

\*\*\*\*\*

\* CR\_MDS\_FrailtyIndex\_45items.

\* Construction of a Frailty Index.

\* Last updated: 13 Jan 2014 / 25-5-2017 (only added prefix 'T0' to constructed variables).

\* Protocol of Searle et al. 2008 "A standard procedure for creating a frailty index" BMC Geriatrics.

\* Convert values of included health deficits to indicate worsening condition - Range of 0 to 1.

\* ADVICE: run this syntax in pieces; running it all at once may create errors/problems.

\*\*\*\*\*

\*\*\*Psych sub-scale\*\*\*

IF (T0\_PW\_NERV = 6) T0\_FI\_nerv=0.

IF (T0\_PW\_NERV = 5) T0\_FI\_nerv=0.2.

IF (T0\_PW\_NERV = 4) T0\_FI\_nerv=0.4.

IF (T0\_PW\_NERV = 3) T0\_FI\_nerv=0.6.

IF (T0\_PW\_NERV = 2) T0\_FI\_nerv=0.8.

IF (T0\_PW\_NERV = 1) T0\_FI\_nerv=1.

EXECUTE.

IF (T0\_PW\_BLUE = 6) T0\_FI\_blue=0.

IF (T0\_PW\_BLUE = 5) T0\_FI\_blue=0.2.

IF (T0\_PW\_BLUE = 4) T0\_FI\_blue=0.4.

IF (T0\_PW\_BLUE = 3) T0\_FI\_blue=0.6.

IF (T0\_PW\_BLUE = 2) T0\_FI\_blue=0.8.

IF (T0\_PW\_BLUE = 1) T0\_FI\_blue=1.

EXECUTE.

IF (T0\_PW\_DOWN = 6) T0\_FI\_down=0.  
IF (T0\_PW\_DOWN = 5) T0\_FI\_down=0.2.  
IF (T0\_PW\_DOWN = 4) T0\_FI\_down=0.4.  
IF (T0\_PW\_DOWN = 3) T0\_FI\_down=0.6.  
IF (T0\_PW\_DOWN = 2) T0\_FI\_down=0.8.  
IF (T0\_PW\_DOWN = 1) T0\_FI\_down=1.  
EXECUTE.

IF (T0\_PW\_CALM = 6) T0\_FI\_calm=1.  
IF (T0\_PW\_CALM = 5) T0\_FI\_calm=0.8.  
IF (T0\_PW\_CALM = 4) T0\_FI\_calm=0.6.  
IF (T0\_PW\_CALM = 3) T0\_FI\_calm=0.4.  
IF (T0\_PW\_CALM = 2) T0\_FI\_calm=0.2.  
IF (T0\_PW\_CALM = 1) T0\_FI\_calm=0.  
EXECUTE.

IF (T0\_PW\_HAPPY = 6) T0\_FI\_happy=1.  
IF (T0\_PW\_HAPPY = 5) T0\_FI\_happy=0.8.  
IF (T0\_PW\_HAPPY = 4) T0\_FI\_happy=0.6.  
IF (T0\_PW\_HAPPY = 3) T0\_FI\_happy=0.4.  
IF (T0\_PW\_HAPPY = 2) T0\_FI\_happy=0.2.  
IF (T0\_PW\_HAPPY = 1) T0\_FI\_happy=0.  
EXECUTE.

\*\*\*EQ-5D+C\*\*\*

IF (T0\_EQ5MO = 1) T0\_FI\_EQ\_mob=0.  
IF (T0\_EQ5MO = 2) T0\_FI\_EQ\_mob=0.5.

IF (T0\_EQ5MO = 3) T0\_FI\_EQ\_mob=1.

EXECUTE.

IF (T0\_EQ5SC = 1) T0\_FI\_EQ\_selfcare=0.

IF (T0\_EQ5SC = 2) T0\_FI\_EQ\_selfcare=0.5.

IF (T0\_EQ5SC = 3) T0\_FI\_EQ\_selfcare=1.

EXECUTE.

IF (T0\_EQ5ACT= 1) T0\_FI\_EQ\_act=0.

IF (T0\_EQ5ACT = 2) T0\_FI\_EQ\_act=0.5.

IF (T0\_EQ5ACT = 3) T0\_FI\_EQ\_act=1.

EXECUTE.

IF (T0\_EQ5PAIN= 1) T0\_FI\_EQ\_pain=0.

IF (T0\_EQ5PAIN = 2) T0\_FI\_EQ\_pain=0.5.

IF (T0\_EQ5PAIN = 3) T0\_FI\_EQ\_pain=1.

EXECUTE.

IF (T0\_EQ5ANX= 1) T0\_FI\_EQ\_mood=0.

IF (T0\_EQ5ANX = 2) T0\_FI\_EQ\_mood=0.5.

IF (T0\_EQ5ANX = 3) T0\_FI\_EQ\_mood=1.

EXECUTE.

IF (T0\_EQ5C= 1) T0\_FI\_EQ\_cog=0.

IF (T0\_EQ5C = 2) T0\_FI\_EQ\_cog=0.5.

IF (T0\_EQ5C = 3) T0\_FI\_EQ\_cog=1.

EXECUTE.

\*\*\*Social functioning and self-reported health\*\*\*

IF (T0\_SOCFUNC = 5) T0\_FI\_SocFunc=0.

IF (T0\_SOCFUNC = 4) T0\_FI\_SocFunc=0.25.

IF (T0\_SOCFUNC = 3) T0\_FI\_SocFunc=0.50.

IF (T0\_SOCFUNC = 2) T0\_FI\_SocFunc=0.75.

IF (T0\_SOCFUNC = 1) T0\_FI\_SocFunc=1.

EXECUTE.

IF (T0\_HEALTH1 = 5) T0\_FI\_Health1=1.

IF (T0\_HEALTH1 = 4) T0\_FI\_Health1=0.75.

IF (T0\_HEALTH1 = 3) T0\_FI\_Health1=0.50.

IF (T0\_HEALTH1 = 2) T0\_FI\_Health1=0.25.

IF (T0\_HEALTH1 = 1) T0\_FI\_Health1=0.

EXECUTE.

IF (T0\_HEALTH2 = 5) T0\_FI\_Health2=1.

IF (T0\_HEALTH2 = 4) T0\_FI\_Health2=0.75.

IF (T0\_HEALTH2 = 3) T0\_FI\_Health2=0.50.

IF (T0\_HEALTH2 = 2) T0\_FI\_Health2=0.25.

IF (T0\_HEALTH2 = 1) T0\_FI\_Health2=0.

EXECUTE.

\*\*\*Compute T0\_FI\*\*\*.

\*\*\*First determine the number of missing values\*\*\*.

COMPUTE T0\_Missing\_number\_FI=NMISS(T0\_MORB1, T0\_MORB2, T0\_MORB3, T0\_MORB4,  
T0\_MORB5, T0\_MORB6, T0\_MORB7,

TO\_MORB8, TO\_MORB9, TO\_MORB10, TO\_MORB11, TO\_MORB13, TO\_MORB14, TO\_MORB15,  
TO\_MORB16, TO\_MORB17,

TO\_KATZ\_BATH, TO\_KATZ\_DRES, TO\_KATZ\_BRUSH, TO\_KATZ\_TOIL,

TO\_KATZ\_CONT, TO\_KATZ\_TRANSFER, TO\_KATZ\_WALK, TO\_KATZ\_EAT, TO\_KATZ\_TEL,  
TO\_KATZ\_TRAVEL, TO\_KATZ\_SHOP ,

TO\_KATZ\_FEED, TO\_KATZ\_HH, TO\_KATZ\_MED, TO\_KATZ\_FIN, TO\_FI\_nerv, TO\_FI\_blue, TO\_FI\_down,  
TO\_FI\_calm, TO\_FI\_happy,

TO\_FI\_EQ\_mob, TO\_FI\_EQ\_selfcare, TO\_FI\_EQ\_act, TO\_FI\_EQ\_pain, TO\_FI\_EQ\_mood,  
TO\_FI\_EQ\_cog, TO\_FI\_SocFunc, TO\_FI\_Health1, TO\_FI\_Health2).

EXECUTE.

\*\*\*Calculate the total number of deficits accrued\*\*\*.

COMPUTE TO\_Frailty\_total = sum (TO\_MORB1, TO\_MORB2, TO\_MORB3, TO\_MORB4, TO\_MORB5,  
TO\_MORB6, TO\_MORB7,

TO\_MORB8, TO\_MORB9, TO\_MORB10, TO\_MORB11, TO\_MORB13, TO\_MORB14, TO\_MORB15,  
TO\_MORB16, TO\_MORB17,

TO\_KATZ\_BATH, TO\_KATZ\_DRES, TO\_KATZ\_BRUSH, TO\_KATZ\_TOIL,

TO\_KATZ\_CONT, TO\_KATZ\_TRANSFER, TO\_KATZ\_WALK, TO\_KATZ\_EAT, TO\_KATZ\_TEL,  
TO\_KATZ\_TRAVEL, TO\_KATZ\_SHOP ,

TO\_KATZ\_FEED, TO\_KATZ\_HH, TO\_KATZ\_MED, TO\_KATZ\_FIN, TO\_FI\_nerv, TO\_FI\_blue, TO\_FI\_down,  
TO\_FI\_calm, TO\_FI\_happy,

TO\_FI\_EQ\_mob, TO\_FI\_EQ\_selfcare, TO\_FI\_EQ\_act, TO\_FI\_EQ\_pain, TO\_FI\_EQ\_mood,  
TO\_FI\_EQ\_cog, TO\_FI\_SocFunc, TO\_FI\_Health1, TO\_FI\_Health2).

EXECUTE.

\*\*\*Examine different methods to address missing\*\*\*.

\*\*\*Complete case analysis - all deficits must be present (no missing values)\*\*\*.

\*\*\*WARNING --> Results in high levels of missing values\*\*\*.

DO IF

TO\_Missing\_number\_FI = 0.

COMPUTE T0\_FI\_complete\_case=T0\_Frailty\_total/45.

END IF.

EXECUTE.

\*\*\*Establish a minimum number of permissible missing deficits\*\*\*.

\*\*\*NB! Previous research has identified improved predicative validity with inclusion of 30 deficits (see Searle et al. 2008 above).

\*\*\*Adjustment of base for missing data\*\*\*.

IF (T0\_Missing\_number\_FI <= 15) T0\_FI\_corrected=

T0\_Frailty\_total/(45-T0\_Missing\_number\_FI).

EXECUTE.

\*\*\*Dichotomize the frailty index\*\*\*.

\*\*\*No established threshold, cut-offs generally made at either 0.25 or 0.20 (see Searle et al. 2008 above) \*\*\*.

IF (T0\_FI\_corrected ge 0.25) T0\_FI\_binary\_25cut=1.

IF (T0\_FI\_corrected lt 0.25) T0\_FI\_binary\_25cut=0.

EXECUTE.

IF (T0\_FI\_corrected ge 0.2) T0\_FI\_binary\_20cut=1.

IF (T0\_FI\_corrected lt 0.2) T0\_FI\_binary\_20cut=0.

EXECUTE.