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A questionnaire-wide association study of personality and mortality

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Title: A Questionnaire-Wide Association Study of Personality and Mortality: The Vietnam Experience Study

Abbreviated running title: Questionnaire-Wide Association Study

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Abstract

Objective: We examined the association between the Minnesota Multiphasic Personality Inventory (MMPI) and all-cause mortality in 4462 middle-aged Vietnam-era veterans. Methods: We split the study population into half samples. In each half, we used proportional hazards (Cox) regression to test the 550 MMPI items' associations with mortality over 15 years. In all participants, we subjected significant (p < .01) items in both halves to principal-components analysis (PCA). We used Cox regression to test whether these components predicted mortality when controlling for other predictors (demographics, cognitive ability, health behaviors, mental/physical health). Results: Eighty-nine items were associated with mortality in both half-samples. PCA revealed Neuroticism/Negative Affectivity, Somatic Complaints, Psychotic/Paranoia, and Antisocial components, and a higher-order component, Personal Disturbance. Individually, Neuroticism/Negative Affectivity (HR = 1.55, 95% CI = 1.39,1.72), Somatic Complaints (HR = 1.66; 95% CI = 1.52,1.80), Psychotic/Paranoid (HR = 1.44; 95% CI = 1.32,1.57), Antisocial (HR = 1.79; 95% CI = 1.59,2.01), and Personal Disturbance (HR = 1.74; 95% CI = 1.58,1.91) were associated with risk. Including covariates attenuated these associations (28.4 to 54.5%), though they were still significant. After entering Personal Disturbance into models with each component, Neuroticism/Negative Affectivity and Somatic Complaints were significant, although Neuroticism/Negative Affectivity's were now protective (HR = 0.73, 95% CI = 0.58,0.92). When the four components were entered together with or without covariates, Somatic Complaints and Antisocial were significant risk factors. Conclusions: Somatic Complaints and Personal Disturbance are associated with increased mortality risk. Other components' effects varied as a function of variables in the model.

Keywords: Minnesota Multiphasic Personality Inventory; Mortality; Negative Affect Personality; Vietnam Experience Study; Somatic Complaints

Abbreviations: DBP =diastolic blood pressure; FEV $_1$ =forced expiratory volume in 1 second; GWAS =genome-wide association study or studies; MMPI =Minnesota Multiphasic Personality Inventory; PCA =principal-components analysis; QWAS =questionnaire-wide association study or studies; SBP =systolic blood pressure; VES =Vietnam Experience Study

Introduction

Personality traits are moderately stable, genetically- and environmentally-based individual differences in behavior, affect, and thinking [1, 2] that are associated with health [3, 4]. The Five-Factor Model describes traits as falling along five broad dimensions: Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness [5-7]. Neuroticism denotes individual differences in anxiety, emotional vulnerability, and depression. Extraversion denotes individual differences in sociability, positive affect, and excitement-seeking. Openness to Experience captures individual differences in sensitivities to aesthetics and feelings as well as a tendency to hold liberal political views. Agreeableness describes individual differences in cooperativeness, straightforwardness, and modesty. Conscientiousness describes individual differences in self-discipline, goal-directedness, and deliberation.

Higher Conscientiousness has been repeatedly associated with reduced mortality risk [3, 4, 8]. However, the picture for the other dimensions is complex. Whereas meta-analyses indicated that lower Neuroticism, higher Extraversion, higher Openness, and higher Agreeableness are related to longer life [9, 10], individual studies either found no such association or an association in the opposite direction [11, 12]. One explanation for this inconsistency is that different aspects, such as facets, of these personality dimensions are differentially-related to mortality risk [3]. Thus, the degree to which a personality instrument taps aspects of these dimensions related to higher or lower risk would determine the size and direction of the association.

Previous studies of personality-mortality associations followed a standard psychometric approach, i.e. personality dimensions were defined as given sets of items prior to examining their impact on health. These item sets will almost all have been derived via principal-components analysis or factor analysis to indicate how they load onto one or more

personality dimensions. This approach ignores the aforementioned heterogeneity in how the facets or even items defining personality dimensions are associated with mortality risk. Empirically, items within dimensions can have different characteristics: for example, they have different heritabilities [13]. Therefore, rather than accept personality dimensions as given sets of items, we used empirical criterion keying to first identify individual personality items that are reliably associated with mortality, and then find how they agglomerate in dimensions.

To these ends we conducted a 'questionnaire-wide association study' (QWAS) to examine the personality-mortality association in the Vietnam Experience Study (VES) cohort. This approach was based on genome-wide association studies (GWAS), which use numerous single nucleotide polymorphisms as predictors. A similar approach was recently used to identify novel predictors of Type II diabetes from a large pool of environmental risk factors [14]. While not without their shortcomings, such "X"-WAS studies may complement other means of examining personality risk factors for mortality [15, 16].

Participants were male Vietnam-era veterans who underwent a detailed medical and psychological examination [17-20]. As part of the psychological examination, participants completed the Minnesota Multiphasic Personality Inventory, a large battery of personality traits [MMPI; 21, 22]. The MMPI's authors anticipated its use in this fashion: "(I)t seemed desirable to create a rather large reservoir of items from which various scales might be constructed in the hope of evolving a greater variety of valid personality descriptions than are available at the present time." [21]. Indeed, rather than being defined by a single set of accepted scales, as is, for example, the NEO-PI-R [6], the MMPI has been used to generate multiple sets of scales for different purposes [22-26].

Here we circumvent the need to choose a set of MMPI scales, each of which may be better or more poorly suited to the task of predicting mortality. Instead, we will first test

which of the hundreds of MMPI personality trait items are associated with mortality. As with GWAS, our sample size was large and thus, to deal with Type I errors, we conducted the initial analysis on two half samples. In addition, we will form dimensions based on the items that were identified as predictors of mortality risk and examine their association with mortality after adjusting for numerous other risk factors. By considering all the MMPI items in this manner, we hope to identify novel, large personality-mortality associations and elucidate pathways from personality traits to mortality.

Methods

Participants

The sample was derived from the VES cohort. The VES was initiated by the U.S. Congress to determine whether health problems were associated with Agent Orange exposure [17-20]. Ethical approval was granted by the U.S. Office for Technology Assessment, the Department of Health and Human Services Advisory Committee, the Agent Orange Working Group Science Panel, and a review panel from the U.S. Centers for Disease Control.

The participants were derived from nearly five million male Vietnam-era U.S. Army veterans who entered military service between January 1, 1965 and December 31, 1971 and whose records were stored at the National Personnel Records Center. The VES cohort comprised 15,288 men from a random sample who were not excluded for any one of five possible reasons and who participated in a 1985 telephone interview. A random sample of men who participated in the telephone interview was invited to take part in a medical examination. The present sample comprises 4462 of those men who were invited to and participated in the 1986 medical examination. At the time of the medical examination, during which their personality was assessed, participants ranged from 30.8 to 48.0 years in age (M = 37.9; SD = 2.5). Further details about recruitment criteria for a telephone interview and medical examinations are described elsewhere [27].

Measures

Covariates. Archival records data included ethnicity and score at induction on the Army General Technical Test, a measure of cognitive ability [28]. Data collected during telephone interviews in 1985 included educational achievement, household income, marital status, smoking and drinking behavior, and whether participants were told by a doctor that they had hypertension, cancer, diabetes, or coronary heart disease. Data collected during examinations in 1986 included serum glucose level, systolic (SBP) and diastolic (DBP) blood pressure, physical activity (resting pulse rate), forced expiratory volume in 1 second (FEV_1), body mass index, and 12-month prevalence of major depression or generalized anxiety disorder, both defined in terms of the third edition of the American Psychiatric Association's Diagnostic and Statistical Manual [29] and assessed via the Diagnostic Interview Schedule [30].

MMPI. During the examination, participants were administered the 566 item MMPI [22]. Items can be answered "True", "False", or "?" and are keyed as belonging to one or more scales, none of which we shall use. Sixteen MMPI items are duplicates used to assess response consistency [22]; our analyses did not include the second occurrence of duplicated items.

Mortality. Vital status was first assessed starting from discharge date to December 31, 1983 [17]. The databases used to identify deaths in that study included those of the U.S. Army, Veterans Administration (Beneficiary Identification and Record Locator Subsystem), Social Security Administration, Internal Revenue Service, and National Center for Health Statistics (National Death Index). In a later study, follow-up time for assessing vital status was extended to December 31, 2000 [31]. In that study, vital status was assessed using the Department of Veterans Affairs (previously the Veterans Administration) Beneficiary Identification Record Locator Subsystem death file, the Social Security Administration Death

Master File, and the National Death Index Plus (NDI Plus). All matches in the latter study were manually reviewed.

Analyses

Analyses were carried out using R version 2.15.2 [32]. Because of the large number of statistical tests involved in examining associations between MMPI items and mortality, we took steps to reduce the number of false positives. Specifically, we randomly divided the study population into two half samples. For each half, we used the -coxph- function to conduct proportional hazards (Cox) regression [33, 34] to determine whether, controlling for age and ethnicity, answering "True" was associated with all-cause mortality risk. In a previous study in which we examined cognitive ability and an MMPI-derived Neuroticism scale, we did not find any violation of the proportionality assumption [35]. Only items associated with mortality in the same direction and with a p-value < .01 in both half samples were retained for further analyses.

We then subjected the retained MMPI items to two principal-components analyses (PCA) using the -principal- function [36]. For the first PCA we treated MMPI responses as continuous and used the total sample. In addition, we treated the 424 missing responses as .5, a procedure similar to one that yields comparable correlation matrices to other methods for handling missing data [25]. For the second PCA, we treated MMPI responses as categorical by first obtaining tetrachoric correlations among items. This PCA required dropping 261 cases that had missing MMPI responses from the total sample. In both cases, we decided on the number of components to extract by examining the scree plot and conducting parallel analyses using the -paran- function [37]. We rotated the components from both PCAs using the promax procedure to clarify their content. Following a previous study of the MMPI [25], we defined item-component loadings as salient if they were ≥ |.3|.

We next carried out Cox regressions in which we predicted mortality risk using the components as predictors. We planned models based on the assumption that a PCA of items discovered via the item-level mortality association analysis will yield multiple components. In a set of single-dimension models, each component will be tested separately in two separate models. The first model includes age and ethnicity (white, black, other) as covariates. The second model includes age, ethnicity, marital status (Married, Divorced/separated/widowed, Never married), cognitive ability, family income (≤ $20,000, $20,001-$40,000, > $40,000), years of education (≤ 8, 9-12, 13-16, 17-18), body mass index (≤ 25, 25-30, > 30), pulse rate, presence of somatic conditions, smoking (non-smoker, former smoker, current smoker) and drinking behavior (never drinker, non-drinker, drinker, never binges, 1 binge/month, 2-7 binges/month, ≥ 8 binges/month), SBP, DBP, blood glucose, FEV_1, history of major depression (absent, present), and history of generalized anxiety disorder (absent, present). Next, in multi-dimension models, the components were tested together to determine whether independent effects of each dimension predicted mortality. This set of models also includes two sets of models, one that only controls for age and ethnicity and one that controls for all of the covariates. In all models, categorical variables were dummy-coded so that the first level was the reference category and continuous variables were converted to z-scores.

Results

Sample Characteristics

Characteristics of the participants on all variables are presented in Table 1. Of the 4462 participants, 248 died by the end of December 31, 2000. Participant characteristics are shown for the total sample and broken down by half sample and mortality status.

Item-Level Mortality Associations

Of the 550 items, 159 and 163 were significantly (p < .01) related to mortality in the first and second half sample, respectively; 89 were significantly related to mortality in both half samples (see Figure 1 and Supplementary Digital Content 1).

Principal-Components Analyses

When the MMPI responses were treated as continuous, parallel analysis indicated that the eigenvalues of 8 components exceeded the 95th percentile of those derived from random permutations of the data set. The scree plot suggested that four or five components described the 89 items. The eight component solution had three relatively small components, with two having five salient loadings and one having four salient loadings. In addition, the four component solution was more interpretable than the five component solution.

When the MMPI responses were treated as categorical, parallel analysis indicated that the eigenvalues of 10 components exceeded the 95th percentile of those derived by chance. The scree plot suggested there were four components. The 10 component solution included 1 singlet and 4 small components comprising 3, 4, 5, and 6 salient loadings. Extracting only five components yielded one difficult to interpret component made up of only four salient loadings.

Based on these results, we retained the four components. These components accounted for 28% of the variance when responses were treated as continuous and 47% of the variance when responses were treated as categorical. We compared these two sets of loadings using targeted orthogonal Procrustes rotation [38] by rotating the solution when responses were treated as continuous to that derived when responses were treated as categorical. The congruence of the overall structure (.96) and those of the first three components (.99, .97, and 1.00) indicated clearly replicable [39, 40]. On the other hand, the congruence of the fourth component (.84) fell just short of indicating fair replicability [39, 40].

Given these findings, we chose to interpret the four large and clearly interpretable components derived when treating MMPI responses as continuous (see Table 2 and Supplementary Digital Content S2). Sixty-six items had salient loadings on only 1 component and 6 had salient loadings on 2 components. The first rotated component comprised items describing anxiety, low mood, self-defeating cognitions, and emotional fragility/vulnerability. It resembled Neuroticism and Negative Affectivity [25, 41] and was named thus. The second component comprised items describing self-reported good health and absence of somatic complaints or disturbed sleep. After reflecting this component, that is multiplying its loadings by -1, it resembled the Somatic Complaints dimension previously derived from the whole MMPI [25]. We therefore assigned it the same name. The third component comprised items reflecting paranoid ideation, auditory hallucinations, avoidance, and aggressive thoughts and thus was similar to the Psychoticism/Infrequency dimension derived in the earlier study of the MMPI [25]. We therefore named it Psychotic/Paranoid. The fourth component was not previously described, though as it comprised items describing antisocial behaviors and cognitions, we named it Antisocial. We used the -alpha- function [36] to compute the internal consistencies (Cronbach's alphas) of each component based on items that had salient loadings. The internal consistencies for the components were .89, .85, .84, and .71, respectively.

The correlations between components ranged from |.41| to |.56|. We therefore computed standardized component scores for each individual and subjected these scores to a second-order PCA. Correlations between components could be described by a higher-order component onto which components loaded .84, .77, .81, and .77, respectively. We named this higher-order component "Personal Disturbance" and computed its standardized score for each participant. The internal consistency of this component was .81.

Cox Regressions

We tested the four components and the higher-order Personal Disturbance component individually to find if they were related to mortality risk (Table 3, upper left panel). Age and ethnicity were covariates. The increased risks associated with each standard deviation were 44% (Psychotic/Paranoid), 55% (Neuroticism/Negative Affectivity), 66% (Somatic Complaints), 79% (Antisocial), and 74% (Personal Disturbance).

Including the remaining covariates attenuated these associations by 54.5% for Neuroticism/Negative Affectivity, 33.3% for Somatic Complaints, 38.6% for Psychotic/Paranoid, 44.3% for Antisocial, and 28.4% for Personal Disturbance, though they were still significant (see Table 3, upper middle panel). Thus, these effects were partly mediated or confounded by their relationship to physical health, psychological health, or health behaviors.

Including Personal Disturbance in the models that included age, ethnicity, and the remaining covariates affected the relationship between lower-order components and mortality (see Table 3, upper right panel). In each model, Personal Disturbance was significant (see Tables S10-S13). The effect of Somatic Complaints was attenuated by 47.7% when Personal Disturbance was included, but it was still significant, with each standard deviation now associated with a 23% increase in risk. Neuroticism/Negative Affectivity was also significant when Personal Disturbance was included, though each standard deviation was now associated with a 27% reduction in risk; i.e. opposite in direction to its effect when entered without Personal Disturbance. Neither Psychotic/Paranoid, which was now in the opposite direction, nor Antisocial, which was further attenuated by 70.5%, were significant in the presence of Personal Disturbance. Thus, the health-harming effects of the components were mostly or entirely attributable to variance they shared with other components. In addition, net of their shared variance with Personal Disturbance, the effects of Neuroticism/Negative Affectivity, and possibly Psychotic/Paranoid, were protective.

When the four components were tested together in the same model alongside age and ethnicity, Somatic Complaints and Antisocial were significantly associated with mortality risk (see Table 3, lower left panel) with each standard deviation of either being equal to just over a 50% increase in risk. When including the remaining covariates, the effects of each were slightly attenuated such that each standard deviation of either was now associated with just under a 40% increase in risk (see Table 3, lower middle panel). Thus, whereas associations of mortality with Somatic Complaints and Antisocial were still significant after taking the other components and even health risk factors into account, the effects of Neuroticism/Negative Affectivity and Psychotic/Paranoid were no longer significant.

Finally, because they were positively skewed, we used square root transformations to normalize the four components and Personal Disturbance and then re-ran the models. There were no substantial changes in the above-reported findings.

Discussion

We identified 89 MMPI items that were significantly (p < .01) related to all-cause mortality in both half-samples. These items could be accounted for by four components that described individual differences in neuroticism or negative affect, somatic complaints, psychotic or paranoid symptoms, and antisocial attitudes and behaviors. Further analyses revealed that these components shared substantial variance that could be described by a higher-order component named Personal Disturbance. Taken separately, all four components and Personal Disturbance were associated with greater mortality risk, and were attenuated only somewhat by demographic, health, and health behavior risk factors. However, when looking at the relationship between the components' independent contributions to mortality risk, only Somatic Complaints and Antisocial were significantly associated with greater risk. Moreover, when looking at the unique component variance, i.e., by including Personal Disturbance in the model, Somatic Complaints was still significantly associated with greater

mortality risk; the effects of the Psychotic/Paranoid and Antisocial components became non-significant; and the effects of Neuroticism/Negative Affectivity reversed in that they were now significantly associated with lower mortality risk.

This analysis approach revealed the personality structure or MMPI profiles of individuals who are at risk of earlier death. These findings are consistent with studies showing associations between personality traits and longevity [3,4, 8-10]. They also go some way to explaining the fickle association between neuroticism and mortality. Specifically, the significance and direction of the effects of the Neuroticism/Negative Affectivity component depended on what other components were included in the model: on its own this component was a risk factor, alongside Personal Disturbance it was protective, and alongside Somatic Complaints, Psychotic/Paranoid, and Antisocial, it was not significant. Further studies could help determine which aspects of neuroticism and negative affectivity are risk factors or protective factors for mortality.

We also found a robust relationship between somatic complaints and mortality risk. This component was largely composed of items that are used in the MMPI to distinguish cases of hypochondriasis or conversion hysteria from normal controls [42]. The higher-order PCA results are consistent with previous studies showing that somatic complaints are associated with neuroticism [43-45]. However, we found that, even after taking this into account, endorsing items belonging to this scale in the direction of more somatic complaints is linked to shorter life. Thus, responses to these items contain valid information about subsequent poor health, leading to mortality. One possible explanation lies in the fact that individuals high in neuroticism or similar traits are not just more sensitive to emotional stressors [46], but also more sensitive to, aware of, bothered by, and less likely to ignore symptoms [44].

Like Neuroticism/Negative Affectivity, the effects of the Psychotic/Paranoid and Antisocial components were influenced by the other variables in the model. With respect to Psychotic/Paranoid, its effects were not significant in models that included Personal Disturbance and all of the covariates or in models that included the Neuroticism/Negative Affectivity, Somatic Complaints, and Antisocial. Thus, the tendency to endorse items referring to psychotic, paranoid thoughts, and possibly the increased mortality risk conferred by serious mental health conditions such as schizophrenia [47], may reflect their relationship to other personality risk factors. With respect to the latter, its effects were not significant in models that included Personal Disturbance and all of the covariates. Likewise, antisocial tendencies appear to be associated with greater risk because they are markers of general personal disturbance and are associated with physical health, psychological health, and health behaviors.

Limitations of this dataset have been noted elsewhere [35]. The primary limitation is that the sample is not highly generalizable as it included no women, and all members had to pass a physical fitness exam upon induction into the U.S. military. This limitation may be particularly problematic in the present study, namely because of the fine-grained level analysis of the QWAS. In short, the items, and consequent dimensions, associated with mortality may differ depending on the composition of the group, cause or death, or other factors. However, this potential limitation also highlights a potential strength of QWAS. If true, it would mean that QWAS is sensitive enough to determine whether the impact of personality on mortality differs across groups or causes of death. Thus, future studies should be conducted not only to determine the degree to which the present results replicate across samples, but also to highlight the circumstances in which QWAS will be most beneficial for understanding the association between personality and health.

Another limitation, and one specific to this study, is that items associated with Conscientiousness are not well-represented in the MMPI [25, 26, 48]. Thus, we could not determine to what extent traits related to Conscientiousness may impact the final structure of mortality-related personality dimensions and the association between those dimensions and mortality. However, Conscientiousness is already well studied, and the major novel contribution here was to find other personality dimensions that are associated with mortality and to demonstrate the feasibility of using this approach to identify such associations in a large set of traits that were not theoretically developed. Another limitation is that, while we used two half samples, they were drawn from the same population. It would thus be useful to conduct a similar QWAS analysis or confirmatory analyses in other samples that include MMPI and mortality information. On the other hand, the dataset has numerous strengths, primarily its size, length of follow-up, and the ability to control for demographic factors, physical health, mental health, health behaviors, and cognitive ability.

We demonstrated the power of this approach for discovering new associations between personality traits and all-cause mortality in the VES cohort. This approach should not be thought of as a substitute for the psychometric approach. Instead, it should be thought as complementary and useful in certain cases, such as when the goal is to generate hypotheses, to resolve inconsistencies in the results of previous studies, or to test whether the same clusters of traits predict health or mortality across different populations or at different times in the lifespan.

As the MMPI is a widely used scale, QWAS could be used to mine existing datasets and further explore personality structures related to mortality or other health-related outcomes in other populations. Moreover, the present findings recommend re-evaluating somatoform disorders as somatic complaints, even without obvious symptoms or signs,

because they predicted mortality and thus should be taken seriously to help ensure patient

survival.

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Table 1

Characteristics of the two half samples and total samples on all covariates broken down by mortality status.

	Sample 1			Sample 2			Total Sample		
	Alive	Dead	Total	Alive	Dead	Total	Alive	Dead	Total
	(n = 2077)	(n = 124)	(n = 2201)	(n = 2086)	(n = 124)	(n = 2210)	(n = 4163)	(n = 248)	(n = 4411)
Categorical Variables[1]									
Ethnicity									
White	1693 (81.5)	83 (66.9)	1776 (85.5)	1748 (83.8)	87 (70.2)	1835 (83.0)	3441 (82.7)	170 (68.5)	3611 (81.8)
Black	241 (11.6)	30 (24.2)	271 (13.0)	224 (10.7)	25 (20.2)	249 (11.3)	465 (11.2)	55 (22.2)	520 (11.8)
Other[2]	143 (6.9)	11 (8.9)	154 (7.4)	114 (5.5)	12 (9.7)	126 (5.7)	257 (6.2)	23 (9.3)	280 (6.3)
Somatic conditions									
Absent	1794 (86.7)	81 (65.9)	1875 (85.5)	1825 (88.0)	100 (81.3)	1925 (87.6)	3619 (87.3)	181 (73.6)	3800 (86.5)
Present	276 (13.3)	42 (34.1)	318 (14.5)	250 (12.0)	23 (18.7)	273 (12.4)	526 (12.7)	65 (26.4)	591 (13.5)
Major depression									
Absent	1950 (93.9)	108 (87.1)	2058 (93.5)	1959 (93.9)	106 (85.5)	2065 (93.4)	3909 (93.9)	214 (86.3)	4123 (93.5)
Present	127 (6.1)	16 (12.9)	143 (6.5)	127 (6.1)	18 (14.5)	145 (6.6)	254 (6.1)	34 (13.7)	288 (6.5)
Generalized anxiety disorder									
Absent	1898 (91.4)	99 (79.8)	1997 (90.7)	1893 (90.7)	96 (77.4)	1989 (90.0)	3791 (91.1)	195 (78.6)	3986 (90.4)
Present	179 (8.6)	25 (20.2)	204 (9.3)	193 (9.3)	28 (22.6)	221 (10.0)	372 (8.9)	53 (21.4)	425 (9.6)
Smoking									
Nonsmoker	523 (25.2)	22 (17.7)	545 (24.8)	550 (26.4)	20 (16.1)	570 (25.8)	1073 (25.8)	42 (16.9)	1115 (25.3)

	Sample 1			Sample 2			Total Sample		
	Alive	Dead	Total	Alive	Dead	Total	Alive	Dead	Total
	(n = 2077)	(n = 124)	(n = 2201)	(n = 2086)	(n = 124)	(n = 2210)	(n = 4163)	(n = 248)	(n = 4411)
Former smoker	630 (30.4)	28 (22.6)	658 (29.9)	584 (28.0)	20 (16.1)	604 (27.3)	1214 (29.2)	48 (19.4)	1262 (28.6)
Current smoker	921 (44.4)	74 (59.7)	995 (45.3)	951 (45.6)	84 (67.7)	1035 (46.9)	1872 (45.0)	158 (63.7)	2030 (46.1)
Drinking									
Never drinker	204 (9.9)	8 (6.5)	212 (9.7)	212 (10.2)	9 (7.3)	221 (10.0)	416 (10.1)	17 (6.9)	433 (9.9)
Nondrinker	328 (15.9)	24 (19.5)	352 (16.1)	281 (13.5)	24 (19.5)	305 (13.9)	609 (14.7)	48 (19.5)	657 (15.0)
Never binges	689 (33.5)	30 (24.4)	719 (33.0)	695 (33.5)	23 (18.7)	718 (32.6)	1384 (33.5)	53 (21.5)	1437 (32.8)
1 binge/month	493 (24.0)	30 (24.4)	523 (24.0)	518 (24.9)	32 (26.0)	550 (25.0)	1011 (24.5)	62 (25.2)	1073 (24.5)
2-7 binges/month	170 (8.3)	11 (8.9)	181 (8.3)	187 (9.0)	13 (10.6)	200 (9.1)	357 (8.6)	24 (9.8)	381 (8.7)
≥ 8 binges/month	173 (8.4)	20 (16.3)	193 (8.9)	184 (8.9)	22 (17.9)	206 (9.4)	357 (8.6)	42 (17.1)	399 (9.1)
Continuous Variables[3]									
Age	37.9 (2.6)	38.3 (2.6)	37.9 (2.5)	37.9 (2.4)	38.0 (2.8)	37.9 (2.4)	37.9 (2.5)	38.2 (2.7)	37.9 (2.5)
Army General Technical Test									
Verbal	107.2 (22.0)	101.8 (22.3)	106.9 (22.0)	107.8 (22.3)	100.0 (24.9)	107.4 (22.5)	107.5 (22.1)	100.9 (23.6)	107.2 (22.3)
Arithmetic	104.4 (21.9)	97.4 (20.8)	104.0 (21.9)	105.3 (21.9)	96.5 (24.4)	104.8 (22.1)	104.9 (21.9)	96.9 (22.6)	104.4 (22.0)
Pulse rate/minute	81.3 (12.2)	85.9 (14.0)	81.6 (12.3)	80.9 (11.9)	85.5 (13.7)	81.2 (12.1)	81.1 (12.1)	85.7 (13.8)	81.4 (12.2)
Blood pressure									
Systolic	123.0 (11.9)	125.9 (16.1)	123.2 (12.2)	122.7 (11.5)	124.9 (14.8)	122.8 (11.7)	122.9 (11.7)	125.4 (15.4)	123.0 (12.0)
Diastolic	84.0 (9.3)	86.7 (11.2)	84.2 (9.4)	84.0 (9.2)	85.7 (12.1)	84.1 (9.4)	84.0 (9.2)	86.2 (11.7)	84.1 (9.4)

	Sample 1			Sample 2			Total Sample		
	Alive	Dead	Total	Alive	Dead	Total	Alive	Dead	Total
	(n = 2077)	(n = 124)	(n = 2201)	(n = 2086)	(n = 124)	(n = 2210)	(n = 4163)	(n = 248)	(n = 4411)
Blood glucose (mg/dl)	93.6 (12.7)	107.2 (52.1)	94.4 (17.7)	94.0 (15.8)	98.5 (26.6)	94.2 (16.6)	93.8 (14.3)	102.8 (41.5)	94.3 (17.1)
FEV_1	4.0 (0.6)	3.8 (0.7)	4.0 (0.7)	4.1 (0.6)	3.7 (0.7)	4.1 (0.7)	4.1 (0.6)	3.8 (0.7)	4.0 (0.7)

Note. [1]The value outside the parentheses is the frequency; the value within the parentheses is the percentage. [2]Comprised of Hispanics, Asians, Pacific Islanders, American Indians, and Native Alaskans. [3]The value outside the parentheses is the mean; the value within the parentheses is the standard deviation.

Table 2

Examples of items and their loadings for each component

Loading	Item	Definition
PC1: Neuroticism/Negative Affectivity		
-.60	379	I very seldom have spells of the blues.
.56	555	I sometimes feel that I am about to go to pieces.
.65	418	At times I think I am no good at all.
PC2: Somatic Complaints (reversed)		
.63	153	During the past few years I have been well most of the time.
-.54	62	Parts of my body often have feelings like burning, tingling, crawling, or like "going to sleep."
-.46	47	Once a week or oftener I feel suddenly hot all over, without apparent cause.
PC3: Psychotic/Paranoid		
.61	35	If people had not had it in for me I would have been much more successful.
.48	345	I often feel as if things were not real.
.43	350	I hear strange things when I am alone.
PC4: Antisocial		
-.49	294	I have never been in trouble with the law.
.44	381	I am often said to be hot-headed.
.43	313	The man who provides temptation by leaving valuable property unprotected is about as much to blame for its theft as the one who steals it.

Table 3

Summary of Cox regressions examining personality components as predictors of all-cause mortality

Components tested separately	Age and ethnicity[a]				All covariates[b]				All covariates and Personal Disturbance[c]			
		95% CI				95% CI				95% CI		
	HR	lower	upper	p	HR	lower	upper	p	HR	lower	upper	p
PC1: Neuroticism/Negative Affectivity	1.55	1.39	1.72	< .001	1.25	1.09	1.43	.001	0.73	0.58	0.92	.007
PC2: Somatic Complaints	1.66	1.52	1.80	< .001	1.44	1.29	1.61	< .001	1.23	1.05	1.44	.010
PC3: Psychotic/Paranoid	1.44	1.32	1.57	< .001	1.27	1.14	1.42	< .001	0.85	0.70	1.03	.088
PC4: Antisocial	1.79	1.59	2.01	< .001	1.44	1.25	1.65	< .001	1.13	0.94	1.36	.199
Personal Disturbance	1.74	1.58	1.91	< .001	1.53	1.35	1.74	< .001	---	---	---	---

Components tested together	Age and ethnicity[d]				All covariates[e]			
	HR	lower	upper	p	HR	lower	upper	p
PC1: Neuroticism/Negative Affectivity	0.96	0.81	1.13	.603	0.91	0.77	1.09	.318
PC2: Somatic Complaints	1.51	1.34	1.71	< .001	1.39	1.22	1.58	< .001
PC3: Psychotic/Paranoid	0.97	0.85	1.10	.615	1.03	0.90	1.19	.669

	Age and ethnicity[a]				All covariates[b]				All covariates and Personal Disturbance[c]
		95% CI				95% CI			95% CI
PC4: Antisocial	1.54	1.33	1.79	< .001	1.36	1.16	1.59	< .001	

Note. Effects for the components are per standard deviation. Ethnicity was defined using two variables which compared risk in blacks to that in whites and risk in "other" ethnic groups to risk in whites. The covariates included marital status, Army General Technical Test score (z-score), family income, educational achievement, pulse rate/minute (z-score), somatic conditions, systolic blood pressure (z-score), diastolic blood pressure (z-score), blood glucose (mg/dl) (z-score), forced expiratory volume in one second (FEV_1; z-score), body mass index, major depression, generalized anxiety disorder, drinking, and smoking. N = 4270. Number of deaths = 237. 95% CI = 95% confidence interval. HR = hazard ratio.

[a]See Supplementary Digital Content 3 for the five full models. [b]See Supplementary Digital Content 4-8 for the five full models. [c]See Supplementary Digital Content 9-12 for the four full models. [d]See Supplementary Digital Content 13 for the full model. [e]See Supplementary Digital Content 14 for the full model.

Item Level Mortality Associations

Figure 1. Associations between the MMPI items and mortality in the two half samples.

Significant and replicable associations are denoted by closed circles. Figure by the authors,

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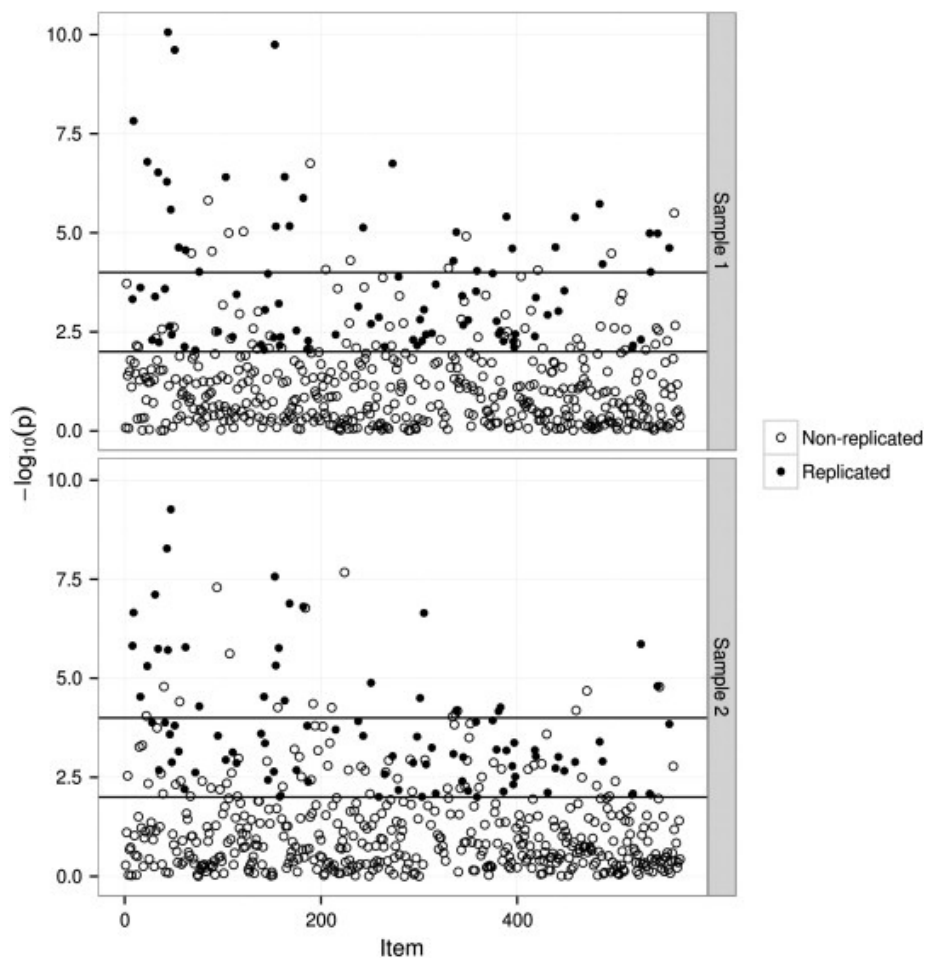
Supplementary Digital Content

Supplementary Digital Content 1:

Table S1

MMPI item-level associations of personality and mortality risk, adjusting for age and ethnicity.

				Sample 1							Sample 2		
				95% CI							95% CI		
Item[1]	N	Deaths	HR	Lower	Upper	p^2	N	Deaths	HR	Lower	Upper	p^2
1	2195	124	0.96	0.67	1.38	.832	2209	124	0.89	0.62	1.28	.526
2	2199	124	0.36	0.21	0.61	.000	2210	124	0.57	0.31	1.06	.078
3	2200	124	0.68	0.47	0.98	.040	2210	124	0.58	0.41	0.83	.003
4	2200	124	1.06	0.59	1.88	.855	2210	124	0.97	0.54	1.77	.929
5	2201	124	1.54	1.04	2.27	.032	2209	124	1.27	0.87	1.86	.210
6	2199	124	1.55	1.08	2.21	.016	2208	123	1.27	0.89	1.82	.187
7	2200	124	0.69	0.45	1.04	.078	2207	124	1.02	0.64	1.61	.948
8[*]	2200	124	0.50	0.33	0.73	.000	2210	124	0.41	0.28	0.59	.000
9[*]	2200	124	0.33	0.23	0.48	.000	2209	124	0.35	0.23	0.52	.000
10	2199	124	1.88	1.11	3.19	.019	2207	122	1.67	0.92	3.03	.093
11	2191	123	1.50	1.03	2.18	.036	2194	123	1.23	0.84	1.79	.292
12	2197	124	1.77	1.17	2.69	.007	2209	124	1.02	0.70	1.48	.923

		Sample 1							Sample 2				
				95% CI							95% CI		
Item[1]	N	Deaths	HR	Lower	Upper	p^2		N	Deaths	HR	Lower	Upper	p^2
13	2197	124	1.13	0.79	1.61	.499		2207	124	1.20	0.84	1.71	.315
14	2200	124	1.71	1.15	2.55	.008		2210	124	1.53	1.04	2.25	.031
15	2198	124	1.42	1.00	2.02	.053		2209	123	1.91	1.32	2.75	.001
16[*]	2200	124	2.36	1.49	3.72	.000		2206	124	2.52	1.63	3.89	.000
17	2185	123	0.80	0.43	1.49	.478		2193	124	0.61	0.36	1.02	.060
18	2198	124	1.01	0.63	1.62	.964		2205	124	0.50	0.34	0.74	.000
19	2186	124	1.60	1.04	2.45	.033		2198	124	0.86	0.52	1.42	.557
20	2200	124	0.84	0.53	1.34	.467		2207	124	0.69	0.44	1.08	.107
21	2192	124	1.45	1.01	2.08	.045		2205	124	1.39	0.97	1.99	.074
22	2199	123	1.45	0.86	2.46	.166		2208	124	2.47	1.57	3.88	.000
23[*]	2200	124	4.44	2.54	7.76	.000		2210	124	3.89	2.17	6.96	.000
24	2198	124	1.55	0.98	2.46	.059		2210	124	1.86	1.21	2.85	.005
25	2200	124	0.98	0.66	1.45	.925		2208	123	1.19	0.82	1.74	.365
26	2187	122	1.42	0.99	2.03	.059		2204	124	1.40	0.98	1.99	.067
27	2198	124	1.96	1.07	3.59	.028		2208	124	1.91	1.02	3.57	.044
28[*]	2199	124	1.66	1.17	2.38	.005		2205	123	1.99	1.40	2.84	.000

		Sample 1							Sample 2				
				95% CI							95% CI		
Item[1]	N	Deaths	HR	Lower	Upper	p^2		N	Deaths	HR	Lower	Upper	p^2
29	2199	124	1.31	0.87	1.97	.195		2208	122	1.38	0.92	2.07	.118
30	2198	124	1.65	1.00	2.74	.051		2208	122	1.15	0.71	1.87	.562
31*	2200	123	2.19	1.42	3.37	.000		2209	124	2.89	1.96	4.25	.000
32	2200	124	1.77	1.20	2.64	.004		2207	123	1.47	0.97	2.24	.071
33	2197	124	1.57	1.08	2.27	.017		2208	123	2.01	1.40	2.90	.000
34*	2197	124	2.82	1.90	4.19	.000		2201	123	2.70	1.80	4.06	.000
35*	2200	124	2.19	1.26	3.83	.006		2208	123	2.28	1.35	3.86	.002
36	2200	124	0.68	0.47	0.96	.030		2207	123	0.71	0.50	1.01	.056
37	2196	124	1.00	0.62	1.61	.985		2205	121	0.53	0.35	0.80	.003
38	2199	124	1.76	1.22	2.54	.003		2208	123	1.13	0.79	1.62	.498
39	2198	124	1.49	1.04	2.12	.029		2208	122	1.63	1.13	2.34	.008
40	2200	124	0.99	0.60	1.63	.965		2207	122	2.39	1.61	3.55	.000
41*	2200	124	1.93	1.36	2.76	.000		2208	123	2.00	1.40	2.86	.000
42	2197	123	1.15	0.65	2.04	.637		2206	124	0.91	0.48	1.75	.785
43*	2195	123	2.58	1.78	3.74	.000		2206	123	2.98	2.06	4.30	.000
44*	2201	124	4.07	2.66	6.22	.000		2208	124	2.97	1.90	4.66	.000

		Sample 1							Sample 2				
				95% CI							95% CI		
Item[1]	N	Deaths	HR	Lower	Upper	p^2	N	Deaths	HR	Lower	Upper	p^2
45	2200	124	1.40	0.97	2.03	.072	2209	123	1.04	0.73	1.49	.815
46[*]	2192	124	0.57	0.39	0.82	.002	2204	123	0.51	0.35	0.73	.000
47[*]	2201	124	2.75	1.80	4.19	.000	2209	124	3.52	2.37	5.25	.000
48[*]	2197	124	1.96	1.24	3.10	.004	2207	124	2.09	1.33	3.27	.001
49	2200	124	1.12	0.52	2.40	.778	2209	124	1.72	0.93	3.20	.086
50	2191	122	2.55	1.39	4.66	.002	2202	124	1.60	0.83	3.07	.159
51[*]	2201	124	0.31	0.22	0.45	.000	2208	124	0.47	0.32	0.69	.000
52	2199	124	1.49	1.00	2.22	.049	2206	123	1.72	1.18	2.50	.005
53	2180	123	1.40	0.82	2.42	.220	2188	121	0.63	0.29	1.35	.236
54	2197	123	0.79	0.40	1.56	.499	2205	124	0.77	0.39	1.52	.446
55[*]	2200	124	0.46	0.32	0.66	.000	2208	123	0.53	0.37	0.76	.001
56	2198	124	1.62	1.11	2.36	.013	2208	124	2.16	1.50	3.12	.000
57	2181	120	1.18	0.79	1.74	.418	2203	122	0.59	0.41	0.84	.004
58	2112	123	1.33	0.93	1.92	.122	2131	118	0.88	0.61	1.27	.492
59	2197	123	1.40	0.93	2.09	.106	2208	124	1.38	0.91	2.09	.126
60	2187	122	0.55	0.29	1.03	.062	2201	124	0.72	0.32	1.64	.430

			Sample 1							Sample 2			
				95% CI							95% CI		
Item[1]	N	Deaths	HR	Lower	Upper	p^2		N	Deaths	HR	Lower	Upper	p^2
61[*]	2194	124	1.65	1.14	2.38	.007		2202	124	1.67	1.16	2.41	.006
62[*]	2201	124	2.15	1.50	3.07	.000		2210	124	2.38	1.67	3.39	.000
63	2199	124	0.71	0.46	1.11	.134		2208	124	0.62	0.40	0.94	.026
64	2196	123	1.43	1.00	2.04	.051		2204	124	1.46	1.02	2.07	.036
65	2175	122	0.83	0.45	1.54	.557		2196	122	0.73	0.42	1.25	.247
66	2197	124	1.37	0.86	2.17	.187		2207	124	1.28	0.80	2.05	.301
67	2194	124	1.29	0.91	1.85	.154		2201	124	1.60	1.12	2.28	.009
68	2198	123	0.47	0.33	0.67	.000		2210	124	0.74	0.51	1.06	.098
69	2194	124	2.12	1.16	3.88	.015		2207	124	1.74	0.91	3.34	.096
70	2045	119	1.32	0.80	2.16	.273		2022	114	0.74	0.40	1.39	.355
71	2195	124	1.77	1.13	2.77	.012		2202	123	1.16	0.77	1.75	.476
72[*]	2201	124	1.81	1.16	2.83	.009		2208	123	1.93	1.26	2.95	.002
73	2190	123	0.70	0.49	1.02	.064		2204	123	0.75	0.51	1.10	.137
74	2200	124	1.52	0.48	4.79	.477		2210	124	1.09	0.27	4.41	.908
75	2201	124	0.44	0.21	0.89	.024		2209	124	9990000.00	0.00	∞	.992
76[*]	2197	124	2.26	1.50	3.40	.000		2210	124	2.33	1.55	3.51	.000

| | | Sample 1 | | | | | | | Sample 2 | | | |
| | | | | 95% CI | | | | | | | 95% CI | | |
Item[1]	N	Deaths	HR	Lower	Upper	p^2	N	Deaths	HR	Lower	Upper	p^2
77	2197	124	0.75	0.45	1.27	.287	2205	124	1.10	0.69	1.74	.684
78	2198	124	0.90	0.62	1.31	.584	2203	124	0.89	0.61	1.29	.538
79	2199	124	0.84	0.59	1.19	.321	2210	124	0.59	0.41	0.84	.004
80	2200	124	1.44	0.99	2.09	.056	2207	124	0.88	0.58	1.34	.554
81	2201	124	1.06	0.72	1.55	.775	2209	124	1.15	0.77	1.71	.503
82	2197	124	1.29	0.84	1.96	.242	2203	124	0.88	0.55	1.42	.602
83	2200	124	0.62	0.34	1.16	.136	2208	123	0.89	0.43	1.82	.750
84	2190	123	1.15	0.80	1.65	.444	2203	124	1.42	0.99	2.03	.056
85	2198	124	6.66	3.08	14.43	.000	2207	124	2.18	0.79	5.98	.131
86	2197	124	1.37	0.92	2.03	.118	2208	124	1.41	0.96	2.08	.081
87	2198	124	1.78	0.98	3.23	.059	2207	123	1.26	0.64	2.49	.504
88	2199	124	0.57	0.29	1.13	.108	2206	124	0.43	0.24	0.78	.006
89	2190	124	2.21	1.53	3.21	.000	2206	124	1.11	0.77	1.59	.584
90	2200	124	0.72	0.41	1.26	.252	2208	124	1.25	0.61	2.57	.542
91	2198	124	0.86	0.60	1.24	.415	2209	124	0.86	0.60	1.24	.414
92	2201	124	2.31	1.21	4.40	.012	2210	124	0.95	0.39	2.32	.907

		Sample 1							Sample 2				
				95% CI							95% CI		
Item[1]	N	Deaths	HR	Lower	Upper	p^2		N	Deaths	HR	Lower	Upper	p^2
93	2200	124	1.85	1.23	2.78	.003		2206	124	1.49	1.00	2.22	.052
94	2199	124	1.46	1.00	2.12	.052		2209	124	2.70	1.89	3.86	.000
95[*]	2200	124	0.46	0.28	0.77	.003		2210	124	0.34	0.19	0.61	.000
96	2199	124	0.78	0.53	1.16	.225		2207	123	0.82	0.55	1.22	.331
97	2201	124	1.21	0.78	1.88	.397		2206	123	1.74	1.17	2.59	.006
98	2166	121	1.02	0.68	1.52	.937		2169	121	0.82	0.56	1.20	.314
99	2197	123	1.45	1.01	2.06	.042		2209	124	1.16	0.81	1.65	.414
100	2192	124	1.89	1.31	2.73	.001		2195	124	1.50	1.05	2.15	.027
101	2191	122	1.15	0.72	1.84	.560		2202	124	1.05	0.65	1.69	.839
102	2196	124	1.27	0.85	1.91	.243		2208	124	1.71	1.10	2.65	.017
103[*]	2200	124	0.38	0.26	0.55	.000		2210	124	0.52	0.35	0.77	.001
104	2200	124	1.34	0.76	2.34	.311		2209	124	2.02	1.24	3.28	.004
105	2196	123	1.55	1.00	2.40	.050		2207	122	1.39	0.90	2.16	.140
106	2200	124	2.61	1.70	3.99	.000		2208	123	1.86	1.15	3.01	.011
107	2197	124	0.86	0.52	1.42	.554		2207	124	0.39	0.26	0.58	.000
108	2193	124	1.83	1.20	2.77	.005		2202	123	1.42	0.92	2.18	.116

			Sample 1							Sample 2			
				95% CI							95% CI		
Item[1]	N	Deaths	HR	Lower	Upper	p^2	N	Deaths	HR	Lower	Upper	p^2
109	2200	124	1.20	0.83	1.74	.340	2210	124	1.73	1.21	2.48	.002
110[*]	2196	123	2.13	1.27	3.58	.004	2208	124	2.27	1.41	3.66	.001
111	2200	124	0.96	0.65	1.41	.820	2210	124	0.87	0.59	1.31	.513
112	2198	124	1.18	0.77	1.81	.460	2209	124	1.29	0.83	2.00	.258
113	2199	124	0.57	0.21	1.56	.274	2209	124	0.41	0.18	0.93	.034
114[*]	2200	124	2.38	1.48	3.82	.000	2210	124	2.13	1.34	3.40	.001
115	2173	121	0.71	0.48	1.05	.087	2186	123	0.61	0.42	0.89	.010
116	2200	124	1.49	1.04	2.14	.029	2208	123	1.81	1.27	2.59	.001
117	2196	124	1.89	1.29	2.77	.001	2206	124	1.42	0.98	2.05	.061
118	2196	124	1.56	1.10	2.23	.013	2208	123	1.56	1.09	2.23	.014
119	2198	124	0.82	0.55	1.21	.314	2208	123	0.74	0.50	1.09	.130
120	2197	124	1.45	0.98	2.15	.064	2208	123	0.73	0.51	1.04	.081
121	2199	124	3.76	2.09	6.75	.000	2209	123	1.53	0.81	2.88	.187
122	2198	124	0.80	0.46	1.40	.439	2209	124	0.55	0.32	0.94	.030
123	2201	124	2.88	1.26	6.60	.013	2210	124	1.77	0.77	4.07	.178
124	2195	123	1.30	0.87	1.96	.200	2203	123	1.43	0.94	2.18	.090

		Sample 1							Sample 2			
				95% CI							95% CI	
Item[1]	N	Deaths	HR	Lower	Upper	p^2	N	Deaths	HR	Lower	Upper	p^2
125	2200	124	1.70	1.07	2.70	.024	2209	124	1.57	0.98	2.49	.059
126	2192	124	1.42	0.99	2.03	.055	2207	124	1.08	0.75	1.55	.673
127	2174	123	1.11	0.76	1.63	.576	2189	124	1.06	0.73	1.53	.774
128	2200	124	1.21	0.80	1.83	.373	2209	124	1.14	0.75	1.74	.528
129	2192	124	1.46	1.03	2.08	.036	2198	123	1.46	1.02	2.08	.037
130	2200	123	0.58	0.39	0.86	.007	2210	124	0.84	0.55	1.29	.431
131	2200	124	0.56	0.38	0.82	.003	2210	124	0.83	0.58	1.19	.318
132	2199	123	1.48	1.04	2.13	.032	2209	124	0.96	0.66	1.40	.831
133	2196	124	0.72	0.50	1.05	.090	2205	124	0.76	0.53	1.11	.158
134	2199	124	1.35	0.86	2.10	.192	2210	124	1.46	0.91	2.33	.116
135	2198	123	1.62	1.13	2.33	.009	2209	124	1.29	0.90	1.86	.167
136	2200	124	1.83	1.28	2.63	.001	2209	124	1.58	1.10	2.25	.013
137	2198	124	0.84	0.52	1.34	.456	2208	124	0.58	0.38	0.89	.013
138	2200	123	1.30	0.91	1.86	.149	2209	124	1.44	1.01	2.05	.046
139[*]	2200	124	2.00	1.21	3.31	.007	2208	124	2.37	1.49	3.75	.000
140	2198	124	1.04	0.72	1.51	.817	2208	124	1.13	0.78	1.65	.507

Item[1]	N	Deaths	HR	Lower	Upper	p^2	N	Deaths	HR	Lower	Upper	p^2
				Sample 1						Sample 2		
				95% CI						95% CI		
141	2198	124	1.11	0.78	1.59	.545	2203	124	1.27	0.89	1.81	.181
142*	2201	124	1.60	1.12	2.27	.009	2210	124	2.13	1.49	3.03	.000
143*	2197	124	1.83	1.28	2.61	.001	2207	124	1.90	1.33	2.72	.000
144	2195	124	1.29	0.86	1.93	.224	2207	124	0.95	0.60	1.51	.825
145	2200	124	1.53	1.00	2.34	.049	2208	124	1.90	1.29	2.81	.001
146*	2192	123	2.26	1.49	3.41	.000	2210	124	1.86	1.22	2.82	.004
147	2200	124	1.62	1.13	2.31	.008	2209	124	1.52	1.07	2.17	.020
148	2199	124	1.68	1.18	2.39	.004	2208	123	1.43	1.01	2.04	.047
149	2199	124	0.80	0.35	1.81	.586	2209	124	1.02	0.50	2.08	.967
150	2198	123	0.83	0.50	1.38	.467	2207	124	1.08	0.61	1.93	.783
151	2201	124	2.58	0.64	10.48	.184	2209	124	1.09	0.15	7.82	.933
152*	2198	124	0.60	0.42	0.85	.004	2209	124	0.57	0.40	0.82	.002
153*	2200	124	0.27	0.18	0.41	.000	2208	124	0.31	0.21	0.47	.000
154*	2201	124	0.35	0.22	0.55	.000	2208	123	0.34	0.22	0.54	.000
155	2200	124	1.05	0.72	1.52	.809	2210	124	0.65	0.46	0.93	.019
156	2201	124	1.61	1.03	2.52	.035	2206	124	2.29	1.53	3.42	.000

Item[1]		Sample 1		95% CI					Sample 2		95% CI		
	N	Deaths	HR	Lower	Upper	p^2		N	Deaths	HR	Lower	Upper	p^2
157[*]	2199	124	2.10	1.37	3.22	.001		2209	124	2.60	1.76	3.84	.000
158[*]	2200	124	1.76	1.17	2.65	.007		2210	124	1.69	1.14	2.53	.010
159[*]	2199	124	1.72	1.19	2.51	.004		2210	124	1.64	1.13	2.38	.009
160	2194	123	0.60	0.41	0.87	.008		2203	123	0.67	0.46	0.97	.036
161	2200	124	1.53	0.98	2.40	.060		2210	124	1.81	1.19	2.74	.005
162	2188	123	1.15	0.80	1.64	.450		2200	123	1.35	0.95	1.92	.098
163[*]	2201	124	0.40	0.28	0.57	.000		2209	124	0.48	0.33	0.68	.000
164	2199	124	1.15	0.71	1.85	.576		2208	123	0.66	0.43	1.01	.054
165	2199	124	1.41	0.99	2.01	.056		2209	124	1.10	0.77	1.57	.618
166	2201	124	1.12	0.79	1.60	.527		2207	122	1.42	0.99	2.03	.054
167	2200	124	0.81	0.53	1.24	.336		2208	124	1.16	0.78	1.72	.469
168[*]	2193	124	2.63	1.72	4.00	.000		2205	124	3.03	2.01	4.58	.000
169	2199	124	0.78	0.42	1.44	.421		2210	124	0.72	0.38	1.38	.328
170	2199	124	1.23	0.86	1.76	.259		2209	124	1.24	0.87	1.78	.240
171	2185	122	1.14	0.79	1.65	.479		2192	124	1.32	0.92	1.91	.134
172	2196	123	1.28	0.90	1.82	.178		2207	124	1.15	0.81	1.64	.431

	Sample 1						Sample 2					
				95% CI						95% CI		
Item[1]	N	Deaths	HR	Lower	Upper	p^2	N	Deaths	HR	Lower	Upper	p^2
173	2199	124	0.65	0.45	0.93	.017	2208	124	0.53	0.37	0.76	.001
174	2201	124	0.75	0.51	1.12	.161	2208	124	0.76	0.52	1.13	.180
175[*]	2199	123	0.54	0.35	0.81	.003	2210	124	0.53	0.35	0.79	.002
176	2199	124	0.97	0.68	1.39	.874	2209	123	0.95	0.66	1.36	.769
177	2196	124	0.62	0.25	1.51	.292	2204	123	0.68	0.30	1.55	.361
178	2200	123	0.62	0.41	0.93	.021	2209	124	0.53	0.36	0.77	.001
179	2199	124	1.03	0.63	1.68	.912	2209	124	1.58	1.03	2.40	.034
180	2198	123	1.11	0.78	1.59	.555	2209	124	1.72	1.20	2.46	.003
181	2197	123	1.48	1.04	2.11	.030	2207	124	1.25	0.88	1.79	.212
182[*]	2200	124	2.64	1.78	3.92	.000	2209	124	2.83	1.92	4.17	.000
183	2195	124	0.76	0.52	1.10	.144	2208	124	1.19	0.84	1.70	.329
184	2199	124	1.97	0.99	3.94	.054	2207	124	4.00	2.38	6.73	.000
185	2200	124	1.20	0.74	1.94	.457	2209	124	0.77	0.51	1.16	.209
186[*]	2200	124	1.72	1.15	2.58	.009	2209	124	2.14	1.44	3.17	.000
187[*]	2198	124	0.53	0.34	0.83	.005	2209	124	0.53	0.34	0.82	.004
188	2201	124	0.62	0.43	0.88	.009	2210	124	0.79	0.55	1.13	.200

		Sample 1							Sample 2			
				95% CI						95% CI		
Item[1]	N	Deaths	HR	Lower	Upper	p^2	N	Deaths	HR	Lower	Upper	p^2
189	2201	124	3.19	2.06	4.93	.000	2209	124	1.75	1.05	2.93	.032
190	2199	124	0.61	0.41	0.89	.011	2208	124	0.57	0.39	0.83	.004
191	2197	124	1.19	0.82	1.72	.352	2209	124	1.50	1.05	2.15	.026
192	2200	124	0.60	0.36	0.99	.046	2210	124	0.39	0.25	0.62	.000
193	2200	124	1.14	0.72	1.81	.580	2210	124	0.83	0.55	1.26	.385
194	2197	124	1.65	0.91	3.01	.101	2210	124	2.57	1.58	4.20	.000
195	2200	123	1.52	0.89	2.58	.124	2208	124	2.31	1.17	4.57	.016
196	2201	124	1.41	0.57	3.44	.456	2210	124	0.85	0.39	1.82	.668
197	2201	124	1.85	0.81	4.22	.145	2209	124	2.97	1.59	5.55	.001
198	2201	124	0.63	0.44	0.90	.010	2209	124	0.74	0.52	1.05	.088
199	2195	123	0.89	0.60	1.32	.550	2203	124	0.81	0.54	1.21	.308
200	2201	124	2.10	1.12	3.95	.021	2209	124	1.69	0.87	3.26	.120
201	2196	124	1.45	1.01	2.08	.043	2204	124	1.19	0.84	1.71	.328
202	2200	124	1.93	0.94	3.98	.074	2208	124	2.86	1.66	4.95	.000
203	2197	123	1.33	0.82	2.13	.245	2208	124	1.02	0.62	1.68	.945
204	2200	123	1.22	0.80	1.86	.360	2209	124	0.96	0.63	1.47	.848

	Sample 1						Sample 2					
				95% CI						95% CI		
Item[1]	N	Deaths	HR	Lower	Upper	p[2]	N	Deaths	HR	Lower	Upper	p[2]
205	2199	124	3.18	1.79	5.67	.000	2210	124	2.07	1.08	3.96	.029
206	2193	123	0.83	0.51	1.34	.451	2206	124	0.85	0.52	1.38	.501
207	2200	124	0.66	0.44	1.00	.049	2209	124	0.52	0.35	0.78	.002
208	2193	124	1.32	0.91	1.93	.142	2208	124	1.15	0.80	1.67	.447
209	2186	123	1.15	0.56	2.37	.698	2199	122	2.60	1.53	4.42	.000
210	2198	124	2.66	1.08	6.55	.033	2210	124	0.58	0.08	4.17	.588
211	2200	124	1.68	0.85	3.31	.137	2209	124	2.83	1.71	4.70	.000
212	2198	124	1.14	0.53	2.46	.729	2210	124	2.10	1.15	3.83	.016
213	2199	124	1.24	0.72	2.12	.442	2209	124	0.82	0.44	1.51	.518
214	2201	124	0.71	0.50	1.01	.060	2210	124	1.06	0.75	1.51	.731
215[*]	2200	124	1.69	1.19	2.41	.004	2208	124	1.99	1.38	2.85	.000
216	2201	124	1.47	0.89	2.42	.133	2207	124	1.81	1.15	2.86	.010
217	2201	124	2.01	1.38	2.92	.000	2209	124	1.44	1.00	2.06	.047
218	2200	124	1.04	0.53	2.06	.905	2210	124	0.93	0.47	1.84	.840
219	2199	124	0.96	0.67	1.37	.825	2209	124	1.28	0.89	1.85	.189
220	2191	123	0.97	0.36	2.64	.957	2203	124	0.92	0.40	2.08	.835

| Item[1] | | Sample 1 | | | | | | | Sample 2 | | | | |
	N	Deaths	HR	95% CI Lower	95% CI Upper	p^2		N	Deaths	HR	95% CI Lower	95% CI Upper	p^2
221	2199	124	0.91	0.60	1.38	.649		2210	124	0.77	0.52	1.15	.200
222	2198	124	0.64	0.44	0.94	.022		2207	124	0.75	0.52	1.08	.127
223	2195	123	1.13	0.79	1.61	.506		2208	124	1.38	0.97	1.96	.075
224	2198	124	1.50	1.02	2.20	.041		2208	124	2.78	1.94	3.97	.000
225	2198	124	0.92	0.61	1.39	.701		2209	124	1.19	0.76	1.85	.440
226	2199	124	1.65	1.15	2.36	.006		2210	124	1.27	0.89	1.80	.190
227	2200	124	0.75	0.31	1.85	.539		2210	124	1.12	0.57	2.21	.738
228	2197	124	0.97	0.62	1.50	.884		2205	124	0.54	0.37	0.80	.002
229	2197	124	1.79	1.24	2.59	.002		2207	124	1.19	0.80	1.77	.390
230	2197	124	0.48	0.34	0.68	.000		2207	123	0.65	0.45	0.94	.023
231	2195	124	1.20	0.84	1.72	.323		2207	124	1.07	0.75	1.53	.708
232	2167	121	1.12	0.76	1.65	.574		2186	124	0.88	0.58	1.32	.535
233	2187	123	1.03	0.68	1.56	.873		2207	124	1.38	0.95	2.00	.095
234	2198	124	1.37	0.96	1.96	.079		2208	124	1.51	1.06	2.15	.022
235	2195	124	1.59	1.02	2.47	.040		2205	124	0.99	0.66	1.47	.955
236	2195	123	1.77	1.16	2.70	.008		2197	124	1.69	1.11	2.58	.014

		Sample 1							Sample 2				
				95% CI							95% CI		
Item[1]	N	Deaths	HR	Lower	Upper	p^2	N	Deaths	HR	Lower	Upper	p^2
237	2169	122	1.04	0.71	1.51	.841	2171	123	1.11	0.77	1.60	.571
238[*]	2199	124	1.84	1.29	2.62	.001	2207	123	2.01	1.41	2.87	.000
239	2193	123	1.55	1.07	2.23	.019	2208	124	1.47	1.03	2.11	.035
240	2195	123	0.84	0.54	1.30	.424	2208	124	1.15	0.76	1.74	.498
241	2199	124	1.52	1.06	2.18	.022	2208	124	1.78	1.24	2.55	.002
242	2201	124	0.70	0.48	1.02	.066	2209	124	0.75	0.51	1.11	.146
243[*]	2201	124	0.44	0.31	0.63	.000	2210	124	0.51	0.35	0.73	.000
244	2198	124	1.96	1.37	2.80	.000	2208	123	1.42	1.00	2.03	.052
245	2199	124	1.76	1.12	2.77	.015	2208	124	1.94	1.27	2.96	.002
246	2193	124	2.54	1.24	5.22	.011	2200	123	1.33	0.59	3.03	.491
247	2200	124	1.45	0.73	2.87	.284	2209	123	1.73	0.97	3.09	.063
248	2193	124	1.24	0.87	1.77	.239	2206	123	1.28	0.89	1.82	.182
249	2174	121	1.01	0.70	1.48	.941	2190	122	1.01	0.69	1.46	.974
250	2194	124	1.18	0.82	1.70	.376	2207	123	1.69	1.14	2.48	.008
251[*]	2200	124	1.99	1.29	3.07	.002	2209	124	2.47	1.65	3.71	.000
252	2200	124	1.63	1.06	2.51	.028	2209	124	1.52	1.00	2.31	.051

			Sample 1							Sample 2			
				95% CI							95% CI		
Item[1]	N	Deaths	HR	Lower	Upper	p^2	N	Deaths	HR	Lower	Upper	p^2
253	2197	123	0.94	0.64	1.37	.738	2206	124	0.93	0.64	1.36	.706
254	2198	124	1.42	0.97	2.08	.073	2210	124	1.15	0.78	1.71	.476
255	2187	123	0.81	0.56	1.16	.246	2200	124	0.67	0.47	0.97	.034
256	2198	124	2.15	1.23	3.76	.007	2209	124	1.52	0.84	2.76	.170
257	2198	124	0.63	0.34	1.17	.141	2209	124	0.75	0.38	1.48	.411
258	2180	123	0.90	0.47	1.73	.753	2196	123	0.85	0.45	1.58	.600
259[*]	2200	124	1.78	1.25	2.54	.001	2210	124	1.60	1.12	2.28	.010
260	2198	124	1.07	0.75	1.53	.720	2208	124	1.15	0.81	1.65	.438
261	2195	124	1.10	0.74	1.62	.633	2206	124	0.70	0.45	1.09	.111
262	2199	124	0.98	0.64	1.51	.942	2210	124	0.64	0.44	0.95	.026
263	2200	124	1.99	1.40	2.84	.000	2210	124	1.33	0.93	1.91	.116
264	2200	124	0.97	0.67	1.39	.862	2206	124	0.78	0.54	1.12	.179
265[*]	2195	124	1.64	1.14	2.37	.008	2209	124	1.74	1.21	2.49	.003
266	2198	124	1.58	1.10	2.26	.013	2207	124	1.75	1.22	2.50	.002
267	2200	124	1.05	0.73	1.50	.803	2209	124	1.54	1.08	2.20	.016
268	2194	124	1.24	0.83	1.86	.294	2205	124	1.18	0.79	1.77	.411

		Sample 1							Sample 2				
				95% CI							95% CI		
Item[1]	N	Deaths	HR	Lower	Upper	p^2	N	Deaths	HR	Lower	Upper	p^2
269	2201	124	0.96	0.51	1.78	.888	2208	124	2.21	1.37	3.58	.001
270	2198	124	0.49	0.31	0.78	.002	2209	124	0.93	0.63	1.37	.711
271	2196	124	1.47	0.96	2.25	.079	2208	124	1.68	1.12	2.51	.012
272	2199	124	0.54	0.34	0.84	.007	2209	124	0.63	0.38	1.04	.068
273[*]	2199	124	2.71	1.86	3.94	.000	2208	123	1.99	1.32	2.99	.001
274	2200	124	0.64	0.45	0.92	.016	2210	124	0.97	0.68	1.40	.882
275	2200	124	1.78	0.73	4.37	.207	2209	124	1.62	0.60	4.43	.343
276	2197	123	0.81	0.44	1.47	.485	2209	124	0.67	0.37	1.19	.173
277	2196	124	1.49	1.04	2.12	.028	2209	124	1.44	1.01	2.05	.041
278	2198	124	1.55	1.08	2.23	.019	2210	124	1.71	1.19	2.44	.003
279[*]	2200	123	2.27	1.49	3.45	.000	2209	124	1.84	1.18	2.86	.007
280	2194	123	1.94	1.34	2.79	.000	2203	124	1.23	0.84	1.79	.287
281	2201	124	0.73	0.50	1.06	.101	2208	124	0.73	0.50	1.06	.101
282	2199	124	1.43	0.98	2.09	.064	2209	124	1.47	1.01	2.14	.046
283	2196	123	0.73	0.51	1.04	.079	2207	124	0.72	0.50	1.03	.069
284	2197	124	1.78	1.24	2.56	.002	2209	124	1.59	1.10	2.30	.013

Item[1]	N	Deaths	HR	95% CI Lower	95% CI Upper	p[2]	N	Deaths	HR	95% CI Lower	95% CI Upper	p[2]
				Sample 1						Sample 2		
285	2200	123	1.10	0.45	2.72	.829	2209	124	10620000.00	0.00	∞	.991
286	2197	124	1.82	1.15	2.87	.011	2207	124	1.30	0.78	2.15	.314
287	2175	122	0.87	0.61	1.25	.448	2182	121	1.09	0.76	1.57	.649
289	2197	123	0.99	0.65	1.51	.977	2206	124	1.17	0.76	1.82	.479
291	2201	124	0.97	0.24	3.91	.961	2210	124	3.57	1.66	7.67	.001
292	2199	123	1.29	0.90	1.85	.166	2209	124	1.55	1.09	2.21	.015
293	2201	124	2.11	1.15	3.86	.016	2210	124	2.16	1.23	3.78	.007
294[*]	2201	124	0.59	0.40	0.85	.005	2210	124	0.54	0.36	0.78	.001
295	2160	121	0.93	0.65	1.33	.692	2181	122	0.98	0.68	1.40	.891
296	2198	124	0.96	0.67	1.38	.827	2206	124	0.96	0.66	1.38	.813
297	2184	122	1.03	0.65	1.64	.894	2195	124	1.22	0.80	1.86	.347
298[*]	2187	124	1.66	1.15	2.39	.007	2201	122	1.95	1.36	2.79	.000
299	2192	124	1.13	0.79	1.62	.489	2198	123	1.46	1.03	2.08	.035
300	2173	123	1.54	1.00	2.38	.050	2185	122	1.00	0.67	1.49	.991
301[*]	2200	124	1.85	1.27	2.72	.002	2208	124	2.21	1.52	3.20	.000
303[*]	2199	124	1.69	1.17	2.44	.005	2207	124	1.63	1.12	2.35	.010

		Sample 1						Sample 2				
				95% CI						95% CI		
Item[1]	N	Deaths	HR	Lower	Upper	p^2	N	Deaths	HR	Lower	Upper	p^2
304	2199	124	1.12	0.77	1.64	.549	2210	124	1.14	0.78	1.66	.503
305[*]	2196	124	1.89	1.30	2.75	.001	2210	124	2.57	1.80	3.68	.000
306	2187	123	0.66	0.42	1.03	.068	2199	123	0.50	0.33	0.76	.001
307[*]	2195	123	1.69	1.19	2.42	.004	2208	124	1.78	1.25	2.55	.001
309	2197	124	1.13	0.73	1.75	.591	2210	124	0.62	0.42	0.92	.016
312	2191	124	1.34	0.81	2.22	.248	2209	124	1.60	1.00	2.57	.050
313[*]	2185	123	1.74	1.20	2.52	.003	2202	124	1.93	1.33	2.79	.001
316	2198	124	1.58	1.07	2.33	.020	2207	124	1.59	1.07	2.35	.022
317[*]	2196	124	1.96	1.37	2.79	.000	2202	124	1.61	1.13	2.29	.008
319	2192	122	1.57	1.08	2.28	.018	2205	124	1.37	0.95	1.95	.088
320	2200	124	1.29	0.86	1.92	.217	2205	124	0.74	0.47	1.18	.208
321	2201	124	1.38	0.97	1.97	.072	2210	124	1.34	0.94	1.91	.105
322	2201	124	1.82	1.20	2.77	.005	2210	124	1.39	0.93	2.06	.106
324	2199	123	1.74	0.55	5.49	.343	2210	124	2.00	0.74	5.44	.172
325	2201	124	1.09	0.72	1.65	.688	2209	124	1.26	0.85	1.87	.255
327	2200	124	1.16	0.79	1.70	.438	2208	124	1.18	0.80	1.72	.407

		Sample 1							Sample 2				
				95% CI							95% CI		
Item[1]	N	Deaths	HR	Lower	Upper	p^2	N	Deaths	HR	Lower	Upper	p^2
329	2200	124	1.02	0.70	1.49	.912	2207	123	0.54	0.35	0.84	.006
330	2198	124	0.46	0.32	0.68	.000	2209	124	0.59	0.39	0.88	.011
332	2200	124	1.63	1.06	2.51	.025	2209	123	1.62	1.06	2.47	.027
334	2201	124	1.73	1.13	2.65	.012	2208	124	2.19	1.48	3.25	.000
335*	2200	124	2.22	1.51	3.26	.000	2210	124	1.97	1.33	2.94	.001
336	2199	124	1.43	1.00	2.03	.049	2210	124	1.99	1.39	2.84	.000
337	2198	124	1.70	1.11	2.60	.016	2207	124	2.19	1.48	3.23	.000
338*	2196	123	2.35	1.61	3.44	.000	2208	124	2.16	1.48	3.15	.000
339	2199	124	2.18	1.10	4.34	.026	2207	124	3.14	1.79	5.51	.000
340	2201	124	1.41	0.99	2.02	.060	2210	124	1.05	0.74	1.50	.770
341	2200	124	1.60	0.94	2.71	.084	2209	124	1.69	1.06	2.70	.027
342	2199	124	1.50	1.00	2.25	.047	2209	124	1.70	1.16	2.49	.006
343	2198	124	1.79	1.25	2.56	.002	2208	124	1.26	0.87	1.80	.217
344*	2199	124	2.22	1.43	3.44	.000	2210	124	1.93	1.23	3.01	.004
345*	2200	124	2.01	1.29	3.13	.002	2209	124	2.09	1.35	3.25	.001
346	2201	124	2.01	1.35	2.99	.001	2209	124	1.38	0.90	2.11	.142

			Sample 1							Sample 2			
				95% CI							95% CI		
Item[1]	N	Deaths	HR	Lower	Upper	p^2	N	Deaths	HR	Lower	Upper	p^2
347	2189	122	1.73	0.97	3.09	.065	2206	124	0.56	0.37	0.84	.005
348	2198	122	2.47	1.65	3.70	.000	2208	123	1.32	0.92	1.91	.136
349	2195	123	1.46	0.95	2.23	.082	2205	123	1.91	1.29	2.83	.001
350[*]	2201	124	2.34	1.38	3.96	.002	2209	124	2.07	1.22	3.52	.007
351	2201	124	1.30	0.74	2.27	.362	2210	124	2.25	1.45	3.49	.000
352	2200	124	1.75	1.14	2.70	.011	2208	124	2.16	1.45	3.21	.000
353	2201	124	1.06	0.73	1.54	.761	2209	124	0.73	0.51	1.04	.077
354	2201	124	2.12	0.93	4.84	.076	2208	124	1.79	0.83	3.86	.138
355	2200	124	1.34	0.68	2.67	.396	2209	124	1.15	0.56	2.37	.701
356	2198	124	1.37	0.95	2.00	.095	2208	124	1.56	1.08	2.25	.017
357	2200	124	1.59	1.10	2.28	.014	2208	124	1.08	0.73	1.59	.710
358[*]	2201	124	2.18	1.43	3.33	.000	2208	123	2.29	1.50	3.51	.000
359[*]	2201	124	2.06	1.43	2.95	.000	2207	124	1.62	1.12	2.35	.010
360	2198	123	2.59	1.35	4.96	.004	2206	123	1.70	0.82	3.51	.152
361	2201	124	1.35	0.94	1.94	.100	2209	124	1.65	1.16	2.34	.006
363	2200	124	1.83	0.80	4.19	.150	2209	124	1.55	0.68	3.53	.295

Item[1]	N	Deaths	HR	95% CI Lower	95% CI Upper	p[2]	N	Deaths	HR	95% CI Lower	95% CI Upper	p[2]
				Sample 1						Sample 2		
364	2196	123	1.73	1.10	2.74	.018	2206	124	1.94	1.25	3.02	.003
365	2201	124	1.67	1.02	2.73	.042	2208	123	1.37	0.82	2.30	.229
367	2201	124	0.90	0.63	1.29	.574	2208	124	0.70	0.49	1.00	.050
368	2198	124	1.92	1.34	2.75	.000	2209	124	1.29	0.91	1.84	.155
369	2188	124	0.82	0.55	1.20	.304	2199	122	0.90	0.60	1.35	.596
370	2199	124	1.25	0.80	1.94	.330	2207	123	1.14	0.73	1.77	.565
371	2195	122	0.93	0.64	1.33	.680	2207	124	0.98	0.68	1.41	.930
372	2194	124	0.86	0.59	1.24	.409	2205	124	0.89	0.62	1.28	.534
373	2180	121	1.06	0.73	1.54	.752	2193	123	1.11	0.77	1.60	.562
374	2200	124	1.61	1.08	2.40	.019	2210	124	1.11	0.76	1.62	.578
375[*]	2201	124	2.12	1.45	3.10	.000	2206	124	2.09	1.44	3.04	.000
376	2193	124	0.73	0.48	1.11	.144	2200	124	0.54	0.37	0.78	.001
377	2198	123	1.23	0.86	1.75	.253	2206	124	1.50	1.05	2.14	.024
378	2193	123	0.92	0.64	1.31	.638	2198	122	0.63	0.44	0.91	.015
379[*]	2195	124	0.57	0.40	0.81	.002	2210	124	0.54	0.37	0.77	.001
380	2194	123	0.91	0.64	1.31	.619	2205	124	1.33	0.90	1.95	.147

			Sample 1							Sample 2			
				95% CI							95% CI		
Item[1]	N	Deaths	HR	Lower	Upper	p^2	N	Deaths	HR	Lower	Upper	p^2
381[*]	2198	124	1.72	1.19	2.48	.004	2209	124	2.08	1.45	2.98	.000
382	2195	124	1.42	0.99	2.02	.054	2203	123	1.44	1.01	2.06	.044
383[*]	2199	123	1.72	1.20	2.45	.003	2207	124	2.08	1.46	2.96	.000
384	2200	124	1.32	0.93	1.88	.125	2209	124	1.76	1.23	2.51	.002
385	2200	124	1.37	0.93	2.00	.107	2208	124	1.18	0.80	1.74	.400
386[*]	2200	124	1.67	1.16	2.40	.005	2207	124	1.64	1.14	2.36	.007
387	2170	124	1.74	1.19	2.54	.004	2184	122	1.27	0.85	1.90	.246
388	2201	124	2.35	1.40	3.94	.001	2207	124	1.82	1.02	3.24	.043
389[*]	2198	124	2.35	1.64	3.38	.000	2208	124	1.89	1.31	2.72	.001
390	2196	123	1.74	1.20	2.51	.003	2194	124	1.27	0.89	1.82	.189
391	2201	124	1.10	0.77	1.58	.603	2209	124	1.12	0.78	1.60	.547
392	2200	124	1.06	0.62	1.83	.825	2209	124	1.29	0.78	2.12	.318
393	2197	124	1.11	0.41	3.01	.837	2205	124	0.75	0.24	2.36	.623
394	2198	123	1.19	0.84	1.70	.332	2209	124	1.15	0.81	1.63	.448
395[*]	2198	124	2.25	1.54	3.29	.000	2207	123	1.85	1.26	2.72	.002
396[*]	2200	124	1.72	1.17	2.53	.006	2209	124	1.74	1.18	2.55	.005

Item[1]	N	Deaths	HR	Lower	Upper	p^2	N	Deaths	HR	Lower	Upper	p^2
				Sample 1 95% CI						Sample 2 95% CI		
397[*]	2200	124	1.62	1.13	2.30	.008	2205	123	1.90	1.33	2.71	.000
398[*]	2201	124	1.74	1.20	2.54	.004	2209	124	1.75	1.21	2.54	.003
399	2199	124	0.61	0.43	0.87	.006	2209	124	0.71	0.49	1.02	.060
400	2178	122	1.41	0.96	2.08	.079	2188	123	1.11	0.76	1.61	.598
401	2201	124	0.94	0.65	1.34	.717	2209	124	1.36	0.93	2.00	.114
402	2199	124	1.31	0.91	1.88	.142	2208	124	1.48	1.04	2.11	.029
403	2194	124	0.65	0.40	1.05	.075	2200	123	0.62	0.38	1.00	.048
404	2197	124	2.08	1.43	3.03	.000	2205	124	1.29	0.90	1.86	.161
405	2200	124	0.75	0.38	1.48	.409	2207	124	0.71	0.37	1.36	.300
406	2199	124	1.34	0.89	2.01	.165	2205	124	1.36	0.90	2.07	.148
407	2199	124	0.76	0.50	1.16	.207	2208	124	0.71	0.47	1.06	.097
408	2197	124	1.93	1.26	2.96	.003	2207	124	1.45	0.97	2.16	.067
409	2200	124	1.25	0.86	1.81	.240	2205	124	1.16	0.80	1.69	.425
410	2192	123	1.28	0.88	1.85	.196	2201	123	1.19	0.82	1.72	.362
411	2199	124	0.96	0.62	1.50	.867	2208	124	1.84	1.25	2.70	.002
412	2201	124	0.78	0.54	1.13	.186	2208	124	0.68	0.47	0.97	.035

			Sample 1							Sample 2			
				95% CI							95% CI		
Item[1]	N	Deaths	HR	Lower	Upper	p^2	N	Deaths	HR	Lower	Upper	p^2
413	2184	123	1.50	0.96	2.33	.073	2200	123	1.37	0.87	2.17	.172
414	2195	124	1.84	1.28	2.63	.001	2206	124	1.23	0.84	1.80	.280
415	2184	122	0.81	0.56	1.18	.275	2195	123	0.91	0.63	1.32	.618
416	2199	124	1.54	1.08	2.21	.018	2206	124	1.59	1.11	2.26	.011
417	2201	124	1.40	0.98	1.99	.067	2208	123	1.77	1.24	2.52	.002
418[*]	2200	124	1.73	1.19	2.50	.004	2206	124	1.90	1.31	2.74	.001
419[*]	2201	124	1.97	1.35	2.86	.000	2207	124	1.88	1.29	2.74	.001
420	2183	122	1.30	0.76	2.20	.339	2184	121	1.32	0.80	2.20	.280
421	2199	123	2.04	1.43	2.91	.000	2206	124	1.49	1.04	2.15	.030
422	2201	124	0.79	0.37	1.69	.537	2208	124	1.59	0.91	2.78	.103
423	2201	124	1.21	0.80	1.82	.372	2209	124	1.19	0.79	1.80	.401
424	2201	124	0.80	0.41	1.58	.526	2208	124	0.96	0.51	1.78	.889
425	2200	123	1.49	1.05	2.13	.027	2207	124	1.79	1.25	2.56	.001
426	2199	124	1.70	1.15	2.51	.008	2208	124	1.03	0.72	1.48	.856
427	2198	124	0.54	0.26	1.11	.094	2208	124	0.78	0.44	1.40	.409
428	2199	124	1.11	0.78	1.59	.549	2206	124	0.81	0.57	1.16	.243

		Sample 1							Sample 2			
				95% CI							95% CI		
Item[1]	N	Deaths	HR	Lower	Upper	p[2]	N	Deaths	HR	Lower	Upper	p[2]
429	2197	124	0.99	0.69	1.43	.972	2207	124	0.77	0.53	1.12	.167
430	2197	123	0.77	0.45	1.31	.332	2207	124	0.44	0.28	0.68	.000
431[*]	2199	124	1.80	1.26	2.56	.001	2208	124	1.63	1.14	2.33	.008
432	2201	124	0.83	0.58	1.21	.333	2206	124	0.93	0.65	1.33	.683
433	2195	124	0.90	0.46	1.78	.771	2206	123	1.32	0.74	2.36	.340
434	2201	124	1.36	0.94	1.96	.103	2207	124	1.07	0.75	1.54	.710
435	2188	121	1.51	1.03	2.20	.033	2191	123	1.21	0.82	1.79	.325
436	2195	124	1.71	1.05	2.81	.032	2200	122	1.30	0.82	2.07	.265
437	2187	123	1.56	1.08	2.26	.018	2203	124	1.48	1.02	2.14	.039
438	2196	123	1.54	1.07	2.20	.019	2204	124	1.42	0.99	2.03	.056
439[*]	2201	124	2.26	1.55	3.29	.000	2207	123	1.79	1.24	2.59	.002
440	2192	124	1.03	0.66	1.63	.884	2202	124	1.20	0.75	1.92	.450
441	2193	124	1.14	0.75	1.73	.536	2198	124	1.24	0.80	1.93	.340
442[*]	2201	124	2.00	1.33	3.02	.001	2208	124	2.03	1.33	3.10	.001
443	2199	124	1.37	0.93	2.01	.111	2205	122	1.20	0.81	1.78	.367
444	2197	124	0.97	0.68	1.38	.857	2204	123	0.82	0.57	1.17	.276

			Sample 1							Sample 2			
				95% CI							95% CI		
Item[1]	N	Deaths	HR	Lower	Upper	p^2	N	Deaths	HR	Lower	Upper	p^2
445	2196	124	1.05	0.59	1.86	.879	2204	124	1.01	0.57	1.80	.967
446	2201	124	1.53	1.06	2.22	.025	2208	123	1.37	0.95	1.97	.096
447	2201	124	1.36	0.96	1.94	.085	2209	123	1.42	1.00	2.03	.052
448[*]	2201	124	2.11	1.41	3.16	.000	2208	124	1.92	1.27	2.92	.002
449	2199	124	1.22	0.84	1.76	.291	2209	124	0.72	0.51	1.03	.074
450	2199	124	1.16	0.82	1.66	.403	2207	124	0.77	0.54	1.09	.140
451	2195	124	1.07	0.74	1.56	.713	2204	124	0.74	0.52	1.06	.101
452	2199	124	1.32	0.90	1.93	.158	2208	124	0.99	0.66	1.48	.951
453	2199	124	0.87	0.61	1.24	.436	2207	124	0.84	0.59	1.20	.342
454	2199	123	1.62	1.13	2.31	.008	2206	124	1.53	1.07	2.18	.019
455	2185	123	1.09	0.76	1.55	.646	2197	124	0.93	0.65	1.32	.674
456	2189	122	1.45	0.95	2.22	.086	2199	124	1.35	0.88	2.09	.172
457	2196	122	0.99	0.56	1.73	.971	2208	124	0.84	0.45	1.57	.580
458	2194	123	1.29	0.90	1.83	.165	2207	124	1.31	0.92	1.86	.139
459[*]	2196	123	2.42	1.66	3.53	.000	2198	123	1.91	1.29	2.83	.001
460	2190	123	0.79	0.52	1.20	.267	2200	123	0.46	0.32	0.68	.000

		Sample 1							Sample 2				
				95% CI							95% CI		
Item[1]	N	Deaths	HR	Lower	Upper	p^2	N	Deaths	HR	Lower	Upper	p^2
461	2197	124	1.66	1.17	2.37	.005	2209	124	1.23	0.86	1.75	.257
462	2198	124	0.66	0.41	1.06	.086	2209	124	0.57	0.37	0.90	.015
463	2191	124	1.08	0.75	1.54	.686	2198	124	0.79	0.55	1.14	.206
464	2196	124	0.68	0.45	1.04	.074	2205	124	0.78	0.52	1.18	.248
465	2195	124	1.71	1.16	2.53	.007	2200	123	1.37	0.93	2.02	.107
466	2198	124	0.71	0.49	1.03	.073	2209	124	0.58	0.40	0.83	.003
467	2200	124	1.60	1.09	2.33	.015	2209	124	1.17	0.78	1.75	.454
468	2198	124	1.43	1.00	2.04	.049	2206	124	1.28	0.90	1.82	.175
469	2199	124	1.56	1.05	2.32	.027	2208	124	1.32	0.88	1.96	.175
470	2198	124	1.08	0.40	2.93	.878	2208	124	1.68	0.78	3.61	.182
471	2113	122	1.49	0.98	2.26	.063	2119	120	2.30	1.57	3.37	.000
472	2201	124	1.11	0.63	1.98	.715	2209	124	1.34	0.82	2.19	.245
473	2195	124	1.16	0.81	1.66	.409	2207	124	1.47	1.03	2.09	.034
474	2197	124	0.94	0.63	1.40	.752	2209	124	0.77	0.52	1.13	.182
475	2193	123	1.35	0.95	1.93	.096	2197	123	1.26	0.88	1.80	.203
476	2190	122	1.09	0.62	1.92	.772	2201	124	1.39	0.82	2.34	.225

		Sample 1							Sample 2				
				95% CI							95% CI		
Item[1]	N	Deaths	HR	Lower	Upper	p[2]	N	Deaths	HR	Lower	Upper	p[2]
477	2183	123	1.12	0.79	1.60	.533	2198	123	1.34	0.94	1.92	.110
478	2190	124	0.98	0.67	1.43	.908	2200	124	0.89	0.61	1.29	.527
479	2192	124	0.90	0.57	1.44	.668	2202	124	0.65	0.43	0.99	.042
480	2192	124	1.06	0.54	2.10	.860	2203	124	1.26	0.69	2.29	.448
481	2201	124	1.34	0.92	1.95	.127	2210	124	1.76	1.18	2.61	.005
482	2200	124	1.62	1.11	2.36	.011	2209	124	1.01	0.71	1.44	.944
483	2132	120	1.06	0.68	1.63	.806	2149	122	0.79	0.53	1.17	.238
484[*]	2192	124	2.37	1.66	3.38	.000	2204	124	1.90	1.33	2.71	.000
485	2194	123	1.75	1.22	2.51	.002	2202	124	1.59	1.11	2.27	.011
486	2200	124	1.27	0.64	2.50	.495	2210	124	0.76	0.45	1.29	.306
487[*]	2201	124	2.14	1.48	3.11	.000	2209	124	1.91	1.29	2.83	.001
488	2194	122	0.73	0.50	1.07	.107	2205	124	1.03	0.72	1.49	.864
489	2198	123	0.93	0.65	1.33	.696	2206	124	1.05	0.73	1.49	.800
490	2195	122	0.72	0.40	1.27	.256	2206	124	0.52	0.26	1.02	.058
491	2181	122	1.37	0.94	2.01	.101	2197	123	1.61	1.12	2.33	.011
492	2193	124	1.49	1.04	2.14	.032	2208	124	1.54	1.07	2.21	.019

		Sample 1							Sample 2				
				95% CI							95% CI		
Item[1]	N	Deaths	HR	Lower	Upper	p[2]	N	Deaths	HR	Lower	Upper	p[2]
493	2184	124	0.90	0.63	1.28	.555	2203	124	1.21	0.84	1.74	.306
494	2198	124	1.22	0.74	2.02	.436	2209	124	1.78	1.15	2.75	.009
495	2192	124	0.89	0.58	1.37	.606	2203	123	1.07	0.67	1.70	.778
496	2187	123	0.45	0.30	0.65	.000	2198	124	0.64	0.43	0.95	.029
497	2201	124	1.24	0.51	3.05	.636	2210	124	0.74	0.34	1.59	.436
498	2199	123	0.78	0.54	1.13	.193	2208	124	1.37	0.91	2.06	.129
499	2200	124	1.83	1.24	2.71	.003	2208	124	1.07	0.75	1.54	.706
500	2197	124	1.35	0.94	1.92	.102	2209	124	1.70	1.18	2.43	.004
501	2200	124	0.94	0.64	1.40	.773	2209	124	0.88	0.60	1.30	.517
502	2198	124	1.03	0.66	1.61	.912	2209	124	0.95	0.61	1.48	.824
503	2195	124	1.09	0.77	1.56	.617	2206	124	1.03	0.72	1.47	.855
504	2189	124	1.26	0.88	1.81	.202	2198	122	1.02	0.71	1.47	.895
505	2199	124	2.00	1.35	2.97	.001	2208	124	1.56	1.05	2.34	.029
506	2193	124	1.60	1.11	2.28	.011	2206	123	1.13	0.78	1.65	.525
507	2196	123	2.01	1.37	2.96	.000	2207	123	1.25	0.87	1.79	.232
508	2201	124	0.74	0.43	1.27	.269	2210	124	1.14	0.60	2.18	.684

		Sample 1							Sample 2				
				95% CI							95% CI		
Item[1]	N	Deaths	HR	Lower	Upper	p^2	N	Deaths	HR	Lower	Upper	p^2
509	2200	124	1.24	0.86	1.79	.252	2210	124	1.07	0.73	1.55	.737
510	2193	124	1.90	1.17	3.08	.009	2208	123	1.71	1.03	2.85	.039
511	2197	124	1.82	1.23	2.68	.003	2206	124	1.58	1.07	2.35	.023
512	2197	123	0.96	0.42	2.19	.926	2205	124	1.60	0.86	2.99	.136
513	2143	122	1.17	0.81	1.69	.390	2148	120	0.84	0.58	1.22	.356
514	2172	121	1.18	0.67	2.10	.565	2187	123	1.67	1.02	2.74	.041
515	2199	124	0.69	0.41	1.17	.170	2206	124	0.64	0.38	1.07	.087
516	2199	124	1.19	0.81	1.75	.379	2206	124	1.66	1.09	2.52	.018
517[*]	2200	124	2.63	1.28	5.41	.008	2206	124	2.48	1.26	4.90	.009
518[*]	2192	123	1.70	1.16	2.49	.007	2204	123	1.67	1.14	2.44	.008
519	2199	124	0.80	0.30	2.18	.668	2204	123	1.60	0.78	3.28	.201
520	2193	124	1.10	0.74	1.64	.647	2205	124	1.28	0.85	1.92	.234
521	2200	124	0.70	0.49	1.01	.054	2208	123	0.87	0.60	1.25	.449
522	2200	124	1.07	0.74	1.55	.703	2207	122	1.06	0.74	1.53	.751
523	2201	124	1.47	1.03	2.09	.034	2208	123	1.21	0.85	1.73	.281
524	2199	124	0.76	0.51	1.14	.189	2207	122	0.97	0.62	1.51	.897

			Sample 1							Sample 2			
				95% CI							95% CI		
Item[1]	N	Deaths	HR	Lower	Upper	p^2	N	Deaths	HR	Lower	Upper	p^2	
525	2201	124	1.33	0.93	1.91	.119	2206	123	1.14	0.80	1.64	.461	
526[*]	2200	124	2.17	1.26	3.74	.005	2207	122	3.23	2.01	5.19	.000	
527	2200	124	0.73	0.47	1.11	.142	2210	124	0.70	0.47	1.06	.090	
528	2195	123	0.84	0.55	1.28	.423	2208	124	0.86	0.56	1.32	.484	
529	2192	124	1.24	0.86	1.79	.245	2208	124	1.44	0.99	2.09	.059	
530	2199	124	0.92	0.57	1.51	.753	2208	124	1.19	0.75	1.87	.457	
531	2197	124	1.68	1.14	2.48	.009	2208	124	1.14	0.75	1.73	.552	
532	2197	124	0.77	0.48	1.23	.271	2204	124	0.62	0.40	0.95	.029	
533	2197	124	0.87	0.58	1.30	.493	2207	123	0.74	0.50	1.09	.132	
534	2190	124	1.05	0.73	1.53	.782	2202	123	1.08	0.74	1.57	.702	
535[*]	2201	124	2.75	1.75	4.31	.000	2209	123	1.90	1.18	3.05	.008	
536[*]	2197	124	2.29	1.51	3.47	.000	2208	124	1.70	1.14	2.52	.009	
537	2201	124	1.51	1.02	2.21	.038	2209	124	1.21	0.81	1.80	.355	
538	2199	124	1.12	0.45	2.75	.810	2209	124	1.14	0.46	2.82	.775	
539	2199	124	1.02	0.60	1.73	.946	2210	124	0.63	0.39	1.01	.055	
540	2201	124	1.04	0.42	2.55	.934	2209	124	1.52	0.56	4.13	.413	

			Sample 1							Sample 2			
				95% CI							95% CI		
Item[1]	N	Deaths	HR	Lower	Upper	p^2	N	Deaths	HR	Lower	Upper	p^2
541	2201	124	1.75	1.17	2.62	.007	2209	124	1.27	0.83	1.93	.276
542	2197	124	0.56	0.38	0.81	.003	2204	124	0.83	0.55	1.25	.368
543[*]	2200	124	2.71	1.74	4.22	.000	2207	124	2.67	1.71	4.17	.000
544	2197	123	1.77	1.21	2.58	.003	2208	124	1.62	1.12	2.35	.011
545	2199	124	1.25	0.85	1.84	.259	2210	124	2.20	1.54	3.14	.000
546	2200	124	1.09	0.73	1.63	.663	2208	124	1.17	0.79	1.73	.442
547	2198	124	1.18	0.81	1.70	.392	2207	124	0.92	0.64	1.32	.645
548	2199	124	1.07	0.71	1.61	.755	2207	124	0.82	0.52	1.28	.384
549	2200	124	1.50	0.98	2.29	.064	2206	123	1.58	1.04	2.40	.031
550	2194	124	0.75	0.53	1.07	.113	2204	123	0.94	0.66	1.35	.748
551	2200	124	1.54	1.07	2.21	.019	2210	124	1.20	0.83	1.74	.330
552	2197	124	1.06	0.72	1.57	.762	2209	124	1.23	0.82	1.85	.318
553	2201	124	2.45	1.30	4.60	.005	2210	124	1.56	0.73	3.36	.252
554	2195	124	1.04	0.73	1.48	.836	2207	124	0.93	0.65	1.32	.682
555[*]	2200	124	2.16	1.51	3.10	.000	2209	124	2.02	1.41	2.91	.000
556	2198	124	1.09	0.74	1.60	.650	2207	124	1.04	0.72	1.52	.828

			Sample 1							Sample 2			
				95% CI							95% CI		
Item[1]	N	Deaths	HR	Lower	Upper	p[2]	N	Deaths	HR	Lower	Upper	p[2]
557	2197	124	1.97	0.92	4.24	.082	2210	124	1.46	0.59	3.59	.408
558	2178	120	1.33	0.92	1.93	.130	2192	123	1.23	0.86	1.77	.257
559	2198	124	1.75	1.11	2.75	.015	2210	124	2.00	1.30	3.08	.002
560	2200	124	2.32	1.63	3.31	.000	2208	124	1.40	0.98	2.00	.066
561	2197	124	1.78	1.23	2.58	.002	2204	124	1.16	0.81	1.66	.407
562	2179	122	1.20	0.83	1.73	.341	2195	123	1.31	0.91	1.89	.145
563	2198	124	2.05	0.95	4.42	.067	2208	124	1.19	0.62	2.28	.606
564	2197	123	1.21	0.84	1.75	.303	2208	124	0.86	0.59	1.26	.444
565	2199	124	0.86	0.38	1.97	.729	2208	124	1.84	1.03	3.28	.039
566	2193	124	0.86	0.60	1.25	.432	2206	124	1.19	0.81	1.75	.370

Note. [1]Item number for the 1943 Minnesota Multiphasic Personality Inventory. [2]p-values of .000 indicate p < .001. [*]Item was significant at p < .01 in both samples. N = Sample size. Deaths = number of deaths. HR = hazard ratio. 95% CI = 95% confidence interval.

Supplementary Digital Content 2:

Table S2

Promax rotated components of the 89 items associated with mortality risk

	Components				
Item[1]	Neuroticism/Negative Affectivity	Somatic Complaints[2]	Psychotic/Paranoid	Antisocial	h^2
418	.65	-.08	.12	-.05	.43
142	.64	-.02	-.04	.04	.40
259	.63	.02	-.12	-.03	.32
379	-.60	-.10	-.03	.13	.38
397	.59	-.09	-.05	.17	.39
305	.57	.01	.13	-.04	.41
301	.56	.02	.22	-.13	.44
555	.56	.07	.11	.01	.46
8	-.54	-.13	.06	.14	.27
396	.50	-.04	.13	.11	.39
431	.49	-.09	.11	.13	.35
487	.49	-.15	.18	.08	.33
76	.48	.10	.33	-.22	.46

		Components			
Item[1]	Neuroticism/Negative Affectivity	Somatic Complaints[2]	Psychotic/Paranoid	Antisocial	h^2
442	.46	.09	-.21	.11	.23
317	.45	-.11	.04	.00	.18
389	.43	-.10	.20	.16	.39
41	.43	.22	-.12	.11	.34
335	.39	.06	.19	.00	.31
448	.35	-.06	.16	.07	.22
46	-.35	-.25	.02	.16	.20
439	.34	-.01	-.12	.32	.26
152	-.33	-.25	.13	-.07	.24
158	.32	.08	.05	-.07	.14
307	.32	-.10	.02	.12	.14
238	.29	.16	-.09	.29	.31
61	.21	.05	.17	.16	.23
159	.21	.15	.14	.07	.21
243	-.09	-.67	.15	-.01	.43
153	.04	-.63	-.11	.09	.40

	Components				
Item[1]	Neuroticism/Negative Affectivity	Somatic Complaints[2]	Psychotic/Paranoid	Antisocial	h^2
51	-.05	-.61	.08	.11	.32
103	.12	-.59	-.04	-.09	.35
9	-.07	-.57	.01	.14	.31
62	-.04	.54	-.06	.25	.39
273	-.11	.54	-.07	.14	.27
55	.00	-.51	.05	-.06	.26
175	.09	-.49	-.15	-.02	.30
44	-.11	.48	.28	-.06	.34
47	-.16	.46	.21	.11	.32
72	.08	.42	.08	-.04	.25
23	-.06	.40	.11	-.05	.17
43	.13	.39	.09	.06	.33
163	-.30	-.38	.17	-.01	.27
114	-.05	.38	.34	-.04	.34
186	.07	.35	.10	.09	.26
31	-.01	.33	.24	.04	.27
187	.00	-.29	-.13	.02	.13

Components

Item[1]	Neuroticism/Negative Affectivity	Somatic Complaints[2]	Psychotic/Paranoid	Antisocial	h^2
251	.06	.26	.21	.09	.25
34	.00	.24	-.06	.20	.12
154	.02	-.23	-.11	.02	.08
35	-.14	.00	.61	-.02	.29
16	.04	.03	.58	-.04	.36
526	.21	-.04	.55	-.18	.34
543	.13	.05	.54	-.04	.40
157	.03	.00	.53	.13	.39
110	-.05	.02	.53	.01	.27
345	.06	.03	.48	.13	.38
350	-.07	.10	.43	.11	.27
182	.20	.11	.41	-.06	.34
168	.25	.15	.38	-.11	.36
395	.11	-.09	.37	.19	.28
344	.09	-.04	.37	.10	.21
517	.11	.00	.36	-.18	.13

Components

Item[1]	Neuroticism/Negative Affectivity	Somatic Complaints[2]	Psychotic/Paranoid	Antisocial	h^2
48	-.04	.11	.34	.04	.17
358	.03	.01	.34	.28	.31
139	.15	.05	.32	.08	.26
265	.16	-.10	.25	.21	.23
535	-.08	.22	.22	.12	.17
386	-.09	-.10	.12	.52	.26
294	.04	-.15	.31	-.49	.20
28	.02	-.04	.01	.48	.23
298	-.12	-.09	.14	.47	.22
419	-.05	.09	-.08	.45	.18
381	.05	.05	.04	.44	.27
143	-.23	.09	-.08	.43	.13
313	-.23	-.03	.19	.43	.19
95	.09	-.04	.15	-.42	.12
536	.24	-.06	-.10	.40	.24
484	.14	-.06	.05	.39	.24

		Components			
Item[1]	Neuroticism/Negative Affectivity	Somatic Complaints[2]	Psychotic/Paranoid	Antisocial	h^2
215	.13	.13	-.34	.39	.19
459	.09	-.05	.10	.37	.21
338	.11	.02	.17	.37	.32
398	.16	-.06	.15	.29	.23
518	.19	-.14	.24	.28	.27
383	.26	-.07	.15	.27	.29
279	-.21	.08	.21	.26	.13
359	.25	.02	.12	.26	.30
375	.20	-.11	.25	.25	.28
303	.24	.00	.14	.24	.28
146	.06	.01	.22	.24	.20

Note. [1]Item number for the 1943 Minnesota Multiphasic Personality Inventory. [2]Loadings on this component have been reflected.

Supplementary Digital Content 3:

Table S3

Individual Cox regressions of Neuroticism/Negative Affectivity, Somatic Complaints, Psychotic/Paranoid, Antisocial, and Personal Disturbance as predictors of all-cause mortality when controlling for age and ethnicity

Predictor	HR	95% CI		p
		lower	upper	
Age	1.06	1.01	1.11	.025
Ethnic group				
Black vs. White	2.34	1.70	3.20	< .001
Other vs. White	1.80	1.16	2.79	.008
Neuroticism/Negative Affectivity (z-score)	1.55	1.39	1.72	< .001
Age	1.06	1.01	1.12	.016
Ethnic group				
Black vs. White	1.92	1.40	2.64	< .001
Other vs. White	1.49	0.96	2.31	.078
Somatic Complaints (z-score)	1.66	1.52	1.80	< .001
Age	1.06	1.01	1.11	.020

Predictor	HR	95% CI		p
		lower	upper	
Ethnic group				
Black vs. White	1.83	1.33	2.52	< .001
Other vs. White	1.31	0.84	2.05	.239
Psychotic/Paranoid (z-score)	1.44	1.32	1.57	< .001
Age	1.08	1.03	1.14	.001
Ethnic group				
Black vs. White	1.77	1.29	2.44	< .001
Other vs. White	1.39	0.90	2.17	.142
Antisocial (z-score)	1.79	1.59	2.01	< .001
Age	1.08	1.03	1.13	.003
Ethnic group				
Black vs. White	1.83	1.33	2.52	< .001
Other vs. White	1.30	0.84	2.03	.241
Personal Disturbance (z-score)	1.74	1.58	1.91	< .001

Note. Effects for the components are per standard deviation. 95% CI = 95% confidence interval. HR = hazard ratio.

Supplementary Digital Content 4:

Table S4

Cox regression of Neuroticism/Negative Affectivity as a predictor of all-cause mortality when controlling for age, ethnicity, and the covariates

Predictor	HR	95% CI		p
		lower	upper	
Age	1.06	1.00	1.11	.035
Ethnic group				
Black vs. White	1.46	0.99	2.14	.054
Other vs. White	1.53	0.96	2.42	.073
Marital status				
Divorced/separated/widowed vs. Married	1.45	1.06	1.99	.021
Never married vs. Married	1.96	1.33	2.90	.001
Army General Technical Test	1.01	0.86	1.19	.876
Family income				
$20,001-$40,000 vs. ≤ $20,000	0.87	0.65	1.18	.374
> $40,000 vs. ≤ $20,000	0.51	0.30	0.86	.011
Educational achievement				

Predictor	HR	95% CI		p
		lower	upper	
9-12 years vs. ≤ 8 years	1.04	0.50	2.16	.926
13-16 years vs. ≤ 8 years	0.72	0.33	1.57	.409
17-18 years vs. ≤ 8 years	0.80	0.29	2.15	.652
Pulse rate/minute (z-score)	1.22	1.08	1.39	.002
Somatic conditions present vs. absent	1.72	1.25	2.37	.001
Systolic blood pressure (z-score)	1.04	0.88	1.23	.665
Diastolic blood pressure (z-score)	1.01	0.85	1.20	.894
Blood glucose (mg/dl) (z-score)	1.11	1.04	1.18	.001
FEV_1 (z-score)	0.84	0.74	0.96	.011
Body mass index				
Overweight (25-30) vs. Normal (< 25)	0.74	0.55	1.00	.053
Obese (>30) vs. Normal (< 25)	1.07	0.73	1.57	.719
Major depression present vs. absent	1.11	0.71	1.71	.653
Generalized anxiety disorder present vs. absent	1.32	0.91	1.91	.142
Drinking				
Nondrinker vs. Never drinker	1.58	0.87	2.89	.134

Predictor	HR	95% CI		p
		lower	upper	
Never binges vs. Never drinker	1.06	0.59	1.91	.856
1 binge/month vs. Never drinker	1.49	0.83	2.68	.181
2-7 binges/month vs. Never drinker	1.39	0.71	2.70	.337
≥ 8 binges/month vs. Never drinker	2.11	1.13	3.94	.019
Smoking				
Former smoker vs. Non-smoker	0.91	0.60	1.40	.675
Current Smoker vs. Non-smoker	1.37	0.95	1.97	.093
Neuroticism/Negative Affectivity (z-score)	1.25	1.09	1.43	.001

Note. 95% CI = 95% confidence interval. HR = hazard ratio.

Supplementary Digital Content 5:

Table S5

Cox regression of Somatic Complaints as a predictor of all-cause mortality when controlling for age, ethnicity, and the covariates

Predictor	HR	95% CI lower	95% CI upper	p
Age	1.06	1.00	1.11	.036
Ethnic group				
Black vs. White	1.42	0.96	2.09	.076
Other vs. White	1.43	0.90	2.28	.129
Marital status				
Divorced/separated/widowed vs. Married	1.53	1.11	2.10	.009
Never married vs. Married	2.08	1.41	3.07	< .001
Total Army General Technical Test (z-score)	1.08	0.92	1.28	.346
Family income				
$20,001-$40,000 vs. ≤ $20,000	0.94	0.70	1.27	.689
> $40,000 vs. ≤ $20,000	0.54	0.32	0.91	.021
Educational achievement				

Predictor	HR	95% CI		p
		lower	upper	
9-12 years vs. ≤ 8 years	1.09	0.52	2.29	.822
13-16 years vs. ≤ 8 years	0.75	0.34	1.65	.480
17-18 years vs. ≤ 8 years	0.85	0.31	2.30	.749
Pulse rate/minute (z-score)	1.22	1.07	1.38	.003
Somatic conditions present vs. absent	1.50	1.08	2.08	.016
Systolic blood pressure (z-score)	1.05	0.89	1.25	.575
Diastolic blood pressure (z-score)	1.00	0.84	1.19	.990
Blood glucose (mg/dl) (z-score)	1.11	1.04	1.18	.001
FEV_1 (z-score)	0.85	0.75	0.98	.020
Body mass index				
Overweight (25-30) vs. Normal (< 25)	0.76	0.56	1.02	.070
Obese (>30) vs. Normal (< 25)	1.08	0.73	1.58	.713
Major depression present vs. absent	0.97	0.63	1.49	.879
Generalized anxiety disorder present vs. absent	1.13	0.78	1.65	.515
Drinking				
Nondrinker vs. Never drinker	1.46	0.80	2.67	.217

Predictor	HR	95% CI lower	upper	p
Never binges vs. Never drinker	1.01	0.56	1.82	.985
1 binge/month vs. Never drinker	1.38	0.77	2.48	.286
2-7 binges/month vs. Never drinker	1.27	0.65	2.47	.490
≥ 8 binges/month vs. Never drinker	1.98	1.06	3.69	.031
Smoking				
Former smoker vs. Non-smoker	0.90	0.59	1.38	.636
Current Smoker vs. Non-smoker	1.34	0.93	1.93	.122
Somatic Complaints (z-score)	1.44	1.29	1.61	< .001

Note. 95% CI = 95% confidence interval. HR = hazard ratio.

Supplementary Digital Content 6:

Table S6

Cox regression of Psychotic/Paranoid as a predictor of all-cause mortality when controlling for age, ethnicity, and the covariates

Predictor	HR	95% CI lower	upper	p
Age	1.06	1.00	1.11	.040
Ethnic group				
Black vs. White	1.32	0.90	1.94	.152
Other vs. White	1.31	0.82	2.10	.252
Marital status				
Divorced/separated/widowed vs. Married	1.51	1.10	2.07	.010
Never married vs. Married	1.96	1.32	2.89	.001
Total Army General Technical Test (z-score)	1.11	0.94	1.32	.218
Family income				
$20,001-$40,000 vs. ≤ $20,000	0.89	0.66	1.20	.437
> $40,000 vs. ≤ $20,000	0.51	0.30	0.86	.011
Educational achievement				

Predictor	HR	95% CI		p
		lower	upper	
9-12 years vs. ≤ 8 years	1.02	0.49	2.14	.955
13-16 years vs. ≤ 8 years	0.68	0.31	1.49	.335
17-18 years vs. ≤ 8 years	0.70	0.26	1.89	.481
Pulse rate/minute (z-score)	1.23	1.08	1.40	.001
Somatic conditions present vs. absent	1.68	1.22	2.32	.002
Systolic blood pressure (z-score)	1.02	0.87	1.21	.782
Diastolic blood pressure (z-score)	1.02	0.86	1.22	.792
Blood glucose (mg/dl) (z-score)	1.12	1.05	1.19	.001
FEV_1 (z-score)	0.85	0.74	0.97	.014
Body mass index				
Overweight (25-30) vs. Normal (< 25)	0.74	0.55	1.00	.050
Obese (>30) vs. Normal (< 25)	1.09	0.74	1.59	.671
Major depression present vs. absent	1.05	0.67	1.63	.841
Generalized anxiety disorder present vs. absent	1.27	0.87	1.84	.215
Drinking				
Nondrinker vs. Never drinker	1.67	0.92	3.04	.094

Predictor	HR	95% CI		p
		lower	upper	
Never binges vs. Never drinker	1.11	0.61	2.00	.736
1 binge/month vs. Never drinker	1.53	0.85	2.75	.153
2-7 binges/month vs. Never drinker	1.47	0.76	2.87	.254
≥ 8 binges/month vs. Never drinker	2.29	1.23	4.26	.009
Smoking				
Former smoker vs. Non-smoker	0.92	0.60	1.41	.705
Current Smoker vs. Non-smoker	1.41	0.98	2.03	.066
Psychotic/Paranoid (z-score)	1.27	1.14	1.42	< .001

Note. 95% CI = 95% confidence interval. HR = hazard ratio.

Supplementary Digital Content 7:

Table S7

Cox regression of Antisocial as a predictor of all-cause mortality when controlling for age, ethnicity, and the covariates

Predictor	HR	95% CI lower	95% CI upper	p
Age	1.07	1.01	1.12	.012
Ethnic group				
Black vs. White	1.34	0.92	1.96	.130
Other vs. White	1.36	0.85	2.16	.195
Marital status				
Divorced/separated/widowed vs. Married	1.44	1.05	1.98	.022
Never married vs. Married	1.92	1.30	2.83	.001
Total Army General Technical Test (z-score)	1.07	0.91	1.27	.399
Family income				
$20,001-$40,000 vs. ≤ $20,000	0.87	0.64	1.16	.335
> $40,000 vs. ≤ $20,000	0.50	0.30	0.84	.009
Educational achievement				
9-12 years vs. ≤ 8 years	1.00	0.48	2.10	.991

Predictor	HR	95% CI		p
		lower	upper	
13-16 years vs. ≤ 8 years	0.73	0.34	1.59	.429
17-18 years vs. ≤ 8 years	0.83	0.31	2.24	.712
Pulse rate/minute (z-score)	1.25	1.10	1.42	.001
Somatic conditions present vs. absent	1.67	1.21	2.30	.002
Systolic blood pressure (z-score)	1.02	0.86	1.20	.844
Diastolic blood pressure (z-score)	1.03	0.86	1.23	.749
Blood glucose (mg/dl) (z-score)	1.09	1.03	1.16	.006
FEV_1 (z-score)	0.84	0.74	0.96	.012
Body mass index				
Overweight (25-30) vs. Normal (< 25)	0.72	0.53	0.98	.034
Obese (>30) vs. Normal (< 25)	1.07	0.73	1.57	.718
Major depression present vs. absent	1.19	0.79	1.81	.402
Generalized anxiety disorder present vs. absent	1.33	0.93	1.90	.114
Drinking				
Nondrinker vs. Never drinker	1.50	0.82	2.74	.188
Never binges vs. Never drinker	0.99	0.55	1.80	.984

Predictor	HR	95% CI		p
		lower	upper	
1 binge/month vs. Never drinker	1.31	0.73	2.36	.369
2-7 binges/month vs. Never drinker	1.20	0.62	2.35	.592
≥ 8 binges/month vs. Never drinker	1.78	0.95	3.34	.073
Smoking				
Former smoker vs. Non-smoker	0.88	0.57	1.34	.545
Current Smoker vs. Non-smoker	1.19	0.83	1.72	.350
Antisocial (z-score)	1.44	1.25	1.65	< .001

Note. 95% CI = 95% confidence interval. HR = hazard ratio.

Supplementary Digital Content 8:

Table S8

Cox regression of Personal Disturbance as a predictor of all-cause mortality when controlling for age, ethnicity, and the covariates

Predictor	HR	95% CI		p
		lower	upper	
Age	1.06	1.01	1.12	.020
Ethnic group				
Black vs. White	1.43	0.97	2.09	.068
Other vs. White	1.34	0.84	2.14	.214
Marital status				
Divorced/separated/widowed vs. Married	1.47	1.07	2.02	.017
Never married vs. Married	1.98	1.34	2.92	.001
Total Army General Technical Test (z-score)	1.12	0.95	1.33	.176
Family income				
$20,001-$40,000 vs. ≤ $20,000	0.93	0.69	1.25	.611
> $40,000 vs. ≤ $20,000	0.56	0.33	0.93	.026
Educational achievement				

Predictor	HR	95% CI		p
		lower	upper	
9-12 years vs. ≤ 8 years	1.07	0.51	2.24	.866
13-16 years vs. ≤ 8 years	0.75	0.34	1.65	.475
17-18 years vs. ≤ 8 years	0.84	0.31	2.26	.725
Pulse rate/minute (z-score)	1.21	1.07	1.38	.003
Somatic conditions present vs. absent	1.56	1.13	2.16	.007
Systolic blood pressure (z-score)	1.04	0.88	1.23	.674
Diastolic blood pressure (z-score)	1.02	0.85	1.21	.861
Blood glucose (mg/dl) (z-score)	1.11	1.05	1.18	.001
FEV_1 (z-score)	0.85	0.75	0.98	.020
Body mass index				
Overweight (25-30) vs. Normal (< 25)	0.74	0.55	1.00	.047
Obese (>30) vs. Normal (< 25)	1.06	0.73	1.56	.756
Major depression present vs. absent	0.86	0.56	1.33	.495
Generalized anxiety disorder present vs. absent	1.06	0.73	1.53	.778
Drinking				
Nondrinker vs. Never drinker	1.46	0.80	2.66	.219

Predictor	HR	95% CI lower	upper	p
Never binges vs. Never drinker	1.01	0.56	1.81	.987
1 binge/month vs. Never drinker	1.35	0.75	2.43	.317
2-7 binges/month vs. Never drinker	1.26	0.65	2.45	.501
≥ 8 binges/month vs. Never drinker	1.88	1.01	3.50	.047
Smoking				
Former smoker vs. Non-smoker	0.92	0.60	1.42	.717
Current Smoker vs. Non-smoker	1.34	0.93	1.93	.121
Personal Disturbance (z-score)	1.53	1.35	1.74	< .001

Note. 95% CI = 95% confidence interval. HR = hazard ratio.

Supplementary Digital Content 9:

Table S9

Cox regression of Neuroticism/Negative Affectivity as a predictor of all-cause mortality when controlling for age, ethnicity, the covariates, and

Personal Disturbance

Predictor	HR	95% CI lower	upper	p
Age	1.07	1.01	1.12	.016
Ethnic group				
Black vs. White	1.33	0.90	1.96	.154
Other vs. White	1.23	0.77	1.97	.387
Marital status				
Divorced/separated/widowed vs. Married	1.52	1.10	2.08	.010
Never married vs. Married	2.00	1.35	2.95	.001
Total Army General Technical Test (z-score)	1.18	1.00	1.40	.057
Family income				
$20,001-$40,000 vs. ≤ $20,000	0.93	0.69	1.26	.654
> $40,000 vs. ≤ $20,000	0.55	0.33	0.92	.023

Predictor	HR	95% CI lower	95% CI upper	p
		lower	upper	
Educational achievement				
9-12 years vs. ≤ 8 years	1.05	0.50	2.21	.896
13-16 years vs. ≤ 8 years	0.73	0.33	1.61	.436
17-18 years vs. ≤ 8 years	0.79	0.29	2.14	.646
Pulse rate/minute (z-score)	1.23	1.08	1.40	.002
Somatic conditions present vs. absent	1.51	1.09	2.09	.014
Systolic blood pressure (z-score)	1.03	0.87	1.22	.760
Diastolic blood pressure (z-score)	1.02	0.86	1.22	.797
Blood glucose (mg/dl) (z-score)	1.11	1.04	1.18	.001
FEV_1 (z-score)	0.86	0.75	0.98	.027
Body mass index				
Overweight (25-30) vs. Normal (< 25)	0.74	0.55	1.00	.048
Obese (>30) vs. Normal (< 25)	1.08	0.74	1.59	.691
Major depression present vs. absent	0.89	0.57	1.39	.612
Generalized anxiety disorder present vs. absent	1.06	0.73	1.55	.766
Drinking				

Predictor	HR	95% CI		p
		lower	upper	
Nondrinker vs. Never drinker	1.47	0.80	2.68	.211
Never binges vs. Never drinker	1.01	0.56	1.82	.973
1 binge/month vs. Never drinker	1.32	0.73	2.37	.360
2-7 binges/month vs. Never drinker	1.24	0.64	2.42	.526
≥ 8 binges/month vs. Never drinker	1.89	1.01	3.51	.046
Smoking				
Former smoker vs. Non-smoker	0.91	0.59	1.40	.667
Current Smoker vs. Non-smoker	1.31	0.91	1.89	.150
Personal Disturbance (z-score)	1.94	1.57	2.40	< .001
Neuroticism/Negative Affectivity (z-score)	0.73	0.58	0.92	.007

Note. 95% CI = 95% confidence interval. HR = hazard ratio.

Supplementary Digital Content 10:

Table S10

Cox regression of Somatic Complaints as a predictor of all-cause mortality when controlling for age, ethnicity, the covariates, and Personal

Disturbance

Predictor	HR	95% CI		p
		lower	upper	
Age	1.06	1.01	1.12	.024
Ethnic group				
Black vs. White	1.43	0.98	2.10	.067
Other vs. White	1.37	0.86	2.18	.187
Marital status				
Divorced/separated/widowed vs. Married	1.50	1.09	2.06	.012
Never married vs. Married	2.04	1.38	3.01	.000
Total Army General Technical Test (z-score)	1.12	0.95	1.32	.191
Family income				
$20,001-$40,000 vs. ≤ $20,000	0.95	0.70	1.28	.725
> $40,000 vs. ≤ $20,000	0.56	0.34	0.95	.030

Predictor	HR	95% CI lower	upper	p
Educational achievement				
9-12 years vs. ≤ 8 years	1.09	0.52	2.29	.820
13-16 years vs. ≤ 8 years	0.77	0.35	1.68	.505
17-18 years vs. ≤ 8 years	0.87	0.32	2.35	.781
Pulse rate/minute (z-score)	1.21	1.07	1.38	.003
Somatic conditions present vs. absent	1.49	1.08	2.07	.017
Systolic blood pressure (z-score)	1.05	0.88	1.24	.594
Diastolic blood pressure (z-score)	1.01	0.84	1.20	.956
Blood glucose (mg/dl) (z-score)	1.11	1.05	1.18	.001
FEV_1 (z-score)	0.86	0.75	0.98	.024
Body mass index				
Overweight (25-30) vs. Normal (< 25)	0.75	0.55	1.01	.061
Obese (>30) vs. Normal (< 25)	1.07	0.73	1.57	.732
Major depression present vs. absent	0.85	0.55	1.32	.474
Generalized anxiety disorder present vs. absent	1.02	0.70	1.49	.905
Drinking				

Predictor	HR	95% CI		p
		lower	upper	
Nondrinker vs. Never drinker	1.42	0.78	2.59	.254
Never binges vs. Never drinker	0.99	0.55	1.79	.972
1 binge/month vs. Never drinker	1.33	0.74	2.40	.340
2-7 binges/month vs. Never drinker	1.23	0.63	2.39	.549
≥ 8 binges/month vs. Never drinker	1.87	1.00	3.49	.049
Smoking				
Former smoker vs. Non-smoker	0.92	0.60	1.41	.693
Current Smoker vs. Non-smoker	1.33	0.93	1.92	.123
Personal Disturbance (z-score)	1.29	1.07	1.55	.008
Somatic Complaints (z-score)	1.23	1.05	1.44	.010

Note. 95% CI = 95% confidence interval. HR = hazard ratio.

Supplementary Digital Content 11:

Table S11

Cox regression of Psychotic/Paranoid as a predictor of all-cause mortality when controlling for age, ethnicity, the covariates, and Personal

Disturbance

Predictor	HR	95% CI lower	95% CI upper	p
Age	1.06	1.01	1.12	.016
Ethnic group				
Black vs. White	1.48	1.01	2.17	.046
Other vs. White	1.42	0.89	2.27	.143
Marital status				
Divorced/separated/widowed vs. Married	1.45	1.06	1.99	.022
Never married vs. Married	1.99	1.35	2.95	.001
Total Army General Technical Test (z-score)	1.09	0.92	1.29	.334
Family income				
$20,001-$40,000 vs. ≤ $20,000	0.93	0.69	1.25	.607
> $40,000 vs. ≤ $20,000	0.56	0.33	0.94	.027

Predictor	HR	95% CI		p
		lower	upper	
Educational achievement				
9-12 years vs. ≤ 8 years	1.08	0.51	2.25	.849
13-16 years vs. ≤ 8 years	0.78	0.35	1.70	.524
17-18 years vs. ≤ 8 years	0.91	0.33	2.46	.844
Pulse rate/minute (z-score)	1.21	1.07	1.38	.003
Somatic conditions present vs. absent	1.55	1.12	2.14	.008
Systolic blood pressure (z-score)	1.04	0.88	1.24	.627
Diastolic blood pressure (z-score)	1.01	0.85	1.20	.910
Blood glucose (mg/dl) (z-score)	1.11	1.04	1.18	.001
FEV_1 (z-score)	0.85	0.75	0.98	.020
Body mass index				
Overweight (25-30) vs. Normal (< 25)	0.74	0.55	1.00	.048
Obese (>30) vs. Normal (< 25)	1.06	0.72	1.55	.780
Major depression present vs. absent	0.88	0.57	1.36	.565
Generalized anxiety disorder present vs. absent	1.06	0.73	1.53	.772
Drinking				

Predictor	HR	95% CI		p
		lower	upper	
Nondrinker vs. Never drinker	1.40	0.76	2.55	.278
Never binges vs. Never drinker	0.97	0.54	1.75	.910
1 binge/month vs. Never drinker	1.30	0.72	2.34	.382
2-7 binges/month vs. Never drinker	1.18	0.61	2.31	.624
≥ 8 binges/month vs. Never drinker	1.75	0.94	3.28	.080
Smoking				
Former smoker vs. Non-smoker	0.92	0.60	1.40	.684
Current Smoker vs. Non-smoker	1.29	0.89	1.86	.180
Personal Disturbance (z-score)	1.80	1.44	2.25	< .001
Psychotic/Paranoid (z-score)	0.85	0.70	1.03	.088

Note. 95% CI = 95% confidence interval. HR = hazard ratio.

Supplementary Digital Content 12:

Table S12

Cox regression of Antisocial as a predictor of all-cause mortality when controlling for age, ethnicity, the covariates, and Personal Disturbance

Predictor	HR	95% CI lower	95% CI upper	p
Age	1.07	1.01	1.12	.015
Ethnic group				
Black vs. White	1.41	0.96	2.07	.076
Other vs. White	1.33	0.84	2.12	.230
Marital status				
Divorced/separated/widowed vs. Married	1.46	1.06	2.00	.019
Never married vs. Married	1.96	1.33	2.90	.001
Total Army General Technical Test (z-score)	1.13	0.95	1.33	.167
Family income				
$20,001-$40,000 vs. ≤ $20,000	0.92	0.68	1.24	.567
> $40,000 vs. ≤ $20,000	0.55	0.33	0.92	.024
Educational achievement				

Predictor	HR	95% CI		p
		lower	upper	
9-12 years vs. ≤ 8 years	1.05	0.50	2.21	.893
13-16 years vs. ≤ 8 years	0.75	0.34	1.65	.479
17-18 years vs. ≤ 8 years	0.85	0.31	2.29	.747
Pulse rate/minute (z-score)	1.22	1.07	1.39	.003
Somatic conditions present vs. absent	1.57	1.13	2.17	.007
Systolic blood pressure (z-score)	1.03	0.87	1.22	.723
Diastolic blood pressure (z-score)	1.02	0.86	1.22	.819
Blood glucose (mg/dl) (z-score)	1.11	1.04	1.18	.001
FEV_1 (z-score)	0.85	0.75	0.98	.020
Body mass index				
Overweight (25-30) vs. Normal (< 25)	0.73	0.54	0.99	.041
Obese (>30) vs. Normal (< 25)	1.06	0.73	1.55	.760
Major depression present vs. absent	0.89	0.58	1.39	.615
Generalized anxiety disorder present vs. absent	1.08	0.75	1.57	.685
Drinking				
Nondrinker vs. Never drinker	1.44	0.79	2.62	.238

Predictor	HR	95% CI		p
		lower	upper	
Never binges vs. Never drinker	0.99	0.55	1.78	.965
1 binge/month vs. Never drinker	1.31	0.73	2.36	.374
2-7 binges/month vs. Never drinker	1.21	0.62	2.36	.576
≥ 8 binges/month vs. Never drinker	1.78	0.95	3.34	.071
Smoking				
Former smoker vs. Non-smoker	0.92	0.60	1.40	.682
Current Smoker vs. Non-smoker	1.29	0.89	1.86	.185
Personal Disturbance (z-score)	1.42	1.19	1.69	< .001
Antisocial (z-score)	1.13	0.94	1.36	.199

Note. 95% CI = 95% confidence interval. HR = hazard ratio.

Supplementary Digital Content 13:

Table S13

Cox regression of all four personality components' associations with all-cause mortality after controlling for age and ethnicity

Predictors	HR	95% CI lower	95% CI upper	p
Age	1.09	1.03	1.14	.001
Ethnic group				
Black vs. White	1.72	1.24	2.39	.001
Black vs. other	1.33	0.85	2.09	.215
Components (z-scores)				
Neuroticism/Negative Affectivity	0.96	0.81	1.13	.603
Somatic Complaints	1.51	1.34	1.71	< .001
Psychotic/Paranoid	0.97	0.85	1.10	.615
Antisocial	1.54	1.33	1.79	< .001

Note. Effects for the components are per standard deviation. 95% CI = 95% confidence interval. HR = hazard ratio.

Supplementary Digital Content 14:

Table S14

Cox regression of all four personality components' association with all-cause mortality after controlling for age, ethnicity, and the covariates

Predictor	HR	95% CI		p
		lower	upper	
Age	1.07	1.01	1.12	.012
Ethnic group				
Black vs. White	1.38	0.93	2.03	.107
Other vs. White	1.31	0.82	2.11	.257
Marital status				
Divorced/separated/widowed vs. Married	1.50	1.09	2.06	.013
Never married vs. Married	2.02	1.37	2.99	< .001
Total Army General Technical Test (z-score)	1.14	0.96	1.36	.127
Family income				
$20,001-$40,000 vs. ≤ $20,000	0.94	0.70	1.27	.675
> $40,000 vs. ≤ $20,000	0.55	0.33	0.93	.025
Educational achievement				

Predictor	HR	95% CI		p
		lower	upper	
9-12 years vs. ≤ 8 years	1.06	0.50	2.22	.884
13-16 years vs. ≤ 8 years	0.76	0.35	1.67	.497
17-18 years vs. ≤ 8 years	0.89	0.33	2.41	.813
Pulse rate/minute (z-score)	1.23	1.08	1.40	.002
Somatic conditions present vs. absent	1.45	1.05	2.02	.026
Systolic blood pressure (z-score)	1.04	0.87	1.23	.691
Diastolic blood pressure (z-score)	1.01	0.85	1.21	.873
Blood glucose (mg/dl) (z-score)	1.10	1.03	1.17	.003
FEV_1 (z-score)	0.86	0.75	0.98	.027
Body mass index				
Overweight (25-30) vs. Normal (< 25)	0.74	0.55	1.00	.051
Obese (>30) vs. Normal (< 25)	1.08	0.73	1.58	.710
Major depression present vs. absent	0.94	0.61	1.47	.788
Generalized anxiety disorder present vs. absent	1.07	0.73	1.56	.729
Drinking				
Nondrinker vs. Never drinker	1.36	0.75	2.50	.314

Predictor	HR	95% CI		p
		lower	upper	
Never binges vs. Never drinker	0.95	0.52	1.71	.857
1 binge/month vs. Never drinker	1.22	0.68	2.21	.502
2-7 binges/month vs. Never drinker	1.11	0.57	2.17	.758
≥ 8 binges/month vs. Never drinker	1.66	0.89	3.12	.113
Smoking				
Former smoker vs. Non-smoker	0.89	0.58	1.36	.584
Current Smoker vs. Non-smoker	1.21	0.84	1.76	.314
Components (z-scores)				
Neuroticism/Negative Affectivity	0.91	0.77	1.09	.318
Somatic Complaints	1.39	1.22	1.58	< .001
Psychotic/Paranoid	1.03	0.90	1.19	.669
Antisocial	1.36	1.16	1.59	< .001

Note. Effects for the components are per standard deviation. 95% CI = 95% confidence interval. HR = hazard ratio.

Predictor	HR	95% CI		p
		lower	upper	