Contents

Depression, Anxiety and Stress Scale - 21 (DASS-21)

Source items:

Raine Variable Name	Description	Recoded into
G126_FL27	Hard to wind down	v1
G126_FL15	Dry mouth	v2
G126_FL13	No positive feelings	v3
G126_FL4	Short of breath / difficulty breathing	v4
G126_FL26	No initiative	v5
G126_FL10	Overreacting to situations	v6
G126_FL39	Experienced trembling	v7
G126_FL22	Using a lot of nervous energy	v8
G126_FL33	Worried might start to panic	v9
G126_FL12	Nothing to look forward to	v10
G126_FL40	Found self getting agitated	v11
G126_FL37	Finds it hard to relax	v12
G126_FL25	Feels blue	v13
G126_FL42	Can't tolerate interruptions	v14
G126_FL35	Felt close to panic	v15
G126_FL32	Not able to get enthusiastic	v16
G126_FL31	Feels worthless	v17
G126_FL21	Feels touchy	v18
G126_FL18	Aware of heartbeat	v19
G126_FL19	Scared for no reason	v20
G126_FL41	Felt life was meaningless	v21

Derived variables:

G126_DEP_TOT	DASS Depression Subscale
G126_ANX_TOT	DASS Anxiety Subscale
G126_STR_TOT	DASS Stress Subscale
G126_DEP_CAT	DASS Depression 'Diagnosis'
G126_ANX_CAT	DASS Anxiety 'Diagnosis'
G126_STR_CAT	DASS Stress 'Diagnosis'

How the derived variables were calculated:

DASS Depression Scale Score	DEP_TOT = sum(v3, v5, v10, v13, v16:17, v21) * 2
DASS Anxiety Score	ANX_TOT = sum(v2, v4, v7, v9, v15, v19:20) * 2
DASS Stress Scale score	STR_TOT = sum(v1, v6, v8, v11:12, v14, v18) * 2
DASS Depression 'Diagnosis'	G126_DEP_CAT 0-9 = Normal (= 1)

	10-13 = Mild (= 2) 14-20 = Moderate (= 3) 21-27 = Severe (= 4) 28+ = Extremely severe (= 5)
DASS Anxiety 'Diagnosis'	G126_ANX_CAT 0-7 = Normal (= 1) 8-9 = Mild (= 2) 10-14 = Moderate (= 3) 15-19 = Severe (= 4) 20+ = Extremely severe (= 5)
DASS Stress 'Diagnosis'	G126_STR_CAT 0-14 = Normal (= 1) 15-18 = Mild (= 2) 19-25 = Moderate (= 3) 26-33 = Severe (= 4) 34+ = Extremely severe (= 5)

Generalised Anxiety Disorder 7-Item Scale (GAD-7)

Source items:

Raine Variable Name	Description
G126_GAD1	Feel nervous, anxious or on edge
G126_GAD2	Not able to stop or control worry
G126_GAD3	Worry too much about things
G126_GAD4	Trouble relaxing
G126_GAD5	Too restless to sit still
G126_GAD6	Easily annoyed or irritable
G126_GAD7	Afraid something awful might happen
G126_GAD8	How difficult have these probs made it for day to day activities?

Derived variables:

G126_GAD_TOT   GAD-7 Total
G126_GAD_TOT_CAT   GAD-7 Diagnosis

How the derived variables were calculated:

GAD-7 Total	G126_GAD_TOT = G126_GAD1 + G126_GAD2 + G126_GAD3 + G126_GAD4 + G126_GAD5 + G126_GAD6 + G126_GAD7
GAD-7 Diagnosis	G126_GAD_TOT_CAT 0-4 = Normal (=0) 5-9 = Mild anxiety (=1) 10-14 = Moderate anxiety (=2) 15+ = Severe anxiety (=3)

Patient Health Questionnaire (PHQ-9)

Source items:

Raine Variable Name	Description
G126_PH1	Little interst in doing things
G126_PH2	Feel down, depressed, hopeless
G126_PH3	Sleep trouble
G126_PH4	Feel tired
G126_PH5	Poor appetite or overeating
G126_PH6	Feel bad about self
G126_PH7	Trouble concentrating
G126_PH8	Being slow or fidgety
G126_PH9	Suicidal or self harm thoughts
G126_PH10	How difficult have these probs made it for day to day activities?

Derived variables:

G126_PHQ_TOT   PHQ-9 Total
G126_PHQ_TOT_CAT   PHQ-9 Diagnosis

How the derived variables were calculated:

PHQ-9 Total	G126_PHQ_TOT= G126_PH1+G126_PH2+G126_PH3+G126_PH4+G126_PH5+G126_PH6+G126_PH7+G126_PH8+G126_PH9
PHQ-9 Diagnosis	G126_PHQ_TOT_CAT 0 -4 = 'Normal' (= 0) 5-9 = 'Minimal symptoms' (=1) 10-14 = 'Minor depression or major depression (mild)' (=2) 15-19 = 'Major depression (moderate)' (= 3) 20+ = 'Major depression (severe)' (=4)

International Physical Activity Questionnaire (IPAQ) - SF

Source items:

Raine Variable Name	Description
G126_AY1	Vigorous physical activity in last week
G126_AY2	Vigorous physical activity - How many days per week?
G126_AY3	Vigorous physical activity - number of hours per day
G126_AY4	Vigorous physical activity - number of minutes per day
G126_AY5	Moderate physical activity in last week
G126_AY6	Moderate physical activity - How many days per week?
G126_AY7	Moderate physical activity - number of hours per day
G126_AY8	Moderate physical activity - number of minutes per day
G126_AY9	Walking in the last week
G126_AY10	Walking - How many days per week?
G126_AY11	Walking - number of hours per day
G126_AY12	Walking - number of minutes per day
G126_SIT1	Number of hours per day last week spent sitting on a weekday
G126_SIT2	Number of minutes per day last week spent sitting on a weekday
G126_SIT4	Number of hours per day last week spent sitting on a weekend day
G126_SIT5	Number of minutes per day last week spent sitting on a weekend day

Derived variables:

G126_Vig_Mins   IPAQ - Total Vigorous activity in mins/day
G126_Mod_Mins   IPAQ - Total Moderate activity in mins/day
G126_Walk_Mins   IPAQ - Total Walking in mins/day
G126_Vig_Days   IPAQ - Total Number of days of vigorous activity
G126_Mod_Days   IPAQ - Total Number of days of moderate activity
G126_Walk_Days   IPAQ - Total Number of days of walking
G126_VIG_MET   IPAQ - Total Metabolic Equivalent Minutes of Vigorous Activity, per week
G126_MOD_MET   IPAQ -Total Metabolic Equivalent Minutes of Moderate Activity, per week
G126_WALK_MET   IPAQ - Total Metabolic Equivalent Minutes Walking, per week
G126_TOT_MET   IPAQ -Total Metabolic Equivalent Minutes of Activity, per week
G126_IPAQ_Cat   IPAQ -Categorised Activity Level (Low, Moderate, High)
G126_Sit_Weekday IPAQ -Total minutes sitting per week day
G126_Sit_Weekend IPAQ -Total minutes sitting per weekend day

How the derived variables were calculated:

1) Summary of Data Processing
   - All time was converted to minutes
   - Minutes less than 10 were recoded to 0

- Total daily minutes of moderate, vigorous, and walking greater than 180 were truncated to 180

- The variable "exclude960" indicates cases that the total minutes reported are greater than 960 per day and thus should be excluded from the analysis.
  - 0=less than or equal to 960 minutes and should be included
  - 1=total minutes greater than 960 and should be EXCLUDED
- Continuous variables-
  - Minutes per day and met-minutes per week in moderate, vigorous, walking, total met-minutes per week
  - Due to the non-normal distribution of continuous activity scores, medians should be used instead of means as a summary variable
- Categorical variables ("category" and "trunc_category")
  - 0=Low
    - No activity is reported OR
    - Some activity is reported but not enough to meet Categories 2 or 3
  - 1=Moderate
    - 3 or more days of vigorous activity of at least 20 minutes per day OR
    - 5 or more days of moderate-intensity activity and/or walking of at least 30 minutes per day OR
    - 5 or more days of any combination of walking, moderate-intensity or vigorous intensity activities achieving a minimum of at least 600 MET-minutes/week.
  - 2=High
    - Vigorous-intensity activity on at least 3 days and accumulating at least 1500 MET-minutes/week OR
    - 7 days of any combination of walking, moderate- or vigorous-intensity activities accumulating at least 3000 MET-minutes/week
- Sitting variables
  - Presented as minutes per week day, minutes per weekend day

IPAQ - Total Vigorous activity in mins/day	G126_Vig_Mins = (G126_AY3*60)+G126_AY4
IPAQ - Total Moderate activity in mins/day	G126_Mod_Mins = (G126_AY7*60)+G126_AY8
IPAQ - Total Walking in mins/day	G126_Walk_Mins = (G126_AY11*60)+G126_AY12
IPAQ - Total Number of days of vigorous activity	G126_Vig_Days = G126_AY2
IPAQ - Total Number of days of moderate activity	G126_Mod_Days = G126_AY6
IPAQ - Total Number of days of walking	G126_Walk_Days = G126_AY10
IPAQ - Total Metabolic Equivalent Minutes of Vigorous Activity, per week	G126_VIG_MET = 8.0* G126_Vig_Mins * G126_Vig_Days
IPAQ -Total Metabolic Equivalent Minutes of Moderate Activity, per week	G126_MOD_MET = 4.0* G126_Mod_Mins * G126_Mod_Days

IPAQ - Total Metabolic Equivalent Minutes Walking, per week	G126_WALK_MET = 3.3* G126_Walk_Mins* G126_Walk_Days
IPAQ -Total Metabolic Equivalent Minutes of Activity, per week	G126_TOT_MET = G126_VIG_MET + G126_MOD_MET + G126_WALK_MET
IPAQ -Categorised Activity Level (Low, Moderate, High)	G126_IPAQ_Cat = 0 = low Those individuals who not meet criteria for Categories 2 or 3 are considered to have a 'low' physical activity level 1 = moderate • 3 or more days of vigorous-intensity activity of at least 20 minutes per day OR • 5 or more days of moderate-intensity activity and/or walking of at least 30 minutes per day OR • 5 or more days of any combination of walking, moderate-intensity or vigorous intensity activities achieving a minimum Total physical activity of at least 600 MET-minutes/week. 2 = high • vigorous-intensity activity on at least 3 days achieving a minimum Total physical activity of at least 1500 MET-minutes/week OR • 7 or more days of any combination of walking, moderate-intensity or vigorous-intensity activities achieving a minimum Total physical activity of at least 3000 MET-minutes/week.
IPAQ -Total minutes sitting per week day	G126_Sit_Weekday = (G126_SIT1*60)+G126_SIT2
IPAQ -Total minutes sitting per weekend day	G126_Sit_Weekend = (G126_SIT4*60)+G126_SIT5

NOTE: see for more processing details: IPAQ – Guidelines for data processing and analysis of the International Physical Activity Questionnaire (IPAQ) – Short and Long Forms. November 2005.

Örebro Musculoskeletal Pain Screening Questionnaire - Short Form (ÖMPSQ-SF)

Source items:

Raine Variable Name	Description
G126_WPN6	How long have you had your current pain
G126_PN80	How would you rate the pain that you have had during the last week
G126_LI36	How tense/anxious have you felt in the past week
G126_LI37	How much have you been bothered by feeling depressed in the past week
G126_PN88	I can do light work for an hour
G126_PN92	I can sleep at night
G126_PN86	An increase in pain is an indication that I should stop what I'm doing until pain decreases
G126_PN87	I should not do my normal work with my present pain
G126_PN84	How large is the risk that your current pain may become persistent
G126_PN95A	What are the chances that you will be working normal duties in 3 months

Derived variables:

G126_Orebro   ÖMPSQ-SF Total Score

G126_PSI   Pain Severity Index - sum(PN106-PN115,WPN6,PN80)

How the derived variables were calculated:

ÖMPSQ-SF Total Score	Reverse order of G126_PN88, G126_PN92, G126_PN95A: G126_PN88=10-G126_PN88 G126_PN92=10-G126_PN92 G126_PN95A=10-G126_PN95A G126_Orebro=G126_WPN6+G126_PN80+G126_LI36+G126_LI30+G126_PN88+G126_PN92+G126_PN86+G126_PN87+G126_PN84+G126_PN95A
Pain Severity Index	G126_PSI = sum(PN106-PN115,WPN6,PN80)

Notes

Also note that there are small differences in wording and answer categories compared to original questionnaire.

Knee Injury and Osteoarthritis Outcome Score (KOOS) - Pain Subscale

Source items:

Raine Variable Name	Description
G126_PN100	Knee - how often do you experience pain
G126_PN101a	Amount of knee pain in last month - twisting/pivoting your knee
G126_PN101b	Amount of knee pain in last month - straightening knee fully
G126_PN101c	Amount of knee pain in last month - bending knee fully
G126_PN101d	Amount of knee pain in last month - walking on flat surfaces
G126_PN101e	Amount of knee pain in last month - going up/down stairs
G126_PN101f	Amount of knee pain in last month - at night while in bed
G126_PN101g	Amount of knee pain in last month - sitting/lying
G126_PN101h	Amount of knee pain in last month - standing upright

Derived variables:

G126_KOOS   KOOS Total Pain Score

How the derived variables were calculated:

KOOS Total Pain Score	G126_KOOS = 100-(mean.5(G126_PN100 to G126_PN101h)/4*100)

Hip Dysfunction and Osteoarthritis Outcome Score (HOOS) - Pain Subscale

Source items:

Raine Variable Name	Description
G126_PN102A	Hip - how often do you experience pain in area A
G126_PN102B	Hip - how often do you experience pain in area B
G126_PN103a	Amount of hip pain in last month - straightening hip fully
G126_PN103b	Amount of hip pain in last month - bending hip fully
G126_PN103c	Amount of hip pain in last month - walking flat surface
G126_PN103d	Amount of hip pain in last month - going up/down stairs
G126_PN103e	Amount of hip pain in last month - at night in bed
G126_PN103f	Amount of hip pain in last month - sitting/lying
G126_PN103g	Amount of hip pain in last month - standing upright
G126_PN103h	Amount of hip pain in last month - walking hard surface
G126_PN103i	Amount of hip pain in last month - walking uneven surface

Derived variables:

G126_HOOS   HOOS Total Pain Score

How the derived variables were calculated:

HOOS Total Pain Score	G126_HOOS 100-(mean.5(G126_PN103a to (MAX(G126_PN102A, G126_PN102B)))/4*100)

Prospective-Retrospective Memory Questionnaire (PRMQ)

Source items:

Raine Variable Name	Description
G126_Cog1	Decide to do something then forget
G126_Cog2	Failed to recognise a revisited place
G126_Cog3	Fail to do something in a few minutes time
G126_Cog4	Forget what told a few minutes before
G126_Cog5	Forget appointmetns
G126_Cog6	Fail to recognisea character from scene to scene
G126_Cog7	Forget to buy something
G126_Cog8	Forget things over last few days
G126_Cog9	Repeat same story to same person
G126_Cog10	Leave things behind
G126_Cog11	Mislay things
G126_Cog12	Fail to mention or give soemthing to a visitor
G126_Cog13	Look at something not realise seen it moments before
G126_Cog14	Forget to recontact a friend
G126_Cog15	Forget what watched on TV previous day
G126_Cog16	Forget to tell someone something

Derived variables:

G126_Cog_Pros	PRMQ Prospective subscale score
G126_Cog_Retro	PRMQ Retrospective subscale score
G126_Cog_TOT	PRMQ Total score
G126_Cog_Pros_T	PRMQ Prospective score converted to T score
G126_Cog_Retro_T	PRMQ Retrospective score converted to T score
G126_Cog_TOT_T	PRMQ Total score converted to T score
G126_Cog_Pros_Z	PRMQ Prospective score converted to Z score
G126_Cog_Retro_Z	PRMQ Retrospective score converted to Z score
G126_Cog_TOT_Z	PRMQ Total score converted to Z score

How the derived variables were calculated:

PRMQ Prospective subscale score	G126_Cog_Pros = G126_Cog1+G126_Cog3+G126_Cog5+G126_Cog7+G126_Cog10+G126_Cog12+G126_Cog14+G126_Cog16
PRMQ Retrospective subscale score	G126_Cog_Retro = G126_Cog2+G126_Cog4+G126_Cog6+G126_Cog8+G126_Cog9+G126_Cog11+G126_Cog13+G126_Cog15

PRMQ Total score	G126_Cog_TOT = G126_Cog_Pros+G126_Cog_Retro	

NOTE: for more details about T and Z scores please contact the Raine Study

12-Item Short Form Health Survey (SF-12) Version 2.0

Source items:

Raine Variable Name	Description	Recoded into:
G126_OAL8	In general, would you say you're in good health	v1
G126_LI12	Health limit activities - moderate activities	v2a
G126_LI14	Health limit activities - climbing several flights of stairs	v2b
G126_LI22	Problems due to physical health - accomplished less	v3a
G126_LI23	Problems due to physical health - limited kind of work/other activities	v3b
G126_LI26	Problems due to emotional health - accomplished less	v4a
G126_LI27	Problems due to emotional health - did work/other activities less carefully than usual	v4b
G126_PN26	In past 4 weeks - how much did pain interfere with your normal work	v5
G126_FE23	In past 4 weeks - have you felt calm and peaceful	v6a
G126_FE24	In past 4 weeks - did you have a lot of energy	v6b
G126_FE25	In past 4 weeks -have you felt downhearted and depressed	v6c
G126_LI28	In past 4 weeks - how much time has your physical/emotional health interfered with social	v7

Derived variables:

G126_PCS	SF12 - PHYSICAL HEALTH COMPOSITE SCORE
G126_MCS	SF12 -MENTAL HEALTH COMPOSITE SCORE
G126_PF_T	SF12 -PHYSICAL FUNCTIONING T-SCORE
G126_RP_T	SF12 -ROLE LIMITATION PHYSICAL T-SCORE
G126_BP_T	SF12 -PAIN T-SCORE
G126_GH_T	SF12 -GENERAL HEALTH T-SCORE
G126_VT_T	SF12 -VITALITY T-SCORE
G126_RE_T	SF12 -ROLE LIMITATION EMOTIONAL T-SCORE
G126_SF_T	SF12 -SOCIAL FUNCTIONING T-SCORE
G126_MH_T	SF12 -MENTAL HEALTH T-SCORE

How the derived variables were calculated:

- Prepared variables for calculating scales so higher score means better health

The "order for a better score" was flipped a few times. This is standard.

New Var Code	Var Value	New Value/Formula
v1	1	5
v1	2	4.4
v1	3	3.4
v1	4	2
v1	5	1
v5	■■■■	6 - V5
v6a & v6b	■■■■	6 - V6*

- Created scales of domain scores

These scales should not be used individually given the reduced reliability of SF-12 to SF-36; however, they needed to be calculated for the composite scores. The Z-scores are created using the standard method and the US norm data (not age/gender based, n~7500).

Calculated individual scale then converted to a Z-score before constructing composites. Final results are presented as T-scores.

Physical Function (PF)
PF = V2a + V2b
PF = 100 * (PF - 2)/4

PF Z-Score → PF_Z = (PF - 81.18122)/29.10588

PF T-Score = G126_PF_T → PF_T = 50 + (PF_Z*10)

Role Physical (RP)
RP = V3a + V3b   RP = 100 * (RP - 2)/8

RP Z-Score → RP_Z = (RP - 80.52856)/27.13526

RP T-Score = G126_RP_T → RP_T = 50 + (RP_Z*10)

Bodily Pain (BP)

BP = V5

BP = 100 * (BP - 1)/4

BP Z-Score → BP_Z = (BP - 81.74015)/24.53019

BP T-Score = G126_BP_T → BP_T = 50 + (BP_Z*10)

General Health (GH)

GH = V1

GH = 100 * (GH - 1)/4

GH Z-Score → GH_Z = (GH - 72.19795)/23.19041

GH T-Score = G126_GH_T → GH_T = 50 + (GH_Z*10)

Vitality (VT)

VT = V6b

VT = 100 * (VT - 1)/4

VT Z-Score → VT_Z = (VT - 55.59090)/24.84380

VT T-Score = G126_VT_T → VT_T = 50 + (VT_Z*10)

Social Functioning (SF)

SF = V7

SF = 100 * (SF - 1)/4

SF Z-Score → SF_Z = (SF - 83.73973)/24.75775

SF T-Score = G126_SF_T → SF_T = 50 + (SF_Z*10)

Role Emotional (RE)

RE = V4a + V4b

RE = 100 * (RE - 2)/8

RE Z-Score → RE_Z = (RE - 86.41051)/22.35543

RE T-Score = G126_RE_T → RE_T = 50 + (RE_Z*10)

Mental Health (MH)

MH = V6a + V6c

MH = 100 * (MH - 2)/8

MH Z-Score → MH_Z = (MH - 70.18217)/20.50597

MH T-Score = G126_MH_T → MH_T = 50 + (MH_Z*10)

- Constructed composite scores

SF12 - PHYSICAL HEALTH COMPOSITE SCORE = G126_PCS

PCS = (PF_Z * 0.42402) + (RP_Z * 0.35119) + (BP_Z * 0.31754) + (GH_Z * 0.24954)

   + (VT_Z * 0.02877) + (SF_Z * -0.00753) + (RE_Z * -0.19206) + (MH_Z * -0.22069)

G126_PCS = 50 +(PCS*10)

SF12 -MENTAL HEALTH COMPOSITE SCORE = G126_MCS

MCS = (PF_Z * -0.22999) + (RP_Z * -0.12329) + (BP_Z * -0.09731) + (GH_Z * -0.01571)

   + (VT_Z * 0.23534) + (SF_Z * 0.26876) + (RE_Z * 0.43407) + (MH_Z * 0.48581)

G126_MCS =50+(MCS*10)

Restless Leg Syndrome

Source items:

Raine Variable Name	Description
G126_SL72	When sitting or lying down, do you have a strong urge to move your legs?
G126_SL73	Is your urge to move your legs accompanied by a discomfort (unpleasant sensation) in your legs, for example a creepy-crawly or tingly feeling?
G126_SL74	Is the discomfort in your legs relieved in any way, even for a short time, by walking or moving your legs?
G126_SL75	At what times is the discomfort in your legs and/or urge to move most bothersome?

Derived variables:

G126_RLS   Restless Leg Syndrome 'Diagnosis'

How the derived variables were calculated:

Restless Leg Syndrome 'Diagnosis'	G126_RLS DO IF ((G126_SL72=4 OR G126_SL72=5) AND (G126_SL73=1) AND (G126_SL74=1) AND (G126_SL75=3 OR G126_SL75=4)). COMPUTE G126_RLS=1. ELSE. COMPUTE G126_RLS=0. END IF. 0 = no 1 = yes

:

Functional Outcomes of Sleep Questionnaire - 10 Item (FOSQ-10) Short Form

Source items:

Raine Variable Name	Description	Recoded into
G126_FOS1	Difficulty concentrating because tired	v1
G126_FOS2	Difficulty rememberin because tired	v2
G126_FOS3	Difficulty operating motor vehicle <160km because tired	v3
G126_FOS4	Difficulty operating motor vehicle >160km because tired	v4
G126_FOS5	Difficulty visiting people because tired	v5
G126_FOS6	Difficult relationship with people because tired	v6
G126_FOS7	Difficulty watching movie because tired	v7
G126_FOS8	Difficulty being active in evening because tired	v8
G126_FOS9	Difficulty being active in morning because tired	v9
G126_FOS10	Desire for intimacy / sex affected because tired	v10

Derived variables:

G126_FOS_GP   FOSQ - General Productivity Subscale
G126_FOS_V   FOSQ - Vigilance Subscale
G126_FOS_SO   FOSQ - Social Outcomes Subscale
G126_FOS_AL   FOSQ - Activity Level Subscale
G126_FOS_SD   FOSQ - Sexual Desire Subscale
G126_FOS_Total   FOSQ Total Score

How the derived variables were calculated:

FOSQ - General Productivity Subscale	G126_FOS_GP = mean(v1, v2)
FOSQ - Vigilance Subscale	G126_FOS_V = mean(v3, v4, v7)
FOSQ - Social Outcomes Subscale	G126_FOS_SO = v5
FOSQ - Activity Level Subscale	G126_FOS_AL = mean(v6, v8, v9)
FOSQ - Sexual Desire Subscale	G126_FOS_SD = v10
FOSQ Total Score	G126_FOS_Total = MEAN.2(G126_FOS_GP, G126_FOS_V, G126_FOS_SO, G126_FOS_AL, G126_FOS_SD) * 5

Attention-Related Cognitive Errors Scale (ARCES)

Source items:

Raine Variable Name	Description
G126_aCg1	Fridge for one thing but got another
G126_aCg2	Room for one thing but got another
G126_aCg3	Zoned out of conversation
G126_aCg4	Put things in wrong places
G126_aCg5	Wondered why went into a room
G126_aCg6	Start one task get distracted to do something else
G126_aCg7	Can't remember what just read
G126_aCg8	Mistake because doing one thing but thinking about another
G126_aCg9	Absent-mindedly mixed up things
G126_aCg10	Double check things e.g locked door
G126_aCg11	Misplaced frequently used objects
G126_aCg12	Can't see what I am looking for even though it's in front

Derived variables:

G126_aCg_Total   ARCES Total Summed Score
G126_aCg_Mean   ARCES Mean Score

How the derived variables were calculated:

ARCES Total Summed Score	G126_aCg_Total = SUM.2(G126_aCg1,G126_aCg2,G126_aCg3,G126_aCg4,G126_aCg5, G126_aCg6,G126_aCg7,G126_aCg8,G126_aCg9,G126_aCg10,G126_aCg11,G126_aCg12)
ARCES Mean Score	G126_aCg_Mean = MEAN.2(G126_aCg1,G126_aCg2,G126_aCg3,G126_aCg4,G126_aCg5, G126_aCg6,G126_aCg7,G126_aCg8,G126_aCg9,G126_aCg10,G126_aCg11,G126_aCg12)

Pittsburgh Sleep Symptom Questionnaire - Insomnia (PSSQ_I)

Source items:

Raine Variable Name	Description
G126_ps1	Last mth - difficulty falling asleep
G126_psa	How long has symptom lasted - weeks/months/years
G126_psa1	Number of weeks/months/years
G126_ps2	Last mth - difficulty staying asleep
G126_psb	How long has symptom lasted - weeks/months/years
G126_psb2	Number of weeks/months/years
G126_ps3	Last mth - Frequent waking
G126_psc	How long has symptom lasted - weeks/months/years
G126_psc3	Number of weeks/months/years
G126_ps4	Last mth - Not sound sleep
G126_psd	How long has symptom lasted - weeks/months/years
G126_psd4	Number of weeks/months/years
G126_ps5	Last mth - Sleep unrefreshing
G126_pse	How long has symptom lasted - weeks/months/years
G126_pse5	Number of weeks/months/years
G126_ps6	Last mth - sleep probs bother you
G126_ps7	Last mth - sleep probs affected work
G126_ps8	Last mth - sleep probs affected social life
G126_ps9	Last mth - Sleep probs affected life
G126_ps10	Last mth - Sleep probs made you irritable
G126_ps11	Last mth - sleep probs trouble concentrating
G126_ps12	Last mth - sleep probs make you fatigued
G126_ps13	Last mth - how sleepy during day

Derived variables:

G126_ps1_01	During the past month, how many nights or days, per week, have you had or been told you had, the following symptoms? Difficulty falling asleep - Indicator of "Freq" or "Always"
G126_psa_01	How long has symptom (difficulty falling asleep) lasted - Indicator of "> 4 weeks"
G126_ps2_01	During the past month, how many nights, or days per week, have you had, or been told you had, the following symptom? - Difficulty staying asleep - indicator of "Freq" or "Always"
G126_psb_01	How long has the symptom (difficulty staying asleep) lasted - Indicator of "> 4 weeks"
G126_ps5_01	During the past month, how many nights, or days per week, have you had, or been told you had, the following symptom? - Feeling that your sleep is unrefreshing - Indicator of "Freq" or "Always"
G126_pse_01	How long has the symptom (feeling that your sleep is unrefreshing) lasted? - Indicator of "> 4 weeks"

G126_PS_SSC	PSSQ_I sleep symptom criterion
G126_PS_DC	PSSQ_I duration criterion
G126_PS_DIC	PSSQ_I daytime impairment criterion
G126_PS_INS	PSSQ_I diagnosed insomnia

How the derived variables were calculated:

PSSQ_I sleep symptom criterion	G126_PS_SSC If at least 1 of G126_ps1_01 = 1, G126_ps2_01 = 1 or G126_ps5_01 = 1) is 1, then G126_PS_SSC=1 Otherwise, G126_PS_SSC=0
PSSQ_I duration criterion	G126_PS_DC If at least 1 of G126_psa_01 = 1, G126_psb_01 = 1 or G126_pse_01 = 1) is 1, then G126_PS_DC=1 Otherwise, G126_PS_DC=0
PSSQ_I daytime impairment criterion	G126_PS_DIC If at least 1 of G126_ps6, G126_ps7, G126_ps8, G126_ps9, G126_ps10, G126_ps11, G126_ps12, G126_ps13 >= 3 is 3 or 4, then G126_PS_DIC=1 Otherwise, G126_PS_DIC=0
PSSQ_I diagnosed insomnia	G126_PS_INS If all of G126_PS_DC, G126_PS_DC, and G126_PS_DIC are 1, then G126_PS_INS=1 Otherwise, G126_PS_INS=0 0 = do not diagnose insomnia 1 = diagnose insomnia

Epsworth Sleepiness Scale (ESS)

Source items:

Raine Variable Name	Description
G126_EPW1	Sleep when sitting and reading
G126_EPW2	Sleep when watching TV
G126_EPW3	Sleep when sitting in public place
G126_EPW4	Sleep when passenger vehicle >1hour
G126_EPW5	Sleep when lying down in afternoon
G126_EPW6	Sleep when sitting and talking to someone
G126_EPW7	Sleep when sitting after lunch (no alcohol)
G126_EPW8	Sleep when stop for few minutes while driving

Derived variables:

G126_EPW_score   Epworth Sleepiness Total Score
G126_EPW_cat   Epworth Sleepiness Total Category

How the derived variables were calculated:

Epworth Sleepiness Total Score	G126_EPW_score = G126_EPW1+G126_EPW2+G126_EPW3+G126_EPW4 +G126_EPW5+G126_EPW6+G126_EPW7+G126_EPW8
Epworth Sleepiness Total Category	G126_EPW_cat 0-5 = 'Lower Normal Daytime Sleepiness' (=0) 6-10 = 'Higher Normal Daytime Sleepiness' (=1) 11-12 = 'Mild Excessive Daytime Sleepiness' (=2) 13-15 = 'Moderate Excessive Daytime Sleepiness' (= 3) 16-24 = 'Severe Excessive Daytime Sleepiness' (=4)

Pittsburgh Sleep Quality Inventory (PSQI)

Source items:

Raine Variable Name	Description	Recoded into
G126_BED	What time (on average) have you gone to bed at night	v1
G126_SL1	How long does it usually take you to fall asleep (minutes)	v2
G126_WAKE	What time (on average) have you gotten up in the morning	v3
G126_SL2A	How many total hours of actual sleep do you usually get (hours)	v4
G126_SL6	Trouble sleeping- Cannot get to sleep within 30 minutes	v5
G126_SL7	Trouble sleeping- Wake up in the middle of the night or early morning	v6
G126_SL8	Trouble sleeping- Have to get up to use the bathroom	v7
G126_SL9	Trouble sleeping-Cannot breathe comfortably	v8
G126_SL10	Trouble sleeping-Cough or snore loudly	v9
G126_SL11	Trouble sleeping-Feel too cold	v10
G126_SL12	Trouble sleeping-Feel too hot	v11
G126_SL13	Trouble sleeping- Had bad dreams	v12
G126_SL14	Trouble sleeping-Have pain	v13
G126_SL15	Trouble sleeping-other reasons	v14
G126_SL16	During the past month, how would you rate your sleep quality overall?	v15
G126_SL17	In past month, how often taken medicine to help you sleep?	v16
G126_SL18A	In past month, how often have you had trouble staying awake driving/eating/social	v17
G126_SL19	Past month, how big problem having enough enthusiasm to get things done?	v18
G126_SL20	Do you have a bed partner/room mate	v19

Derived variables:

G126_PSQI_C1   PSQI Comp1 - subjective sleep quality
G126_PSQI_C2   PSQI Comp2 - sleep latency
G126_PSQI_C3   PSQI Comp3 - sleep duration
G126_PSQI_C4   PSQI Comp4 - habitual sleep efficiency
G126_PSQI_C5   PSQI Comp5 - sleep disturbances
G126_PSQI_C6   PSQI Comp6 - use of sleep medications
G126_PSQI_C7   PSQI Comp7 - daytime dysfunction
G126_PSQI_TOTAL   PSQI Total Score - Continuous
G126_PSQI_TOTAL_CAT PSQI Total Score – Categorical

How the derived variables were calculated:

Component 1: Subjective sleep quality = G126_PSQI_C1

$$Comp1 = v15$$

Component 2: Sleep latency   = G126_PSQI_C2

Assign categorical coding for v2 in new variable (x1):

Response	x1
≤ 15 mins	0
16 - 30 mins	1
31 - 60 mins	2
> 60 mins	3

Sum x1 and v5 scores together in new variable (x2)

Assign Comp2 score as follows:

x2 Sum	Comp2
0	0
1 - 2	1
3 - 4	2
5 - 6	3

Component 3: Sleep duration   = G126_PSQI_C3

Assign categorical coding for v4 for Comp3.

Response	Comp3
> 7 hrs	0
6 - 7 hrs	1
5 - 6 hrs	2
< 5 hrs	3

Component 4: Habitual sleep efficiency = G126_PSQI_C4

First, you need to calculate the amount of hours spent in bed, then calculate sleep efficiency.

$$HrsBed = (v3 + 24hrs) - v1$$
$$SleepEff\ (\%) = v4/HrsBed \times 100$$

Assign categorical coding for Comp4

Response	Comp4
> 85%	0
75 - 84%	1
65 - 74%	2
< 65%	3

Component 5: Sleep disturbances = G126_PSQI_C5
$$\text{SleepDis} = \text{sum}(v6{:}v14)$$

Assign categorical coding for Comp5.

Response	Comp5
0	0
1 - 9	1
10 - 18	2
19 - 27	3

Component 6: Use of sleeping medication = G126_PSQI_C6
$$\text{Comp6} = v16$$

Component 7: Daytime dysfunction = G126_PSQI_C7
$$\text{DayDys} = v17 + v18$$

Assign categorical coding for Comp7.

Response	Comp7
0	0
1 - 2	1
3 - 4	2
5 - 6	3

Global PSQI Score = G126_PSQI_TOTAL
$$\text{GlobalPSQI} = \text{sum}(\text{Comp1}{:}\text{Comp7})$$

PSQI Total Score – Categorical = G126_PSQI_TOTAL_CAT
  ≤ 5 = good sleep quality (=1)
  >5 = poor sleep quality (= 2)

Morningness-Eveningness Questionnaire (MEQ)

Source items:

Raine Variable Name	Description
G126_ME1	Best time to get up
G126_ME2	Best time to go to bed
G126_ME3	How dependent on alarm clock
G126_ME4	how easy getting up
G126_ME5	How alert in first half hour
G126_ME6	Appetite in first half hour
G126_ME7	Tiredness in first half hour
G126_ME8	No commitments the next day - same bed time
G126_ME9	Exercise between 7 - 8 am. How would you perform
G126_ME10	What time at night do you want to sleep
G126_ME11	Best testing time
G126_ME12	bedtime 11.00pm - how tired
G126_ME13	Late night - when wake up
G126_ME14	Awake 4 - 6 am - what would you do
G126_ME15	2 hours hard physical work - when
G126_ME16	Exercise between 10 -11 pm. How would you perform
G126_ME17a-x	Best 5 consecutive work hours (indicator variables)
G126_ME18	Time of feeling best peak
G126_ME19	Evening or morning person

Derived variables:

G126_MEQ_TOTAL   MEQ Total Score
G126_MEQ_TOTAL_CAT   MEQ Categorised Total Score

How the derived variables were calculated:

MEQ Total Score	G126_MEQ_TOTAL = G126_ME1_CAT+G126_ME2_CAT+G126_ME3+G126_ME4+ G126_ME5+G126_ME6+G126_ME7+G126_ME8+G126_ME9+ G126_ME10_CAT+G126_ME11+G126_ME12+G126_ME13+ G126_ME14+G126_ME15+G126_ME16+G126_ME17_CAT+ G126_ME18_CAT+G126_ME19
MEQ Categorised Total Score	G126_MEQ_TOTAL_CAT 16-30 = Definitely evening type (=1) 31-41 = Moderately evening type (=2) 42-58 = Neither type (=3) 59-69 = Moderately morning type (=4) 70-86 = Definitely morning type (=5)

Berlin Questionnaire

Source items:

Raine Variable Name	Description	Recoded into
G126_Bn1	Do you snore	v1
G126_Bn2	How loud snoring	v2
G126_Bn3	How often snore	v3
G126_Bn4	snoring bother others	v4
G126_Bn5	quit breathing during sleep	v5
G126_Bn6	How often tired after sleep	v6
G126_Bn7	when awake feel tired	v7
G126_Bn8	nodded off/ fallen asleep while driving	v8
G126_Bn9	How often asleep while driving	v9
G126_Bn10	Do you have high BP	v10
G126_BMI_I	Calculate indicator variable: 1 if BMI > 30kg/m^2	v11

Derived variables:

G126_Bn_Total   Berlin Questionnaire - Indicator for risk of sleep apnoea

How the derived variables were calculated:

Berlin Questionnaire - Indicator for risk of sleep apnoea	v11 = 1 if G126_BMI>30, otherwise 0 Category 1 Sum questions v1 - v5. If ≥ 2, then mark as 1 otherwise 0. Call the variable Cat1. Category 2 Sum questions v6 - v8. If ≥ 2, then mark as 1 otherwise 0. Call the variable Cat2. Category 3 Sum questions v10 - v11. If ≥ 1, then mark as 1 otherwise 0. Call the variable Cat3. G126_Bn_Total=SUM(G126_BnCat1,G126_BnCat2,G126_BnCat3) If sum(cat1, cat2, cat3) ≥ 2, the participant is at high risk of sleep apnoea. If sum(cat1, cat2, cat3) < 2, the participant is at low risk of sleep apnoea. 0= low risk of sleep apnoea 1= high risk of sleep apnoea

Hot Flashes Related Daily Interference Scale (HFRDIS)

Source items:

Raine Variable Name	Description
G126_MEN14A	Hot flush interfered in past week - work
G126_MEN14B	Hot flush interfered in past week - social activities
G126_MEN14C	Hot flush interfered in past week - leisure activities
G126_MEN14D	Hot flush interfered in past week - sleep
G126_MEN14E	Hot flush interfered in past week - mood
G126_MEN14F	Hot flush interfered in past week - concentration
G126_MEN14G	Hot flush interfered in past week - relaxation with others
G126_MEN14H	Hot flush interfered in past week - sexuality
G126_MEN14I	Hot flush interfered in past week - enjoyment of life
G126_MEN14J	Hot flush interfered in past week - overall quality of life

Derived variables:

G126_HF_T   Hot Flashes Total Score

How the derived variables were calculated:

Hot Flashes Total Score	G126_HF_T = G126_MEN14A + G126_MEN14B + G126_MEN14C + G126_MEN14D + G126_MEN14E + G126_MEN14F + G126_MEN14G + G126_MEN14H + G126_MEN14I + G126_MEN14J **NOTE:** the HFRDIS can be thought of as answering the quote "Hot flashes interfered with my life": 0 = not at all, 100 = very much so

Greene Climacteric Scale (GSC)

Source items:

Raine Variable Name	Description	Recoded into
G126_MEN15A	Present menopausal symptoms - heart beating quickly/strongly	v1
G126_MEN15B	Present menopausal symptoms - feeling tense/nervous	v2
G126_MEN15C	Present menopausal symptoms - difficulty sleeping	v3
G126_MEN15D	Present menopausal symptoms - excitability	v4
G126_MEN15E	Present menopausal symptoms - attacks of anxiety/panic	v5
G126_MEN15F	Present menopausal symptoms - difficulty concentrating	v6
G126_MEN15G	Present menopausal symptoms - feeling tired/lacking energy	v7
G126_MEN15H	Present menopausal symptoms - loss of interest in most things	v8
G126_MEN15I	Present menopausal symptoms - feeling unhappy/depressed	v9
G126_MEN15J	Present menopausal symptoms - crying spells	v10
G126_MEN15K	Present menopausal symptoms - irritability	v11
G126_MEN15L	Present menopausal symptoms - feeling dizzy/faint	v12
G126_MEN15M	Present menopausal symptoms - pressure/tightness in head	v13
G126_MEN15N	Present menopausal symptoms - parts of body feel numb	v14
G126_MEN15O	Present menopausal symptoms - headaches	v15
G126_MEN15P	Present menopausal symptoms - muscle/joint pains	v16
G126_MEN15Q	Present menopausal symptoms - loss of feeling in hands/feet	v17
G126_MEN15R	Present menopausal symptoms - breathing difficulties	v18
G126_MEN15S	Present menopausal symptoms - hot flushes	v19
G126_MEN15T	Present menopausal symptoms - sweating at night	v20
G126_MEN15U	Present menopausal symptoms - loss of interest in sex	v21

Derived variables:

G126_GSC_P	GSC Psychological Scale Total Score
G126_GSC_P_A	GSC Psychological – Anxiety Subscale Total Score
G126_GSC_P_D	GSC Psychological – Depression Subscale Total Score
G126_GSC_S	GSC Somatic Scale Total Score
G126_GSC_V	GSC Vasomotor Scale Total Score
G126_GSC_SF	GSC Sexual Function Score

How the derived variables were calculated:

GSC Psychological Scale Total Score	$G126\_GSC\_P = v1 + v2 + v3 + v4 + v5 + v6 + v7 + v8 + v9 + v10 + v11$
GSC Psychological – Anxiety Subscale Total Score	$G126\_GSC\_P\_A = v1 + v2 + v3 + v4 + v5 + v6$

GSC Psychological – Depression Subscale Total Score	G126_GSC_P_D = v7 + v8 + v9 + v10 + v11
GSC Somatic Scale Total Score	G126_GSC_S = v12 + v13 + v14 + v15 + v16 + v17 + v18
GSC Vasomotor Scale Total Score	G126_GSC_V = v19 + v20
GSC Sexual Function Score	G126_GSC_SF = v21

Sleep questionnaire data Generation 0

Notes:

Please note that the following variables are about Generation 0 but reported by Generation 1.
They are stored under the Gen0 ID:

G126_SL78	Any of the following diagnosed by a doctor? - Sleep Apnoea
G126_SL79	Any of the following diagnosed by a doctor? - Narcolepsy
G126_SL80	Any of the following diagnosed by a doctor? - Loud or disruptive snoring
G126_S108	Any of the following diagnosed by a doctor? - Insomnia disorder
G126_SL81	Any of the following diagnosed by a doctor? - Excessive (too much) sleepiness
G126_SL82	Any of the following diagnosed by a doctor? - Restless legs or periodic leg movements of sleep