

Metabolic syndrome increases the risk for premature employment exit: A longitudinal study among 60 427 middle-aged and older workers from the Lifelines Cohort Study and Biobank¹

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1. *Supplementary tables*
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Table S1: Comparison of the study sample baseline (T0) characteristics with participants who dropped-out after T0 or had no follow-up information on employment status (ES)

	Study sample		Drop-out sample		Missing ES sample	
	N=60 427		N=5258		N=679	
Baseline	%	mean (SD)	%	mean (SD)	%	mean (SD)
Health status						
MetS	17.6		18.1		20.3	
MetS components						
Abdominal obesity	36.3		40.5		36.8	
Hypertension	44.9		47.1		43.0	
Raised triglycerides	21.0		20.2		24.6	
Reduced HDL-Cholesterol	16.7		16.6		18.4	
Raised blood glucose	13.9		13.0		15.2	
Number of MetS components						
0	31.5		24.4		30.2	
1	31.0		27.1		29.6	
2	19.9		18.7		17.1	
3	10.3		10.3		11.9	
4	5.2		5.7		5.7	
5	2.1		2.0		2.7	
Sociodemographic factors						
Age (years)		48.3 (5.8)		46.5 (5.0)		46.8 (5.0)
Sex						
Female	53.8		49.5		43.6	
Male	46.2		50.5		56.4	
Partner status						
Married / partnered	90.0		87.8		88.4	
Not married / partnered	10.0		12.1		11.5	
Occupational group						
High skilled white-collar	49.8		41.2		45.1	
Low skilled white-collar	31.1		30.8		25.0	
High skilled blue-collar	10.8		12.6		12.4	
Low skilled blue-collar	8.3		11.4		12.5	
Educational level						
High	31.1		24.3		27.2	
Medium	40.5		38.2		37.4	
Low	28.4		35.9		31.7	
Weekly working hours		31.4 (8.7)		32.4 (8.7)		33.0 (8.5)

Abbreviations: SD, standard deviation; MetS, metabolic syndrome; HDL, high-density lipoprotein

Table S2: The association between MetS and premature employment exit: competing risk regression analysis (sensitivity analysis: including participants working ≥ 1 hour but < 12 hours per week, N=64 796)

	Premature employment exit type during 4.2 years follow-up					
	Unemployment		Work disability		Early retirement	
	Model 1 SHR (95% CI)	Model 2 SHR (95% CI)	Model 1 SHR (95% CI)	Model 2 SHR (95% CI)	Model 1 SHR (95% CI)	Model 2 SHR (95% CI)
Baseline						
MetS	1.21 (1.12-1.31)	1.14 (1.05-1.23)	2.05 (1.81-2.33)	1.80 (1.58-2.04)	1.73 (1.54-1.94)	1.04 (0.92-1.18)
Covariates						
Age (years)		1.00 (1.00-1.01)		1.01 (1.00-1.02)		1.36 (1.35-1.37)
Male sex		0.98 (0.90-1.07)		1.38 (1.16-1.63)		0.96 (0.84-1.09)
Not married / partnered		1.64 (1.50-1.79)		1.88 (1.60-2.20)		0.54 (0.43-0.68)
Occupation						
HSWC		Ref.				
LSWC		1.32 (1.22-1.44)		1.04 (0.88-1.22)		0.73 (0.63-0.84)
HSBC		0.96 (0.84-1.10)		1.76 (1.43-2.17)		0.59 (0.48-0.74)
LSBC		1.22 (1.08-1.38)		1.37 (1.12-1.69)		0.49 (0.38-0.62)
Education						
High		Ref.				
Medium		1.17 (1.07-1.29)		1.25 (1.04-1.50)		0.87 (0.76-1.01)
Low		1.54 (1.39-1.71)		1.72 (1.41-2.10)		0.87 (0.75-1.02)
Working hours		1.00 (0.99-1.00)		0.95 (0.95-0.96)		1.00 (0.99-1.01)

Abbreviations: SHR, sub distribution hazard ratio; CI, confidence interval; MetS, metabolic syndrome; HSWC, high skilled white-collar; LSWC, low skilled white-collar; HSBC, high skilled blue-collar; LSBC, low skilled blue-collar; Ref., reference group

Note: model 1 = crude; model 2 = model 1 adjusted for age, sex, occupational group, education, and working hours; SHR's written in bold are statistically significant ($p < .05$)

Table S3: The association between number of MetS components and premature employment exit: competing risk regression analysis (sensitivity analysis: including participants working ≥ 1 hour but < 12 hours per week, N=64 796)

	Premature employment exit type during 4.2 years follow-up					
	Unemployment		Work disability		Early retirement	
	Model 1 SHR (95% CI)	Model 2 SHR (95% CI)	Model 1 SHR (95% CI)	Model 2 SHR (95% CI)	Model 1 SHR (95% CI)	Model 2 SHR (95% CI)
Baseline						
MetS components						
0	0.80 (0.72-0.90)	0.86 (0.77-0.96)	0.46 (0.38-0.56)	0.53 (0.43-0.64)	0.51 (0.43-0.61)	0.98 (0.82-1.19)
1	0.90 (0.81-1.01)	0.94 (0.84-1.05)	0.63 (0.52-0.76)	0.68 (0.57-0.83)	0.69 (0.58-0.82)	0.96 (0.81-1.15)
2	0.98 (0.87-1.11)	0.99 (0.88-1.11)	0.79 (0.65-0.96)	0.81 (0.67-0.99)	0.86 (0.72-1.03)	1.05 (0.87-1.26)
3	Ref.					
4	1.17 (1.00-1.37)	1.15 (0.98-1.35)	1.46 (1.16-1.85)	1.43 (1.13-1.80)	1.21 (0.96-1.51)	1.09 (0.86-1.38)
5	1.13 (0.91-1.41)	1.05 (0.84-1.31)	1.81 (1.35-2.43)	1.55 (1.15-2.09)	1.71 (1.30-2.25)	1.05 (0.79-1.41)
Covariates						
Age (years)		1.00 (1.00-1.01)		1.01 (1.00-1.02)		1.36 (1.35-1.37)
Male sex		0.97 (0.89-1.06)		1.34 (1.14-1.59)		0.96 (0.84-1.09)
Not married / partnered		1.64 (1.50-1.79)		1.86 (1.58-2.18)		0.54 (0.43-0.68)
Occupation						
HSWC		Ref.				
LSWC		1.32 (1.21-1.44)		1.03 (0.87-1.22)		0.73 (0.63-0.84)
HSBC		0.96 (0.84-1.10)		1.77 (1.43-2.18)		0.60 (0.48-0.74)
LSBC		1.21 (1.07-1.37)		1.35 (1.09-1.66)		0.49 (0.38-0.62)
Education						
High		Ref.				
Medium		1.16 (1.06-1.28)		1.21 (1.01-1.46)		0.87 (0.75-1.01)
Low		1.52 (1.37-1.69)		1.65 (1.35-2.02)		0.87 (0.75-1.01)
Working hours		1.00 (0.99-1.00)		0.95 (0.95-0.96)		1.00 (0.99-1.01)

Abbreviations: SHR, sub distribution hazard ratio; CI, confidence interval; MetS, metabolic syndrome; HSWC, high skilled white-collar; LSWC, low skilled white-collar; HSBC, high skilled blue-collar; LSBC, low skilled blue-collar; Ref., reference group

Note: model 1 = crude; model 2 = model 1 adjusted for age, sex, occupational group, education, and working hours; SHR's written in bold are statistically significant ($p < .05$)

Table S4: The association between MetS components and premature employment exit: competing risk regression analysis

	Premature employment exit type					
	Unemployment		Work disability		Early retirement	
	Model 1 SHR (95% CI)	Model 2 SHR (95% CI)	Model 1 SHR (95% CI)	Model 2 SHR (95% CI)	Model 1 SHR (95% CI)	Model 2 SHR (95% CI)
MetS components						
Abdominal obesity	1.17 (1.09-1.26)	1.08 (1.00-1.16)	1.53 (1.34-1.75)	1.37 (1.19-1.58)	0.99 (0.88-1.11)	0.99 (0.88-1.12)
Hypertension	1.05 (0.98-1.13)	1.03 (0.96-1.11)	1.22 (1.07-1.40)	1.15 (1.00-1.33)	1.60 (1.43-1.80)	1.05 (0.93-1.18)
Raised triglycerides	0.98 (0.89-1.08)	1.00 (0.91-1.10)	1.18 (1.01-1.38)	1.20 (1.02-1.42)	1.19 (1.04-1.35)	0.98 (0.82-1.16)
Reduced HDL-Cholesterol	1.12 (1.02-1.24)	1.08 (0.98-1.20)	1.50 (1.28-1.76)	1.43 (1.21-1.69)	1.14 (0.99-1.30)	1.17 (0.97-1.40)
Raised blood glucose	1.16 (1.06-1.28)	1.15 (1.04-1.26)	1.20 (1.02-1.42)	1.15 (0.97-1.37)	1.58 (1.37-1.82)	1.02 (0.88-1.18)
Covariates						
Age (years)		1.01 (1.00-1.01)		1.02 (1.01-1.03)		1.37 (1.36-1.38)
Male sex		0.95 (0.86-1.05)		1.36 (1.09-1.68)		0.98 (0.85-1.14)
Not married / partnered		1.58 (1.44-1.74)		1.68 (1.41-2.02)		0.54 (0.43-0.68)
Occupation						
HSWC		Ref.				
LSWC		1.30 (1.18-1.42)		1.07 (0.89-1.28)		0.75 (0.64-0.87)
HSBC		0.95 (0.83-1.09)		1.96 (1.58-2.44)		0.61 (0.48-0.77)
LSBC		1.13 (0.98-1.29)		1.64 (1.30-2.06)		0.47 (0.35-0.62)
Education						
High		Ref.				
Medium		1.20 (1.09-1.33)		1.15 (0.94-1.41)		0.83 (0.71-0.97)
Low		1.58 (1.42-1.77)		1.61 (1.30-2.00)		0.87 (0.74-1.02)
Working hours		1.00 (0.99-1.00)		0.95 (0.94-0.96)		0.99 (0.98-0.99)

Abbreviations: SHR, sub distribution hazard ratio; CI, confidence interval; MetS, metabolic syndrome; HSWC, high skilled white-collar; LSWC, low skilled white-collar; HSBC, high skilled blue-collar; LSBC, low skilled blue-collar; Ref., reference group

Note: model 1 = crude; model 2 = model 1 adjusted for age, sex, occupational group, education, and working hours; SHR's written in bold are statistically significant (p<.05)