 * 2.31.
compute wPO02=PO02 * 2.21.
compute wPO03=PO03 * 2.08.
compute wPO04=PO04 * 2.63.
compute wPO05=PO05 * 2.16.
compute wPO06=PO06 * 2.54.
compute wPO07=PO07 * 1.71.
compute wPO08=PO08 * 2.13.
compute wPO09=zPO09 * 2.75.
compute wPO10=zPO10 * 2.09.
compute wPO11=zPO11 * 1.16.
compute wPO12=zPO12 * 1.55.
compute wPO13=zPO13 * 1.71.
compute wPO14=zPO14 * 2.51.
compute wPO15=zPO15 * 2.56.
compute wPO16=zPO16 * 1.67.
compute wPO17=zPO17 * 2.44.
compute wPO18=zPO18 * 2.09.
compute wPO19=zPO19 * 1.96.
compute wPO20=zPO20 * 1.54.
compute wPO21=zPO21 * 1.70.
compute wPO22=zPO22 * 1.42.
compute wPO23=zPO23 * 1.75.
compute wPO24=zPO24 * 1.93.
compute wPO25=zPO25 * 1.80.
compute wPO26=zPO26 * 0.90.

*part 5: calculating scale and subscale scores.
*-----------------------------scoring PO-------------------------------------.
*subscale scores are calculated as the mean value of the constituent items. A
 limited number of constituent items, different from subscale to subscale, is
 allowed to be missing.

*because the mean and standard deviation for PO01 thru PO08 are not 0.00 and
 1.00, respectively, an adjustment is made to bring them into that range.
compute POwsub1a =mean.6(wPO01,wPO02,wPO03,wPO04,wPO05,wPO06,wPO07,wPO08).
compute POwsub1=(POwsub1a-3.4864)/1.5678.
compute POwsub2 =mean.2(wPO09,wPO10,wPO11).
compute POwsub3 =mean.2(wPO12,wPO13).
compute POwsub4 =mean.6(wPO14,wPO15,wPO16,wPO17,wPO18,wPO19,wPO20,wPO21).
compute POwsub5 =mean.4(wPO22,wPO23,wPO24,wPO25,wPO26).

*total scale score is calculated as the mean value of the constituent subscales;
 one subscale is allowed to be missing.
compute POwtot    =mean.4(POwsub1,POwsub2,POwsub3,POwsub4,POwsub5).

var labels
 POwsub1 'POwsub1 domestic'
 POwsub2 'POwsub2 major life areas'
 POwsub3 'POwsub3 transportation'
 POwsub4 'POwsub4 interpersonal'
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 POwsub5 'POwsub5 community'
 POwtot    'POwtot total score'.

descriptives vars=POwsub1, POwsub2, POwsub3, POwsub4, POwsub5, POwtot.

*--------------------------scoring PS---------------------------------------.
*"want to do more" and "want to do less" are recoded into "dissatisfied", with
 value of -1. "want to do same" is recoded into "satisfied", with value of +1;
 then, these values are multiplied with the respondent-assigned importance of
 the item, and averaged over subscales and total scales.

*part 1. recoding DA: more,less to -1, same to +1.

recode
 PSda01, PSda02, PSda03, PSda04, PSda05, PSda06, PSda07, PSda08, PSda09, PSda10,
 PSda11, PSda12, PSda13, PSda14, PSda15, PSda16, PSda17, PSda18, PSda19, PSda20,
 PSda21, PSda22, PSda23, PSda24, PSda25, PSda26
  (1=-1)(2=-1)(3=1).

*part 2. multiplying DA and HI.

compute PSw01=PSda01 * PShi01.
compute PSw02=PSda02 * PShi02.
compute PSw03=PSda03 * PShi03.
compute PSw04=PSda04 * PShi04.
compute PSw05=PSda05 * PShi05.
compute PSw06=PSda06 * PShi06.
compute PSw07=PSda07 * PShi07.
compute PSw08=PSda08 * PShi08.
compute PSw09=PSda09 * PShi09.
compute PSw10=PSda10 * PShi10.
compute PSw11=PSda11 * PShi11.
compute PSw12=PSda12 * PShi12.
compute PSw13=PSda13 * PShi13.
compute PSw14=PSda14 * PShi14.
compute PSw15=PSda15 * PShi15.
compute PSw16=PSda16 * PShi16.
compute PSw17=PSda17 * PShi17.
compute PSw18=PSda18 * PShi18.
compute PSw19=PSda19 * PShi19.
compute PSw20=PSda20 * PShi20.
compute PSw21=PSda21 * PShi21.
compute PSw22=PSda22 * PShi22.
compute PSw23=PSda23 * PShi23.
compute PSw24=PSda24 * PShi24.
compute PSw25=PSda25 * PShi25.
compute PSw26=PSda26 * PShi26.

*part 3. calculating scale and subscale scores.
*subscale scores are calculated as the mean value of the constituent items. A
 limited number of constituent items, different from subscale to subscale,
 are allowed to be missing.
compute PSwsub1 =mean.6(PSw01,PSw02,PSw03,PSw04,PSw05,PSw06,PSw07,PSw08).
compute PSwsub2 =mean.2(PSw09,PSw10,PSw11).
compute PSwsub3 =mean.2(PSw12,PSw13).
compute PSwsub4 =mean.6(PSw14,PSw15,PSw16,PSw17,PSw18,PSw19,PSw20,PSw21).
compute PSwsub5 =mean.4(PSw22,PSw23,PSw24,PSw25,PSw26).
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*total scale score is calculated as the mean value of the constituent subscales;
 one subscale is allowed to be missing.
compute PSwtot    =mean.4(PSwsub1,PSwsub2,PSwsub3,PSwsub4,PSwsub5).

var labels
 PSwsub1 'PSwsub1 domestic'
 PSwsub2 'PSwsub2 major life areas'
 PSwsub3 'PSwsub3 transportation'
 PSwsub4 'PSwsub4 interpersonal'
 PSwsub5 'PSwsub5 community'
 PSwtot    'PSwtot total score'.

descriptives vars=PSwsub1, PSwsub2, PSwsub3, PSwsub4, PSwsub5,PSwtot.
```