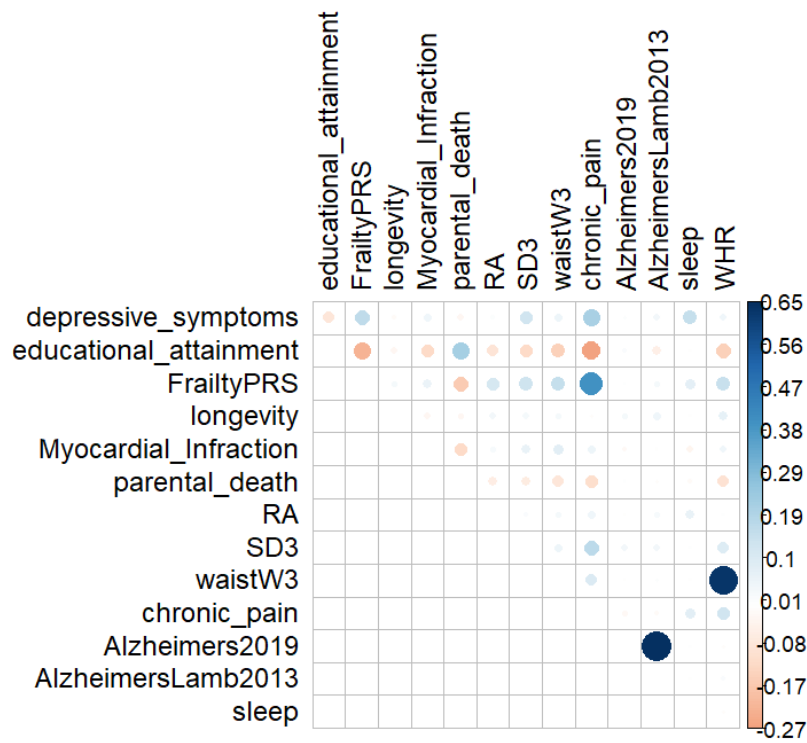


Supplementary Figure S1. ELSA correlation matrix for 26 PGS



Supplementary Figure S2. LBC1936 (full sample – Wave 1) Correlation Matrix for predictive PGS

Supplementary Table ST1: Elements comprising the frailty index in LBC1936

Items	Coding	Cut offs based on
Systolic Blood Pressure	<5 th percentile (1), 5 th -20 th percentile (0.5), >20 th percentile (0)	Recommended technique (Theou et al., 2015)
Diabetes	Yes (1) or No (0)	Already binary variable
High Cholesterol	Yes (1) or No (0)	Already binary variable
Heart problem	Yes (1) or No (0)	Already binary variable
Stroke or mini stroke	Yes (1) or No (0)	Already binary variable
Crampy pains in calves	Yes (1) or No (0)	Already binary variable
Problems with blood circulation	Yes (1) or No (0)	Already binary variable
Thyroid Disorder	Yes (1) or No (0)	Already binary variable
Cancer	Yes (1) or No (0)	Already binary variable
Parkinson's disease	Yes (1) or No (0)	Already binary variable
Dementia	Yes (1) or No (0)	Already binary variable
Arthritis	Yes (1) or No (0)	Already binary variable
Any other chronic disease	Yes (1) or No (0)	Already binary variable
Polypharmacy	>4 medications (1), ≤4 medications (0)	Recommended technique (Theou et al., 2013)
Body Mass Index	18.5 to <25 (0), 25 to <30 (0.5), <18.5 or ≥equal to 30 (1)	Recommended technique (Chamberlain, Sauver, et al., 2016)
6m walk time (gait speed)	>10 seconds or physically unable (1), <10 seconds (0)	Recommended technique (Hoogendijk et al., 2017)
Able to stand up from a chair	Yes (1) or No (0)	Already binary variable

Items	Coding	Cut offs based on
Grip strength (strongest hand and stratified by sex and BMI)	<5 th percentile (1), 5 th -20 th percentile (0.5), >20 th percentile (0)	Recommended technique (Theou et al., 2015)
Townsend Disability Scale	11 – 18 (1), 0 -10 (0)	Recommended technique (Fiona Elaine Matthews et al., 2016)
Peak Expiratory Flow rate (stratified by sex)	<5 th percentile (1), 5 th -20 th percentile (0.5), >20 th percentile (0)	Recommended technique (Theou et al., 2015)
Forced expiratory volume (stratified by sex)	<5 th percentile (1), 5 th -20 th percentile (0.5), >20 th percentile (0)	Recommended technique (Theou et al., 2015)
Depression	11 -21 (1), 8 – 10 (0.5), 0 – 7 (0)	Recommended technique (Zigmond & Snaith, 1983)
Anxiety	11 -21 (1), 8 – 10 (0.5), 0 – 7 (0)	Recommended technique (Zigmond & Snaith, 1983)
MMSE	<10 (1), 11-17 (0.75), 18 – 20 (0.5), 20 – 24 (0.25), >24 (0)	Recommended technique (Searle et al., 2008)
Digit Symbol	<5 th percentile (1), 5 th -20 th percentile (0.5), >20 th percentile (0)	Recommended technique (Theou et al., 2015)
Block Design	<5 th percentile (1), 5 th -20 th percentile (0.5), >20 th percentile (0)	Recommended technique (Theou et al., 2015)
Verbal Fluency	<5 th percentile (1), 5 th -20 th percentile (0.5), >20 th percentile (0)	Recommended technique (Theou et al., 2015)
Matrix Reasoning	<5 th percentile (1), 5 th -20 th percentile (0.5), >20 th percentile (0)	Recommended technique (Theou et al., 2015)
Reaction time test	<5 th percentile (1), 5 th -20 th percentile (0.5), >20 th percentile (0)	Recommended technique (Theou et al., 2015)
Delayed recall	<5 th percentile (1), 5 th -20 th percentile (0.5), >20 th percentile (0)	Recommended technique (Theou et al., 2015)

Supplementary Table ST2: Elements comprising the frailty index score and their seven domains in ELSA

Variable name	Domain (taken from elsa questionnaire)	Description
hemobwa	mobility	Difficulty walking 100m
hemobsi	mobility	Difficulty sitting 2 hrs
hemobch	mobility	difficulty getting up from chair after sitting long periods
hemobcs	mobility	Difficulty climbing several flights of stairs without resting
hemobcl	mobility	Difficulty climbing one flight of stairs without resting
hemobst	mobility	Difficulty stooping, kneeling or crouching
hemobre	mobility	Difficulty reaching or extending arms above shoulder level
hemobpu	mobility	Difficulty pulling or pushing large objects
hemobli	mobility	Difficulty lifting or carrying weights over 10 pounds (4.54kg)
hemobpi	mobility	Difficulty picking up a 5p coin from a table
headldr	activities of daily life	Difficulty dressing, including putting on shoes and socks
headlwa	activities of daily life	difficulty walking across a room
headlba	activities of daily life	Difficulty bathing or showering
headlea	activities of daily life	Difficulty eating, such as cutting up food
headlbe	activities of daily life	Difficulty getting in and out of bed
headlwc	activities of daily life	Difficulty using the toilet including getting up or down
headlma	activities of daily life	Difficulty using map to figure out how to get around strange place
headlpr	activities of daily life	Difficulty preparing a hot meal
headlsh	activities of daily life	Difficulty shopping for groceries
headlph	activities of daily life	Difficulty making telephone calls
headlme	activities of daily life	Difficulty taking medications
headlhg	activities of daily life	Difficulty doing work around the house or garden
headlmo	activities of daily life	Difficulty managing money, eg paying bills, keeping track of

hedimbp	CV	expenses
hediman	CV	High bp dx
hedimmi	CV	Angina dx
hedimhf	CV	Heart attack
hedimar	CV	Congestive heart failure
hedimdi	CV	Abnormal heart rhythm
hedimst	CV	Diabetes or high blood sugar
hediblu	Chronic	Stroke dx
hedibas	Chronic	Lung disease dx
hedibar	Chronic	Asthma dx
hedibos	Chronic	Arthritis dx
hedibca	Chronic	Osteoporosis
hedibpd	Chronic	Cancer dx
hedibps	Chronic	Parkinson's dx
hedibad	Chronic	Psychiatric condition
hedibde	Chronic	Alzheimer's dx
psceda	Psych	Dementia dx
pscedb	Psych	Whether felt depressed much of the time during the past week
pscedc	Psych	Whether felt everything they did during the past week was an effort
pscedd	Psych	Whether felt their sleep was restless during the past week
pscede	Psych	Whether was happy much of the time during the past week /R
pscedf	Psych	Whether felt lonely much of the time during the past week
pscedg	Psych	Whether enjoyed life much of the time during the past week /R
pscedh	Psych	Whether felt sad much of the time during the past week
hehelp	General	Whether could not get going much of the time during the past week
heeye	General	Self-reported general health
hehear	General	Self-reported eyesight (while using lenses if appropriate)
hefla	General	Self-reported hearing (while using hearing aid if appropriate)
		Whether fallen down since last interview

hefrac	General	Whether has fractured hip
heji	General	Whether had joint replacement
mmpain	General	Timed walk: whether had pain whilst walking
cfdatd	Memory	Whether correct day of month given
cfdatm	Memory	Whether correct month given
cfdaty	Memory	Whether correct year given
cfday	Memory	Whether correct day given
cfmem	Memory	Whether prompt given for prospective memory test (remembering to write initials)
cflisenq	Memory	Refers to cflisen
cfaniq	Memory	Refers to cfani
cfliisdq	Memory	Refers to cfliisd