

Psychosocial work stressors and risk of all-cause and coronary heart disease mortality: A systematic review and meta-analysis ¹

by Yamna Taouk, MPH,² Matthew J Spittal, PhD, Anthony D LaMontagne, ScD, Allison J Milner, PhD

1. *Supplementary material*
2. *Correspondence to: Yamna Taouk, MPH, Melbourne School of Population and Global Health, Level 4, 207 Bouverie Street, The University of Melbourne, Parkville, Victoria 3010 Australia. [E-mail: taouk.y@unimelb.edu.au]*

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Table S1: Search strategies

Search strategy in Embase

#	Query
#1	(psychosocial job stress* or working condition* or (psychosocial adj2 work*) or (psychosocial adj2 job*) or (occupation* adj2 stress*)).ti,ab.
#2	((job or work) adj5 (strain or stress)).ti,ab.
#3	(job control or job demand* or job secur* or job insecure* or work insecure* or work secur* or decision latitude or skill discretion or decision authority or ((precarious adj2 work) or (precarious adj2 employ*) or (precarious adj2 job))).ti,ab.
#4	(psychosocial job demands or workload or effort reward imbalance or (organisation* adj2 justice) or (organisation* adj2 injustice) or (organisation* adj2 fairness) or (organisation* adj2 unfairness) or (organization adj2 justice) or (organization adj2 injustice) or (organization* adj2 fairness) or (organization* adj2 unfairness) or (shift adj work) or ((job or work) adj5 social support)).ti,ab.
#5	((work* adj2 hour*) or (work* adj2 time) or (work* adj2 span) or underemployment).ti,ab.
#6	((work or business or employ*) adj5 (management style or leadership)).ti,ab.
#7	((temporary or casual) adj5 employ*).ti,ab.
#8	(mortality or death).ti,ab.
#9	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7
#10	#8 AND #9

Search strategy in Medline

#	Query
#1	(psychosocial job stress* or working condition* or (psychosocial adj2 work*) or (psychosocial adj2 job*) or (occupation* adj2 stress*)).ti,ab.
#2	((job or work) adj5 (strain or stress)).ti,ab.
#3	(job control or job demand* or job secur* or job insecure* or work insecure* or work secur* or decision latitude or skill discretion or decision authority or ((precarious adj2 work) or (precarious adj2 employ*) or (precarious adj2 job))).ti,ab.
#4	(psychosocial job demands or workload or effort reward imbalance or (organisation* adj2 justice) or (organisation* adj2 injustice) or (organisation* adj2 fairness) or (organisation* adj2 unfairness) or (organization adj2 justice) or (organization adj2 injustice) or (organization* adj2 fairness) or (organization* adj2 unfairness) or (shift adj work) or ((job or work) adj5 social support)).ti,ab.
#5	((work* adj2 hour*) or (work* adj2 time) or (work* adj2 span) or underemployment).ti,ab.
#6	((work or business or employ*) adj5 (management style or leadership)).ti,ab.
#7	((temporary or casual) adj5 employ*).ti,ab.
#8	(mortality or death).ti,ab.
#9	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7
#10	#8 AND #9

Search strategy in PubMed (read from bottom to top)

#	Query
#12	#10 AND #11
#11	mortality[Title/Abstract] OR death[Title/Abstract]

#10	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9
#9	temporary employ*[Title/Abstract] OR casual employ*[Title/Abstract]
#8	employ* management style[Title/Abstract] OR employ* leadership[Title/Abstract]
#7	business management style[Title/Abstract] OR business leadership[Title/Abstract]
#6	work management style[Title/Abstract] OR work leadership[Title/Abstract]
#5	work* hour*[Title/Abstract] OR work* time[Title/Abstract] OR work* span[Title/Abstract] OR underemployment[Title/Abstract]
#4	psychosocial job demands[Title/Abstract] OR workload[Title/Abstract] OR effort reward imbalance[Title/Abstract] OR organisation* justice[Title/Abstract] OR organisation* injustice[Title/Abstract] OR organisation* fairness[Title/Abstract] OR organisation* unfairness[Title/Abstract] OR organization justice[Title/Abstract] OR organization injustice[Title/Abstract] OR organization* fairness[Title/Abstract] OR organization* unfairness[Title/Abstract] OR work* social support[Title/Abstract] OR shift work[Title/Abstract] OR employ* social support[Title/Abstract] OR job social support[Title/Abstract]
#3	job control[Title/Abstract] OR job demand*[Title/Abstract] OR job secur*[Title/Abstract] OR job insecure*[Title/Abstract] OR work insecure*[Title/Abstract] OR work secur*[Title/Abstract] OR decision latitude[Title/Abstract] OR skill discretion[Title/Abstract] OR decision authority[Title/Abstract] OR precarious work[Title/Abstract] OR precarious employ*[Title/Abstract] OR precarious job[Title/Abstract]
#2	job strain[Title/Abstract] OR job stress[Title/Abstract] OR work strain[Title/Abstract] OR work stress[Title/Abstract]
#1	psychosocial job stress*[Title/Abstract] OR working condition*[Title/Abstract] OR psychosocial work*[Title/Abstract] OR psychosocial job*[Title/Abstract] OR occupation* stress*[Title/Abstract]

Search strategy in SCOPUS

#1	TITLE-ABS(("psychosocial job stress*") or ("working condition*") or (psychosocial W/2 work*) or (psychosocial W/2 job*) or (occupation* W/2 stress*))
#2	TITLE-ABS((job W/2 strain or job W/2 stress or work W/2 strain or work W/2 stress))
#3	TITLE-ABS(("job control") or ("job demand*") or ("job secur*") or ("job insecure*") or ("work insecure*") or ("work secur*") or ("decision latitude") or ("skill discretion") or ("decision authority") or (precarious W/2 work) or (precarious W/2 employ*) or (precarious W/2 job))
#4	TITLE-ABS(("psychosocial job demands") or (workload) or ("effort reward imbalance") or (organisation* W/2 justice) or (organisation* W/2 injustice) or (organisation* W/2 fairness) or (organisation* W/2 unfairness) or (organization W/2 justice) or (organization W/2 injustice) or (organization* W/2 fairness) or (organization* W/2 unfairness) or (shift W/1 work))
#5	TITLE-ABS((job W/5 "social support") or (work W/5 "social support"))
#6	TITLE-ABS((work* W/2 hour*) or (work* W/2 time) or (work* W/2 span) or underemployment)
#7	TITLE-ABS(work W/5 "management style" or work W/5 leadership)
#8	TITLE-ABS(business W/5 "management style" or business W/5 leadership)
#9	TITLE-ABS(employ* W/5 "management style" or employ* W/5 leadership)
#10	TITLE-ABS(temporary W/5 employ* or casual W/5 employ*)
#11	TITLE-ABS(mortality or death)
#12	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10
#13	#12 and #11

Search strategy in PsycINFO

#	Query
#1	(psychosocial job stress* or working condition* or (psychosocial adj2 work*) or (psychosocial adj2 job*) or (occupation* adj2 stress*)).ti,ab.
#2	((job or work) adj5 (strain or stress)).ti,ab.

#3	(job control or job demand* or job secur* or job insecure* or work insecure* or work secur* or decision latitude or skill discretion or decision authority or ((precarious adj2 work) or (precarious adj2 employ*) or (precarious adj2 job))).ti,ab.
#4	(psychosocial job demands or workload or effort reward imbalance or (organisation* adj2 justice) or (organisation* adj2 injustice) or (organisation* adj2 fairness) or (organisation* adj2 unfairness) or (organization adj2 justice) or (organization adj2 injustice) or (organization* adj2 fairness) or (organization* adj2 unfairness) or (shift adj work) ((job or work) adj5 social support)).ti,ab.
#5	((work* adj2 hour*) or (work* adj2 time) or (work* adj2 span) or underemployment).ti,ab.
#6	((work or business or employ*) adj5 (management style or leadership)).ti,ab.
#7	((temporary or casual) adj5 employ*).ti,ab.
#8	(mortality or death).ti,ab.
#9	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7
#10	#8 AND #9

Search strategy in Web of Science

#1	(TS=("psychosocial job stress*" or "working condition*" or "psychosocial near/2 work*" or "psychosocial near/2 job*" or "occupation* near/2 stress*"))
#2	(TS=(job near/2 strain or job near/2 stress or work near/2 strain or work near/2 stress))
#3	(TS=("job control" or "job demand*" or "job secur*" or "job insecure*" or "work insecure*" or "work secur*" or "decision latitude" or "skill discretion" or "decision authority" or precarious near/2 work or precarious near/2 employ* or precarious near/2 job))
#4	(TS=(psychosocial job demands or workload or effort reward imbalance or (organisation* near/2 justice) or (organisation* near/2 injustice) or (organisation* near/2 fairness) or (organisation* near/2 unfairness) or (organization near/2 justice) or (organization near/2 injustice) or (organization* near/2 fairness) or (organization* near/2 unfairness) or (shift near/1 work)))
#5	(TS=((job near/5 "social support") or (work near/5 "social support")))
#6	(TS=((work* near/2 hour*) or (work* near/2 time) or (work* near/2 span) or underemployment))
#7	(TS=(work near/5 "management style" or work near/5 leadership))
#8	(TS=(business near/5 "management style" or business near/5 leadership))
#9	(TS=(employ* near/5 "management style" or employ* near/5 leadership))
#10	(TS=(temporary near/5 employ* or casual near/5 employ*))
#11	(TS=(mortality or death))
#12	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10
#13	#11 AND #12

Search strategy in Global Health (CABI)

#1	("psychosocial job stress*" or "working condition*" or "psychosocial near/2 work*" or "psychosocial near/2 job*" or "occupation* near/2 stress*")
#2	("job near/2 strain" or "job near/2 stress" or "work near/2 strain" or "work near/2 stress")
#3	("job control" or "job demand*" or "job secur*" or "job insecure*" or "work insecure*" or "work secur*" or "decision latitude" or "skill discretion" or "decision authority" or "precarious near/2 work" or "precarious near/2 employ*" or "precarious near/2 job")
#4	("psychosocial job demands" or "workload" or "effort reward imbalance" or ("organisation* near/2 justice") or ("organisation* near/2 injustice") or ("organisation* near/2 fairness") or ("organisation* near/2 unfairness") or ("organization near/2 justice") or ("organization near/2 injustice") or ("organization* near/2 fairness") or ("organization* near/2 unfairness") or ("shift near/1 work"))
#5	(job near/5 "social support") or (work near/5 "social support")
#6	(work* near/2 hour* or work* near/2 time or work* near/2 span or underemployment)
#7	(work near/5 "management style" or work near/5 leadership)

#8	(business near/5 "management style" or business near/5 leadership)
#9	(employ* near/5 "management style" or employ* near/5 leadership)
#10	(temporary near/5 employ* or casual near/5 employ*)
#11	(mortality or death)
#12	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10
#13	#11 AND #12

Table S2: Quality assessment

SIGN Methodology Checklist 3: Cohort studies (version 3, 20 November 2012)

	CRITERIA	Yes	No	Cannot Say
1.	The study addresses an appropriate and clearly focused question?			
2.	The two groups being studied are selected from source populations that are comparable in all respects other than the factor under investigation?			
3.	The study indicates how many of the people asked to take part did so, in each of the groups being studied?			
4.	The likelihood that some eligible subjects might have the outcome at the time of enrolment is assessed and taken into account in the analysis?			
5.	The percentage of individuals or clusters recruited into each arm of the study whom dropped out before the study was completed is reported?			
6.	If applicable, comparison is made between full participants and those lost to follow up, by exposure status?			
7.	The outcomes are clearly defined?			
8.	The assessment of outcome is made blind to exposure status? (if the study is retrospective this may not be applicable)			
9.	Where blinding was not possible, there is some recognition that knowledge of exposure status could have influenced the assessment of outcome?			
10.	The method of assessment of exposure is reliable?			
11.	Evidence from other sources is used to demonstrate that the method of outcome assessment is valid and reliable?			
12.	Exposure level or prognostic factor is assessed more than once?			
13.	The main potential confounders are identified and taken into account in the design and analysis? *			
14.	Have confidence intervals been provided?			
	OVERALL			
	How well was the study done to minimise the risk of bias or confounding? (High quality/acceptable/low quality)			

*Limited was included as an additional response for item 13.

1. A well-defined question is a prerequisite in assessing the objectives and relevance of the study
2. Comparable groups should be similar in all characteristics except for their exposure status
3. Large differences in participation rates between groups may be due to selection bias hence study results should be treated with considerable caution
4. If the outcome is present at baseline, results may be subject to performance bias
5. A high drop-out rate in the study may indicate attrition bias and the study should be examined as to why people dropped out and whether drop-out rates were comparable in the exposed and unexposed groups
6. Attrition bias may occur if the participants who dropped out of the study differed significantly from those whom remained and any unexplained differences warrants study results to be treated with caution
7. Outcomes and the criteria used for measuring them should be clearly defined and participants should be followed until specified end points or outcomes are reached to minimise the risk of detection bias
8. If outcome assessment is made blind to exposure status, minimising the risk of detection bias and increasing the likelihood of unbiased results, the study should be rated more highly than those where it is not done, or not done adequately

9. Blinding is not possible in many cohort studies so assessment of extent of detection bias present in the study allows results to be regarded with more confidence

10. Clearly described, reliable measures minimise the risk of detection bias in the study and should increase the confidence in the quality of the study

11. The primary outcome measures used should be clear to minimise the risk of detection bias. If outcome measures are not stated, or the study bases its main conclusions on secondary outcomes, the study should be rejected

12. Confidence in data quality should be increased and the risk of detection bias minimised if exposure level is measured more than once and independent assessment is made by more than one investigator

13. The study should report on potential confounders considered and how they have been assessed or allowed for in the analysis. Judgement should be made as to the inclusion of all likely confounders. If the measures used to address confounding are inadequate, the study should be downgraded or rejected. A study that does not address the risk of confounding should be rejected

14. Confidence limits are the preferred method for indicating the precision of statistical results, and can be used to differentiate between an inconclusive study and a study that shows no effect. Studies that report a single value with no assessment of precision should be treated with extreme caution

SIGN Methodology Checklist 4: Case-control studies (*version 2, 28 May 2012*)

(Used for nested case control studies within longitudinal studies)

	CRITERIA	Yes	No	Cannot Say
1.	The study addresses an appropriate and clearly focused question?			
2.	The cases and controls are taken from comparable populations?			
3.	The same exclusion criteria are used for both cases and controls?			
4.	Percentage of each group (cases and controls) that participated in the study reported?			
5.	Comparison is made between participants and non-participants to establish their similarities or differences?			
6.	Cases are clearly defined and differentiated from controls?			
7.	It is clearly established that controls are non-cases?			
8.	Measures will have been taken to prevent knowledge of primary exposure influencing case ascertainment?			
9.	Exposure status is measured in a standard, valid and reliable way?			
10.	The main potential confounders are identified and taken into account in the design and analysis? *			
11.	Confidence intervals are provided?			
	OVERALL			
	How well was the study done to minimise the risk of bias or confounding? (High quality/acceptable/low quality)			

*Limited was included as an additional response for item 10.

1. A well-defined question is a prerequisite in assessing the objectives and relevance of the study

2. If the study does not include clear definitions of the source population it should be rejected

3. Failure to apply selection and exclusion criteria equally to cases and controls may introduce a significant degree of bias into the results of the study

4. Low participation rates, or large difference between cases and controls, may bias the study results due to differences between participants and non-participants
5. Well conducted case-control study will examine non-participants among the source population to ensure that the participants are a truly representative sample and do not differ from other members of the source population in some significant way
6. The method of selection of cases is of critical importance to the validity of the study. It must be clear that cases are truly cases and are representative of the eligible population
7. Controls must not have the outcome under investigation and the exposure status assessed in a similar way to that used for the selection of cases
8. If there is a possibility that case ascertainment can be influenced by knowledge of exposure status, assessment of any association is likely to be biased
9. The primary outcome measures used should be clear to minimise the risk of detection bias. If outcome measures are not stated, or the study bases its main conclusions on secondary outcomes, the study should be rejected
10. The study should report on potential confounders considered and how they have been assessed or allowed for in the analysis. Judgement should be made as to the inclusion of all likely confounders. If the measures used to address confounding are inadequate, the study should be downgraded or rejected. A study that does not address the risk of confounding should be rejected
11. Confidence limits are the preferred method for indicating the precision of statistical results, and can be used to differentiate between an inconclusive study and a study that shows no effect. Studies that report a single value with no assessment of precision should be treated with extreme caution.

The overall methodological quality of the study is rated as i) High quality (++): majority of criteria met (little or no risk of bias and results unlikely to be changed by further research), ii) Acceptable (+): most criteria met (some flaws in the study with an associated risk of bias and conclusions may change in the light of further studies), iii) Low quality (0): (either most criteria not met, or significant flaws relating to key aspects of study design and conclusions likely to change in the light of further studies).

Table S3: Excluded articles by reason for exclusion

	Authors	Journal	Title	Volume; (Issue): pages	Reason for exclusion
1	Aasland, O. G., Falkum, E.	Tidsskrift for Den Norske Laegeforening	How are we today? On physicians' health, well-being and job satisfaction	1992; 112(30):3818-3823	No full text
2	Aboa-Eboule, C., Brisson, C., Maunsell, E., Masse, B., Bourbonnais, R., Vezina, M., Milot, A., Theroux, P., Dagenais, GR.	Jama-Journal of the American Medical Association	Job strain and risk of acute recurrent coronary heart disease events	2007; 298(14):1652-1660	Exposure and/or outcome not suitable
3	Ahlbom, A., Karasek, R., Theorell, T.	Lakartidningen	Psychosocial stress during work and the risk of cardiovascular death	1980; 77(46):4243-4245	No English translation
4	Ahola, K., Vaananen, A., Koskinen, A., Kouvonen, A., Shirom, A.	Journal of Psychosomatic Research	Burnout as a predictor of all-cause mortality among industrial employees: a 10-year prospective register-linkage study	2010; 69(1):51-57	Exposure and/or outcome not suitable
5	Alfredsson, L., Hammar, N., Hogstedt, C.	International Journal of Epidemiology	Incidence of myocardial infarction and mortality from specific causes among bus drivers in Sweden	1993; 22(1):57-61	Exposure and/or outcome not suitable
6	Alfredsson, L., Karasek, R., Theorell, T.	Social Science and Medicine	Myocardial infarction risk and psychosocial work environment: an analysis of the male Swedish working force	1982; 16(4):463-467	Exposure and/or outcome not suitable
7	Amagasa, T., Nakayama, T., Takahashi, Y.	Journal of Occupational Health	Karojisatsu in Japan: characteristics of 22 cases of work-related suicide	2005; 47(2):157-164	Exposure and/or outcome not suitable
8	Andersen, I., Burr, H., Kristensen, T. S., Gamborg, M., Osler, M., Prescott, E., Diderichsen, F.	Occupational and Environmental Medicine	Do factors in the psychosocial work environment mediate the effect of socioeconomic position on the risk of myocardial infarction? Study from the Copenhagen Centre for Prospective Population Studies	2004; 61(11):886-892	Exposure and/or outcome not suitable
9	Andreev, E., Hoffmann, R., Carlson, E., Shkolnikov, V., Kharkova, T.	European Societies	Concentration of working-age male mortality among manual workers in urban Latvia and Russia, 1970-/1989	2009; 11(1):161-185	Exposure and/or outcome not suitable
10	Astrand, NE., Hanson, BS., Isacson, SO.	British Journal of Industrial Medicine	Job demands, job decision latitude, job support, and social	1989; 46(5):334-340	Exposure and/or outcome not suitable

			network factors as predictors of mortality in a Swedish pulp and paper company		
11	Backe, EM., Seidler, A., Latza, U., Rossnagel, K., Schumann, B.	International Archives of Occupational and Environmental Health	The role of psychosocial stress at work for the development of cardiovascular diseases: a systematic review	2012; 85(1):67-79	Not longitudinal study
12	Bannai, A., Tamakoshi, A.	Scandinavian Journal of Work, Environment and Health	The association between long working hours and health: a systematic review of epidemiological evidence	2014; 40(1):5-18	Not longitudinal study
13	Baumert, J., Schneider, B., Lukaschek, K., Emeny, RT., Meisinger, C., Erazo, N., Dragano, N., Ladwig, KH.	Journal of Psychiatric Research	Adverse conditions at the workplace are associated with increased suicide risk	2014; 57():90-95	Exposure and/or outcome not suitable
14	Biering, K., Andersen, JH., Lund, T., Hjollund, NH.	Journal of Occupational Rehabilitation	Psychosocial working environment and risk of adverse cardiac events in patients treated for coronary heart disease	2015; 25(4):770-775	Exposure and/or outcome not suitable
15	Boggild, H., Knutsson, A.	Scandinavian Journal of Work, Environment and Health	Shift work, risk factors and cardiovascular disease	1999; 25(2):85-99	Exposure and/or outcome not suitable
16	Brown, DL., Feskanich, D., Sanchez, BN., Rexrode, KM., Schernhammer, ES., Lisabeth, LD.	American Journal of Epidemiology	Rotating night shift work and the risk of ischemic stroke	2009; 169(11):1370-1377	Exposure and/or outcome not suitable
17	Diene, E., Fouquet, A., Esquirol, Y.	Archives of cardiovascular diseases	Cardiovascular diseases and psychosocial factors at work	2012; 105(1):33-39	Exposure and/or outcome not suitable
18	Dragano, N., Siegrist, J., Nyberg, S., Kivimaki, M.	European Journal of Preventive Cardiology	Effort-reward imbalance at work and job strain as risk factors for incident coronary heart disease: results from the multicohort IPD-work consortium	2017; 24(2 Supplement 1):11	No full text
19	Dragano, N., Siegrist, J., Nyberg, ST., Lunau, T., Fransson, EI., Alfredsson, L., Bjorner, JB., Borritz, M., Burr, H., Erbel, R., Fahlen, G., Goldberg, M., Hamer, M., Heikkila, K., Jockel, KH., Knutsson, A., Madsen, IEH., Nielsen, ML., Nordin, M., Oksanen, T., Pejtersen, JH., Pentti, J., Rugulies, R., Salo, P., Schupp, J., Singh-Manoux, A., Steptoe, A., Theorell, T., Vahtera, J., Westerholm, PJM., Westerlund, H., Virtanen, M., Zins, M., Batty, GD., Kivimaki, M.	Epidemiology	Effort-Reward imbalance at work and incident coronary heart disease: a multicohort study of 90,164 Individuals	2017; 28(4):619-626	Exposure and/or outcome not suitable
20	Emeny, RT., Zierer, A., Lacruz, ME., Baumert, J., Herder, C., Gornitzka, G., Koenig, W., Thorand, B., Ladwig, KH.	Psychosomatic Medicine	Job strain-Associated inflammatory burden and long-term risk of coronary events:	2013; 75(3):317-325	Exposure and/or outcome not suitable

			findings from the MONICA/KORA Augsburg Case-Cohort Study		
21	Ferrada-Noli, M.	Lakartidningen	Is work-related stress the primary cause of sudden death? [Swedish]	2000; 97(51-52):6108-6110	No English translation
22	Ferrada-Noli, M.	Lakartidningen	Work-related stress and sudden death epidemiology [Swedish]	2000; 97(50):5946-5947	No English translation
23	Ferrario, M. M., Veronesi, G., Chambless, L. E., Sega, R., Fornari, C., Bonzini, M., Cesana, G.	Occupational and Environmental Medicine	The contribution of major risk factors and job strain to occupational class differences in coronary heart disease incidence: the MONICA Brianza and PAMELA population-based cohorts	2011; 68(10):717-722	Exposure and/or outcome not suitable
24	Ferrario, M., Porati, S., Chiodini, P., Taborelli, S., Toso, C., Borchini, R., Maretti, A., Cesana, G.	Giornale Italiano di Medicina del Lavoro Ed Ergonomia	Differences of mortality risk for all causes and for cardiovascular diseases among occupational classes in men living the Northern Italy	2003; 25(3):426-427	No English translation
25	Fishta, A., Backe, EM.	International Archives of Occupational and Environmental Health	Psychosocial stress at work and cardiovascular diseases: an overview of systematic reviews	2015; 88(8):997-1014	Not longitudinal study
26	Frost, P., Kolstad, HA., Bonde, JP.	Scandinavian Journal of Work, Environment and Health	Shift work and the risk of ischemic heart disease - a systematic review of the epidemiologic evidence	2009; 35(3):163-179	Exposure and/or outcome not suitable
27	Fujishiro, K., Diez Roux, AV., Landsbergis, P., Baron, S., Barr, RG., Kaufman, JD., Polak, JF., Stukovsky, KH.	Occupational and Environmental Medicine	Associations of occupation, job control and job demands with intima-media thickness: the Multi-Ethnic Study of Atherosclerosis (MESA)	2011; 68(5):319-326	Exposure and/or outcome not suitable
28	Fujishiro, K., Hajat, A., Landsbergis, PA., Meyer, JD., Schreiner, PJ., Kaufman, JD.	SSM - Population Health	Explaining racial/ethnic differences in all-cause mortality in the Multi-Ethnic Study of Atherosclerosis (MESA): substantive complexity and hazardous working conditions as mediating factors	2017; 3:497-505	Exposure and/or outcome not suitable
29	Gallo, LC., Bogart, LM., Vranceanu, AM., Walt, LC.	Annals of Behavioral Medicine	Job characteristics, occupational status, and ambulatory cardiovascular activity in women	2004; 28(1):62-73	Exposure and/or outcome not suitable

30	Ganster, DC., Rosen, CC.	Journal of Management	Work stress and employee health: a multidisciplinary review	2013; 39(5):1085-1122	Not longitudinal study
31	Goh, J., Pfeffer, J., Zenios, SA.	Management Science	The relationship between workplace stressors and mortality and health costs in the United State	2016; 62(2):608-628	Not longitudinal study
32	Golubic, R., Ekelund, U., Luben, R., Khaw, K., Wareham, N., Brage, S.	Journal of Science and Medicine in Sport	Does total physical activity modify the association between working hours and all-cause mortality? The EPIC-Norfolk cohort	2012; 15:S28	No full text
33	Hammar, N., Alfredsson, L., Johnson, JV.	Occupational and Environmental Medicine	Job strain, social support at work, and incidence of myocardial infarction	1998; 55(8):548-553	Exposure and/or outcome not suitable
34	Hammar, N., Alfredsson, L., Theorell, T.	International Journal of Epidemiology	Job characteristics and the incidence of myocardial infarction	1994; 23(2):277-284	Exposure and/or outcome not suitable
35	Hannerz, H., Larsen, AD., Garde, AH.	Jmir Research Protocols	Working time arrangements as potential risk factors for ischemic heart disease among workers in Denmark: a study protocol	2016; 5(2):e130	Exposure and/or outcome not suitable
36	Heikkila, K., Nyberg, ST., Madsen, IE., de Vroome, E., Alfredsson, L., Bjorner, JJ., Borritz, M., Burr, H., Erbel, R., Ferrie, JE., Fransson, EI., Geuskens, GA., Hooftman, WE., Houtman, IL., Jockel, KH., Knutsson, A., Koskenvuo, M., Lunau, T., Nielsen, ML., Nordin, M., Oksanen, T., Pejtersen, JH., Pentti, J., Shipley, MJ., Steptoe, A., Suominen, SB., Theorell, T., Vahtera, J., Westerholm, PJ., Westerlund, H., Dragano, N., Rugulies, R., Kawachi, I., Batty, GD., Singh-Manoux, A., Virtanen, M., Kivimaki, M., Consortium, I. PD-Work	British Journal of Cancer	Long working hours and cancer risk: a multi-cohort study	2016; 114(7):813-818	Exposure and/or outcome not suitable
37	Hemmingsson, T., Lundberg, I.	International Journal of Epidemiology	Is the association between low job control and coronary heart disease confounded by risk factors measured in childhood and adolescence among Swedish males 40-53 years of age?	2006; 35(3):616-622	Exposure and/or outcome not suitable
38	Heslop, P., Smith, G. D., Metcalfe, C., Macleod, J., Hart, C.	Social Science and Medicine	Change in job satisfaction, and its association with self-reported stress, cardiovascular risk factors and mortality	2002; 54(10):1589-1599	Exposure and/or outcome not suitable

39	Hibbard, JH., Pope, CR.	Women and Health	Women's employment, social support, and mortality	1992; 18(1):119-133	Duplicate study
40	House, JS., Strecher, VJ., Metzner, HL., Robbins, CA.	Journal of Health and Social Behavior	Occupational stress and health among men and women in the Tecumseh Community Health Study	1986; 27(1):62-77	Exposure and/or outcome not suitable
41	Huang, Y. L., Xu, SX., Hua, JH., Zhu, DJ., Liu, CH., Hu, YZ., Liu, TB., Xu, DL.	Neurology	Association between job strain and risk of incident stroke: a meta-analysis	2015; 85(19):1648-1654	Not longitudinal study
42	Inoue, M., Nishikitani, M., Tsurugano, S., Yano, E.	Sangyo Eiseigaku Zasshi	The health of permanent workers and workers with precarious employment: a literature review	2011; 53(4):117-139	No English translation
43	Jarvholm, B., Reuterwall, C., Bystedt, J.	Scandinavian Journal of Work, Environment and Health	Mortality attributable to occupational exposure in Sweden	2013; 39(1):106-111	Exposure and/or outcome not suitable
44	Ke, DS.	Acta Neurologica Taiwanica	Overwork, stroke, and karoshi-death from overwork	2012; 21(2):54-59	Exposure and/or outcome not suitable
45	Kivimaki, M., Batty, GD., Hamer, M., Ferrie, JE., Vahtera, J., Virtanen, M., Marmot, MG., Singh-Manoux, A., Shipley, MJ.	Annals of Internal Medicine	Using additional information on working hours to predict coronary heart disease: a cohort study	2011; 154(7):457-463	Exposure and/or outcome not suitable
46	Kivimaki, M., Ferrie, JE., Brunner, E., Head, J., Shipley, MJ., Vahtera, J., Marmot, MG.	Archives of Internal Medicine	Justice at work and reduced risk of coronary heart disease among employees: the Whitehall II Study	2005; 165(19):2245-2251	Exposure and/or outcome not suitable
47	Kivimaki, M., Gimeno, D., Ferrie, JE., Batty, GD., Oksanen, T., Jokela, M., Virtanen, M., Salo, P., Akbaraly, TN., Elovainio, M., Pentti, J., Vahtera, J.	International Journal of Epidemiology	Socioeconomic position, psychosocial work environment and cerebrovascular disease among women: the Finnish public sector study	2009; 38(5):1265-1271	Exposure and/or outcome not suitable
48	Kivimaki, M., Head, J., Ferrie, JE., Brunner, E., Marmot, MG., Vahtera, J., Shipley, MJ.	Psychosomatic Medicine	Why is evidence on job strain and coronary heart disease mixed? An illustration of measurement challenges in the Whitehall II study	2006; 68(3):398-401	Exposure and/or outcome not suitable
49	Kivimaki, M., Leino-Arjas, P., Kaila-Kangas, L., Luukkonen, R., Vahtera, J., Elovainio, M., Harma, M., Kirjonen, J.	Psychosomatic Medicine	Is incomplete recovery from work a risk marker of cardiovascular death? Prospective evidence from industrial employees	2006; 68(3):402-407	Exposure and/or outcome not suitable
50	Kivimaki, M., Nyberg, ST., Batty, G., Fransson, EI., Heikkila, K., Alfredsson, L., Bjorner, JB., Borritz, M., Burr, H., Casini, A., Clays, E., De Bacquer, D., Dragano, N., Ferrie, JE., Geuskens, GA.,	The Lancet	Job strain as a risk factor for coronary heart disease: a	2012; 380(9852):1491-1497	Not longitudinal study

	Goldberg, M., Hamer, M., Hooftman, WE., Houtman, IL., Joensuu, M., Jokela, M., Kittel, F., Knutsson, A., Koskenvuo, M., Koskinen, A., Kouvonen, A., Kumari, M., Madsen, IE., Marmot, MG., Nielsen, ML., Nordin, M., Oksanen, T., Pentti, J., Rugulies, R., Salo, P., Siegrist, J., Singh-Manoux, A., Suominen, SB., Vaananen, A., Vahtera, J., Virtanen, M., Westerholm, PJ., Westerlund, H., Zins, M., Steptoe, A., Theorell, T.		collaborative meta-analysis of individual participant data		
51	Kivimaki, M., Nyberg, ST., Batty, GD., Shipley, MJ., Ferrie, JE., Virtanen, M., Marmot, MG., Vahtera, J., Singh-Manoux, A., Hamer, M.	International Journal of Epidemiology	Does adding information on job strain improve risk prediction for coronary heart disease beyond the standard Framingham risk score? The Whitehall II study	2011; 40(6):1577-1584	Exposure and/or outcome not suitable
52	Kivimaki, M., Nyberg, ST., Fransson, EI., Heikkila, K., Alfredsson, L., Casini, A., Clays, E., De Bacquer, D., Dragano, N., Ferrie, JE., Goldberg, M., Hamer, M., Jokela, M., Karasek, R., Kittel, F., Knutsson, A., Koskenvuo, M., Nordin, M., Oksanen, T., Pentti, J., Rugulies, R., Salo, P., Siegrist, J., Suominen, SB., Theorell, T., Vahtera, J., Virtanen, M., Westerholm, PJ., Westerlund, H., Zins, M., Steptoe, A., Singh-Manoux, A., Batty, G.	Canadian Medical Association Journal	Associations of job strain and lifestyle risk factors with risk of coronary artery disease: a meta-analysis of individual participant data	2013; 185(9):763-769	Exposure and/or outcome not suitable
53	Kivimaki, M., Theorell, T., Westerlund, H., Vahtera, J., Alfredsson, L.	Journal of Epidemiology and Community Health	Job strain and ischaemic disease: Does the inclusion of older employees in the cohort dilute the association? The WOLF Stockholm Study	2008; 62(4):372-374	Exposure and/or outcome not suitable
54	Kivimaki, M., Virtanen, M., Elovainio, M., Kouvonen, A., Vaananen, A., Vahtera, J.	Scandinavian Journal of Work, Environment and Health	Work stress in the etiology of coronary heart disease - a meta-analysis	2006; 32(6):431-442	Not longitudinal study
55	Kjeldsen, SE., Knudsen, K., Ekrem, G., Fure, TO., Movinckel, P., Erikssen, JE.	Blood Pressure	Is there an association between severe job strain, transient rise in blood pressure and increased mortality?	2006; 15(2):93-100	Exposure and/or outcome not suitable
56	Knutsson, A.	Scandinavian Journal of Social Medicine. Supplementum	Shift work and coronary heart disease	1989; 44:1-36	Exposure and/or outcome not suitable
57	Knutsson, A., Hammar, N., Karlsson, B.	Chronobiology International	Shift workers' mortality scrutinized	2004; 21(6):1049-1053	No full text
58	Kopp, M., Skrabski, A.	Neuropsychopharmacologia Hungarica	Why do Hungarian men die early?	2009; 11(3):141-149	No English translation
59	Kopp, M., Skrabski, A., Szanto, Z., Siegrist, J.	Journal of Epidemiology and Community Health	Psychosocial determinants of premature cardiovascular	2006; 60(9):782-788	Not longitudinal study

			mortality differences within Hungary		
60	Kopp, MS., Skrabski, A., Szekeley, A., Stauder, A., Williams, R.	Csermely, Peter [Ed]; Korcsmaros, Tamas [Ed]; Sulyok, Katalin (2007) Stress responses in biology and medicine: Stress of life in molecules, organisms, and psychosocial communities (pp 325-338) xvii, 366 pp Malden: Blackwell Publishing	Chronic stress and social changes: socioeconomic determination of chronic stress	2007; :325-338	Not longitudinal study
61	Kornitzer, M., Desmet, P., Sans, S., Dramaix, M., Boulenguez, C., Debacker, G., Ferrario, M., Houtman, I., Isacson, SO., Ostergren, PO., Peres, I., Pelfrene, E., Romon, M., Rosengren, A., Cesana, G., Wilhelmsen, L.	European Journal of Preventive Cardiology	Job stress and major coronary events: results from the job stress, absenteeism and coronary heart disease in Europe study	2006; 13(5):695-704	Exposure and/or outcome not suitable
62	Kristenson, M., Kucinskiene, Z., Bergdahl, B., Calkauskas, H., Urmonas, V., Orth-Gomer, K.	Psychosomatic Medicine	Increased psychosocial strain in Lithuanian versus Swedish men: the LiVicordia study [Erratum appears in Psychosom Med. 2003 May-Jun;65(3):346]	1998; 60(3):277-282	Not longitudinal study
63	Kuper, H., Marmot, M.	Journal of Epidemiology and Community Health	Job strain, job demands, decision latitude, and risk of coronary heart disease within the Whitehall II study	2003; 57(2):147-153	Exposure and/or outcome not suitable
64	Li, J., Zhang, M., Loerbroks, A., Angerer, P., Siegrist, J.	International Journal of Occupational Medicine and Environmental Health	Work stress and the risk of recurrent coronary heart disease events: a systematic review and meta-analysis	2015; 28(1):8-19	Not longitudinal study
65	Lynch, J., Krause, N., Kaplan, GA., Tuomilehto, J., Salonen, JT.	American Journal of Public Health	Workplace conditions, socioeconomic status, and the risk of mortality and acute myocardial infarction: the Kuopio ischemic heart disease risk factor study	1997; 87(4):617-622	Exposure and/or outcome not suitable
66	Macleod, J., Davey Smith, G., Metcalfe, C., Hart, C.	Social Science and Medicine	How are we today? On physicians' health, well-being and job satisfaction	2005; 61(9):1916-1929	Exposure and/or outcome not suitable
67	Marmot, M. G., Bosma, H., Hemingway, H., Brunner, E. and Stansfeld, S.	Lancet	Contribution of job control and other risk factors to social	1997; 350(9073):235-239	Exposure and/or outcome not suitable

			variations in coronary heart disease incidence		
68	Matthews, KA., Gump, BB.	Archives of Internal Medicine	Chronic work stress and marital dissolution increase risk of posttrial mortality in men from the Multiple Risk Factor Intervention Trial	2002; 162(3):309-315	Exposure and/or outcome not suitable
69	Michaels, D., Zoloth, SR.	International Journal of Epidemiology	Mortality among urban bus drivers	1991; 20(2):399-404	Exposure and/or outcome not suitable
70	Milner, A., Spittal, MJ., Pirkis, J., Chastang, JF., Niedhammer, I., LaMontagne, AD.	Psychosomatic Medicine	Low control and high demands at work as risk factors for suicide: an Australian national population-level case-control study	2017; 79(3):358-364	Exposure and/or outcome not suitable
71	Nabi, H., Kivimaki, M., Batty, G. D., Shipley, M. J., Britton, A., Brunner, E. J., Vahtera, J., Lemogne, C., Elbaz, A., Singh-Manoux, A.	European Heart Journal	Increased risk of coronary heart disease among individuals reporting adverse impact of stress on their health: the Whitehall II prospective cohort study	2013; 34(34):2697-2705	Exposure and/or outcome not suitable
72	Netterstrom, B., Juel, K.	Scandinavian Journal of Work, Environment and Health	Impact of work-related and psychosocial factors on the development of ischemic heart disease among urban bus drivers in Denmark	1988; 14(4):231-238	Exposure and/or outcome not suitable
73	Netterstrom, B., Kristensen, TS., Jensen, G., Schnor, P.	International Journal of Occupational Medicine and Environmental Health	Is the demand-control model still a usefull tool to assess work-related psychosocial risk for ischemic heart disease? Results from 14 year follow up in the Copenhagen City Heart study	2010; 23(3):217-224	Exposure and/or outcome not suitable
74	Netterstrom, B., Kristensen, TS., Sjol, A.	European Journal of Cardiovascular Prevention and Rehabilitation	Psychological job demands increase the risk of ischaemic heart disease: a 14-year cohort study of employed Danish men	2006; 13(3):414-420	Exposure and/or outcome not suitable
75	Netterstrom, B., Suadicani, P.	International Journal of Epidemiology	Self-assessed job satisfaction and ischaemic heart disease mortality: a 10-year follow-up of urban bus drivers	1993; 22(1):51-56	Exposure and/or outcome not suitable

76	Nielsen, NR., Kristensen, TS., Schnohr, P., Gronbaek, M.	American Journal of Epidemiology	Perceived stress and cause-specific mortality among men and women: results from a prospective cohort study	2008; 168(5):481-491	Exposure and/or outcome not suitable
77	Nyberg, A., Alfredsson, L., Theorell, T., Westerlund, H., Vahtera, J., Kivimaki, M.	Occupational and Environmental Medicine	Managerial leadership and ischaemic heart disease among employees: the Swedish WOLF study	2009; 66(1):51-55	Exposure and/or outcome not suitable
78	Nylen, L., Voss, M., Floderus, B.	Occupational and Environmental Medicine	Mortality among women and men relative to unemployment, part time work, overtime work, and extra work: a study based on data from the Swedish twin registry	2001; 58(1):52-57	Exposure and/or outcome not suitable
79	Oberlinner, C., Ott, MG., Nasterlack, M., Yong, M., Messerer, P., Zober, A., Lang, S.	Scandinavian Journal of Work, Environment and Health	Medical program for shift workers - impacts on chronic disease and mortality outcomes	2009; 35(4):309-318	Exposure and/or outcome not suitable
80	Ostry, A., Maggi, S., Tansey, J., Dunn, J., Hershler, R., Chen, L., Louie, AM., Hertzman, C.	Scandinavian Journal of Public Health	The impact of psychosocial work conditions on attempted and completed suicide among western Canadian sawmill workers	2007; 35(3):265-271	Exposure and/or outcome not suitable
81	Peter, R., Siegrist, J.	International Archives of Occupational and Environmental Health	Psychosocial work environment and the risk of coronary heart disease	2000; 73:S41-S45	Not longitudinal study
82	Schioler, L., Soderberg, M., Rosengren, A., Jarvholm, B., Toren, K.	Scandinavian Journal of Work, Environment and Health	Psychosocial work environment and risk of ischemic stroke and coronary heart disease: a prospective longitudinal study of 75 236 construction workers	2015; 41(3):280-287	Exposure and/or outcome not suitable
83	Steenland, K., Fine, L.	American Journal of Industrial Medicine	Shift work, shift change, and risk of death from heart disease at work	1996; 29(3):278-281	Exposure and/or outcome not suitable
84	Taylor, PJ., Pocock, SJ.	British Journal of Industrial Medicine	Mortality of shift and day workers 1956-68	1972; 29(2):201-207	Incomplete data
85	Theorell, T., Tsutsumi, A., Hallquist, J., Reuterwall, C., Hogstedt, C., Fredlund, P., Emlund, N., Johnson, JV., Grp, Sheep Study	American Journal of Public Health	Decision latitude, job strain, and myocardial infarction: a study of working men in Stockholm	1998; 88(3):382-388	Exposure and/or outcome not suitable

86	Tobiasz-Adamczyk, B., Bartoszewska, E., Brzyski, P., Kopacz, M.	International Journal of Occupational Medicine and Environmental Health	Long-term consequences of education, working conditions, and health-related behaviors on mortality patterns in older age. A 17-year observational study in Kraków, Poland	2007; 20(3):247-256	Exposure and/or outcome not suitable
87	Toivanen, S.	Scandinavian Journal of Work Environment and Health	Job control and the risk of incident stroke in the working population in Sweden	2008; 34(1):40-47	Exposure and/or outcome not suitable
88	Toivanen, S., Griep, RH., Mellner, C., Vinberg, S., Eloranta, S.	Occupational and Environmental Medicine	Mortality differences between self-employed and paid employees: a 5-year follow-up study of the working population in Sweden	2016; 73(9):627-636	Exposure and/or outcome not suitable
89	Toivanen, S., Hemstrom, O.	Stroke	Is the impact of job control on stroke independent from socioeconomic status? A large-scale study of the Swedish working population	2008; 39(4):1321-1323	Exposure and/or outcome not suitable
90	Toren, K., Schioler, L., Giang, WK., Novak, M., Soderberg, M., Rosengren, A.	BMJ Open	A longitudinal general population-based study of job strain and risk for coronary heart disease and stroke in Swedish men	2014; 4(3):e004355	Exposure and/or outcome not suitable
91	Toren, K., Schioler, L., Soderberg, M., Giang, KW., Rosengren, A.	Occupational and Environmental Medicine	The association between job strain and atrial fibrillation in Swedish men	2015; 72(3):177-180	Exposure and/or outcome not suitable
92	Trudel-Fitzgerald, C., Poole, EM., Idahl, A., Lundin, E., Sood, AK., Kawachi, I., Kubzansky, LD., Tworoger, SS.	Psychosomatic Medicine	The association of work characteristics with ovarian cancer risk and mortality	2017; 79(9):1059-1067	Exposure and/or outcome not suitable
93	Tsutsumi, A.	European Journal of Preventive Cardiology	Work environment and strokes: an update of the most recent findings	2017; 24(2 Supplement 1):12-13	No full text
94	Tsutsumi, A., Kayaba, K., Ishikawa, S.	Social Science and Medicine	Impact of occupational stress on stroke across occupational classes and genders	2011; 72(10):1652-1658	Exposure and/or outcome not suitable
95	Tsutsumi, A., Kayaba, K., Kario, K., Ishikawa, S.	Archives of Internal Medicine	Prospective study on occupational stress and risk of stroke	2009; 169(1):56-61	Exposure and/or outcome not suitable

96	Tsutsumi, A., Kayaba, K., Ojima, T., Ishikawa, S., Kawakami, N.	Psychotherapy and Psychosomatics	Low control at work and the risk of suicide in Japanese men: a prospective cohort study	2007; 76(3):177-185	Exposure and/or outcome not suitable
97	Tuyishimire, D., Brisson, C., Milot, A., Vezina, M., Gilbert-Ouimet, M.	European Journal of Preventive Cardiology	Combined effect of job strain and psychological distress on the risk of recurrent myocardial infarction	2017; 24(2 Supplement 1):19	No full text
98	Uchiyama, S., Kurasawa, T., Sekizawa, T., Nakatsuka, H.	Journal of Science of Labour	Work and hypertension	2004; 80(5):213-219	No English translation
99	Uchiyama, S., Kurasawa, T., Sekizawa, T., Nakatsuka, H.	Journal of Occupational Health	Job strain and risk of cardiovascular events in treated hypertensive Japanese workers: hypertension follow-up group study	2005; 47(2):102-111	Exposure and/or outcome not suitable
100	Virtanen, SV., Notkola, V.	International Journal of Epidemiology	Socioeconomic inequalities in cardiovascular mortality and the role of work: a register study of Finnish men	2002; 31(3):614-621	Exposure and/or outcome not suitable
101	von Bonsdorff, M. E., Kokko, K., Seitsamo, J., von Bonsdorff, M. B., Nygard, C. H., Ilmarinen, J., Rantanen, T.	Scandinavian Journal of Work, Environment and Health	Work strain in midlife and 28-year work ability trajectories	2011; 37(6):455-463	Exposure and/or outcome not suitable
102	Yong, M., Nasterlack, M., Germann, C., Lang, S., Oberlinner, C.	International Archives of Occupational and Environmental Health	Shift work and risk of non-cancer mortality in a cohort of German male chemical workers	2014; 87(7):763-773	Exposure and/or outcome not suitable

Table S4: Quality assessment of studies for all-cause and CHD mortality outcome included in systematic review per criteria described in Table S2

First author; Year	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7	Item 8	Item 9	Item 10	Item 11	Item 12	Item 13	Item 14	Overall Score [#]
All-cause mortality outcome (n=17)															
Hibbard 1993 (1)	Cannot say	Yes	Yes	Yes	Cannot say	Cannot say	Yes	Cannot say	No	No	Yes	No	Limited	Yes	0
Eaker 2004 (2)	Yes	Yes	Yes	Yes	Cannot say	Cannot say	No	Cannot say	No	Yes	Cannot say	No	Yes	Yes	+
Falk 1992 (3)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Cannot say	No	Yes	Yes	No	Yes	Yes	+
Gonzalez-Mule 2017 (4)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Cannot say	No	Yes	No	Yes	Yes	No	0
Natti 2009 (5)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Cannot say	No	Yes	Yes	No	Limited	Yes	0
Natti 2012 (6)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Cannot say	No	Yes	Yes	No	Yes	Yes	+
Niedhammer 2011 (7)	Yes	Yes	Yes	Yes	Yes	No	Yes	Cannot say	No	Yes	Yes	No	Yes	Yes	+
Nilsen 2016 (8)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Cannot say	No	Yes	Yes	Yes	Limited	Yes	0
O'Reily 2013 (9)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Cannot say	No	Yes	Yes	No	Yes	Yes	+
Shirom 2011 (10)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Cannot say	No	Yes	Yes	Yes	Yes	Yes	+
Tobiasz-Adamczyk 2013 (11)	Yes	Yes	No	Yes	Cannot say	Cannot say	Yes	Cannot say	No	Yes	Yes	No	Yes	Yes	0
Von Bonsdorff 2012 (12)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Cannot say	No	Yes	Yes	No	Yes	Yes	+

Amick 2002 (13)	Yes	Yes	Yes	No	Yes	No	Yes	Cannot say	No	No	No	No	Yes	Yes	0
Boggild 1999 (14)	Yes	Yes	Yes	No	Cannot say	Cannot say	Yes	Cannot say	No	Yes	Yes	No	Yes	Yes	0
Åkerstedt 2004 (15)	Yes	Yes	Yes	No	Yes	No	Yes	Cannot say	No	Yes	Yes	No	Limited	Yes	0
Sabbath 2015 (16)	Yes	Yes	No	No	Cannot say	Cannot say	Yes	Cannot say	No	Yes	Yes	No	Limited	Yes	0
Perlman 2009 (17)	Yes	Yes	Yes	No	Yes	Yes	Yes	Cannot say	No	Yes	No	No	Limited	Yes	0
CHD mortality outcome (n=14)															
Johnson 1989 (18)	Yes	Yes	Yes	No	Yes	Yes	Yes	Cannot say	No	Yes	Yes	No	No	Yes	0
Kivimaki 2006 (19)	Yes	Yes	Yes	Yes	Yes	No	Yes	Cannot say	No	Yes	Yes	No	Yes	Yes	+
Kivimaki 2002 (20)	Yes	Yes	No	Yes	Cannot say	No	Yes	Cannot say	No	Yes	Yes	No	Yes	Yes	+
Elovainio 2006 (21)	Yes	Yes	No	Yes	Cannot say	No	Yes	Cannot say	No	Yes	Yes	No	Yes	Yes	+
Lee 2002 (22)	Yes	Yes	Yes	Yes	Yes	No	Yes	Cannot say	No	Yes	Yes	No	No	Yes	0
Slopen 2012 (23)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Cannot say	No	Yes	Yes	No	Yes	Yes	+
Toivanen 2006 (24)	Yes	Yes	Yes	No	Yes	Yes	Yes	Cannot say	No	Yes	Yes	No	No	Yes	0
Alterman 1994 (25)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Cannot say	No	Yes	Yes	No	Yes	Yes	+
Padyab 2014 (26)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Cannot say	No	Yes	Yes	No	Yes	Yes	+
Hublin 2010 (27)	Yes	Yes	No	Yes	Yes	No	Yes	Cannot say	No	Yes	Yes	Yes	Yes	Yes	+
Johnson 1996* (28)	Yes	Yes	Yes	Yes	No	Yes	Yes	Cannot say	Yes	Limited	Yes				+
Karasek 1981* (29)	Yes	Yes	Yes	Yes	No	Yes	Yes	Cannot say	Yes	Yes	Yes				+

Yadegarfar 2008* (30)	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	N/A	Limited	Yes				+
McNamee 1996* (31)	Yes	Yes	Yes	No	No	Yes	Yes	Yes	N/A	Limited	Yes				+
All-cause mortality and CHD mortality outcomes (n=14)															
Brunner 2004 (32)	Yes	Yes	No	Yes	Cannot say	No	Yes	Cannot say	No	Yes	Yes	No	Limited	Yes	+
Laszlo 2010 (33)	Yes	Yes	No	Yes	Yes	No	Yes	Cannot say	No	Yes	Yes	No	Yes	Yes	+
Laszlo 2013 (34)	Yes	Yes	No	Yes	Yes	No	Yes	Cannot say	No	Yes	Yes	No	Yes	Yes	+
Holtermann 2010 (35)	Yes	Yes	Yes	Yes	Cannot say	Cannot say	Yes	Cannot say	No	Yes	Yes	No	No	Yes	0
Holtermann 2011 (36)	Yes	Yes	Yes	Yes	Cannot say	Cannot say	Yes	Cannot say	No	Yes	Yes	No	Limited	Yes	0
Joensuu 2012 (37)	Yes	Yes	Yes	Yes	Cannot say	Cannot say	Yes	Cannot say	No	Yes	Yes	No	Limited	Yes	0
Joensuu 2014 (38)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Cannot say	No	Yes	Yes	No	Yes	Yes	+
Tsutsumi 2006 (39)	Yes	Yes	Yes	Yes	Yes	No	Yes	Cannot say	No	Yes	Yes	No	Yes	Yes	+
Yong 2014 (40)	Yes	Yes	No	Yes	Yes	No	Yes	Yes	N/A	Yes	Yes	Yes	Yes	Yes	+
Kivimaki 2003 (41)	Yes	Yes	No	No	Cannot say	Cannot say	Yes	Cannot say	No	Yes	Yes	No	Limited	Yes	0
Jorgensen 2017 (42)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Cannot say	No	Yes	Yes	No	Yes	Yes	+
Gu 2015 (43)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Cannot say	No	Yes	Yes	No	Yes	Yes	+
Karlsson 2005 (44)	Yes	Yes	Yes	No	Yes	Yes	Yes	Cannot say	No	Yes	Yes	Yes	No	Yes	0
Fujino 2006 (45)	Yes	Yes	Yes	Yes	Yes	No	Yes	Cannot say	No	Yes	Yes	No	Yes	Yes	+

* SIGN Methodology Checklist 4: Case-control studies (version 2, 28 May 2012) used for nested case control studies within longitudinal studies

The overall methodological quality of the study is rated as i) High quality (++): majority of criteria met (little or no risk of bias and results unlikely to be changed by further research), ii) Acceptable (+): most criteria met (some flaws in the study with an associated risk of bias and conclusions may change in the light of further studies), iii) Low quality (0): (either most criteria not met, or significant flaws relating to key aspects of study design and conclusions likely to change in the light of further studies).

Table S5: Characteristics of 45 epidemiological studies of work stressors and risk of mortality

First author & year; cohort & country	Study population	Participants (n)	Men (%)	Age (years)	Work stressor exposure and measurement	Outcome	Measurement of Outcome	Follow up duration
All-cause mortality outcome (n=17)								
Hibbard 1993 (1) Household interview survey, United States	general population	1502	61	18-65	Work support: self-reported at baseline; summary of 3 items on continuous scale Job control: self-reported at baseline; summary of 8 items on continuous scale	All-cause mortality	Health plan records, National Death Index and vital records	15
Eaker 2004 (2) Framingham Offspring Study, United States	general population	3039	56	18-77	Job demands: self-reported 3rd examination cycle 1984-1987; summary of 5 items scored on Likert scale from 1 to 4 on continuous scale Decision latitude: self-reported 3rd examination cycle 1984-1987; summary of subscales decision authority (3 items) and skill discretion (6 items) scored on Likert scale from 1 (strongly disagree) to 4 (strongly agree) on continuous scale Job strain derived from job demands and decision latitude high job strain: high job demands (above median score) and low decision latitude (at or below median score), low job strain: low job demands and high decision latitude, passive job strain: low job demands and low decision latitude, active job strain: high job demands and high decision latitude	All-cause mortality	No information	10
Falk 1992 (3) Malmo study, Sweden	general population	477	100	68-69	Job demands: self-reported 3 years after participants' retirement 1982-1983; affirmative answers to two items on workload and time pressure used to define high job demands Personal schedule freedom: self-reported 3 years after participants' retirement 1982-1983; low personal schedule freedom defined as negative answers to at least two of three items Job strain derived from job demands and personal schedule freedom; job strain: high job demands and low personal schedule freedom, no job strain: all other job demands and personal schedule freedom groups	All-cause mortality	Cause of Death Register (Department of Community Health Sciences in Malmo and Swedish National Central Bureau of Statistics)	6
Gonzalez-Mule 2017 (4) Wisconsin Longitudinal Study, United States	Wisconsin high schools'	2363	50	63-67	Job demands: self-reported from questionnaire administered in 2004; 8 items scored on Likert scale from 1 (strongly disagree) to 4 (strongly agree) and 1 item scored	All-cause mortality	Relatives and Death certificate	7

	graduates in 1957				on Likert scale from 1 (never) to 5 (always), and scores standardised then averaged Job control: self-reported from questionnaire administered in 2004; 6 items scored on Likert scale from 1 (strongly disagree) to 4 (strongly agree) and scores standardised then averaged			
Natti 2009 (5) Statistics Finland Quality of Work Life Surveys, Finland (Study 1)	Finnish employees	4502	51*	15-64	Physical demands: self-reported at baseline; 1 item scored on Likert scale from 1 (very undemanding) to 4 (very demanding) and dichotomised into low (very or quite undemanding) or high (very or rather demanding) levels of physical demands Psychological demands: self-reported at baseline; 1 item scored on Likert scale from 1 (very undemanding) to 4 (very demanding) dichotomised into low (very or quite undemanding) or high (very or rather demanding) levels of psychological demands Demand for learning: self-reported at baseline; 1 item on Likert scale from 1 (not at all) to 4 (very much) dichotomised into low (not at all or some) or high (high or very high) demands for learning new things Job insecurity: self-reported at baseline; based on 2 items and classified as permanent employees, temporary employees satisfied and temporary employees unsatisfied	All-cause mortality	Death certificates supplemented with data from the population information system of the Population Register Centre	16
Natti 2009 (5) Statistics Finland Quality of Work Life Surveys, Finland (Study 2)	Finnish employees	3345	49*	15-64	Physical demands: self-reported at baseline; 1 item scored on Likert scale from 1 (very undemanding) to 4 (very demanding) dichotomised into low (very or quite undemanding) or high (very or rather demanding) levels of physical demands Psychological demands: self-reported at baseline; 1 item scored on Likert scale from 1 (very undemanding) to 4 (very demanding) dichotomised into low (very or quite undemanding) or high (very or rather demanding) levels of psychological demands Demand for learning at work: self-reported at baseline; 1 item on Likert scale from 1 (not at all) to 4 (very much) dichotomised into low (not at all or some) or high (high or very high) demands for learning new things	All-cause mortality	Death certificates supplemented with data from the population information system of the Population Register Centre	10

					Job insecurity: self-reported at baseline; based on 2 items and classified as permanent employees, voluntary temporary employees and involuntary permanent employees			
Natti 2012 (6) Statistics Finland Quality of Work Life Surveys, Finland	Finnish employees	3095	47	15-64	Night work: self-reported at baseline; employees classified as night workers who worked most often (on a weekly basis) at night or dayworkers who did not work at night	All-cause mortality	Death certificates supplemented with data from the population information system of the Population Register Centre	23
Niedhammer 2011 (7) Lorhandicap study, France	general population	4118	53	15-70	Work support: self-reported at baseline; 1 item based on Likert scale from 1 (very unsatisfied) to 5 (very satisfied) dichotomised into low (very unsatisfied or unsatisfied) or high (neither satisfied nor unsatisfied, satisfied or very satisfied) social support from colleagues	All-cause mortality	National computerised database and registry offices	12.5
Nilsen 2016 (8) Level of Living Survey, Sweden	general working population	1393	50	42-65	Job demands: 1. self-reported at baseline; affirmative answers to two items on workload and time pressure used to define high job demands 2. JEM based on occupation-by-industry data at baseline and dichotomised into low or high job demands using median split Job control: 1. self-reported at baseline; scores from 4 items on intellectual discretion (low, medium, high categories) and 2 items on personal schedule freedom on Likert scale from 0 (very high) to 4 (not at all) summed and dichotomised into low or high job control using median split 2. JEM based on occupation-by-industry data at baseline and dichotomised into low or high job control using median split Job strain derived from job demands and job control high job strain: high job demands and low job control, low job strain: low job demands and high job control, passive job strain: low job demands and low job control, active job strain: high job demands and high job control	All-cause mortality	Official Swedish personal identification number linked to National Death Register	23
O'Reily 2013 (9) Northern Ireland Mortality Study, Ireland	Employees	414949	65	m: 20-64 f: 20-59	Working weekly hours: self-reported at baseline 2001 Census; response to weekly number of hours usually worked in main job in past 4 weeks classified into 4 groups (35-40, 41-48, 49-54, ≥ 55 hours)	All-cause mortality	2001 Census data for the whole enumerated population linked to registered deaths up to 2009	8.7

<p>Shirom 2011 (10) Periodic employee health examination and Clalit Health Services (CHS) data, Israel</p>	<p>adult Jewish workforce</p>	<p>820</p>	<p>67</p>	<p>mean 41.6 (SD 9.34)</p>	<p>Job demands: self-reported at baseline; scores from 8 items on 5-point Likert scale summarised and mean centred (high scores reflecting high job demands)</p> <p>Job control: self-reported at baseline; scores from 5 items on 5-point Likert scale summarised and mean centred (high scores reflect high job control)</p> <p>Supervisor support: self-reported at baseline; scores from 2 items on 5-point Likert scale summarised and mean centred (high scores reflect high supervisor support)</p> <p>Peer support: self-reported at baseline; scores from 2 items on 5-point Likert scale summarised and mean centred (high scores reflect high peer support)</p>	<p>All-cause mortality</p>	<p>CHS's medical records (deaths officially notified to CHS by hospitals and the Ministry of the Interior)</p>	<p>20</p>
<p>Tobiasz-Adamczyk 2013 (11) Community dwelling citizens of Krakow, Poland</p>	<p>general population aged 65 years</p>	<p>727</p>	<p>44</p>	<p>65</p>	<p>Psychological demands and control: self-reported at baseline; subscales for psychological effort/demands (3 items) and job control (2 items) summarised and dichotomised into low or high psychological demands and low or high job control using median split, and classified into 4 groups (low psychological demands and high control, high psychological demands and high control, low psychological demands and low control, high psychological demands and low control)</p> <p>Psychological efforts and rewards: self-reported at baseline; subscales for psychological effort/demands (3 items) and rewards (4 items) summarised and dichotomised into low or high psychological effort and low or high rewards using median split, and classified into 4 groups (low psychological effort and high reward, high psychological effort and high reward, low psychological effort and low reward, high psychological efforts and high reward)</p>	<p>All-cause mortality</p>	<p>City Vital Records</p>	<p>7</p>
<p>Von Bonsdorff 2012 (12) Finnish Longitudinal Study on Municipal Employees, Finland</p>	<p>municipal employees</p>	<p>5731</p>	<p>45</p>	<p>44-58</p>	<p>Job demands: self-reported at baseline; scores from 5 items on Likert scale from 0 (not at all) to 3 (a lot) summed and dichotomised into low or high job demands using median split</p> <p>Job control: self-reported at baseline; scores from 10 items on Likert scale from 0 (not at all) to 3 (enough) summed and dichotomised into low or high job control using median split</p> <p>Job strain derived from job demands and job control</p>	<p>All-cause mortality</p>	<p>Finnish National Population Register</p>	<p>25.3</p>

					high job strain: high job demands and low job control, low job strain: low job demands and high job control, passive job strain: low job demands and low job control, active job strain: high job demands and high job control			
Amick 2002 (13) Panel Study of Income Dynamics, United States	general population	7746	52	18-62	<p>Job demands: JEM based on occupational data imputed for 1968 to 1991; yearly percentages of working life spent in each quartile of the distribution (high, medium high, medium low, low) calculated to estimate cumulative lifetime job demands exposure as time-varying measure</p> <p>Job decision latitude: JEM based on occupational data imputed for 1968 to 1991; yearly percentages of time spent in each quartile of the distribution (high, medium high, medium low, low) calculated to estimate cumulative lifetime job control exposure as time-varying measure</p> <p>Job strain: job demands divided by job decision latitude calculated to create a continuous measure (high values representing high strain) and yearly percentages of time spent in each quartile of the distribution (high, medium high, medium low, low) calculated to estimate cumulative lifetime job strain exposure as time-varying measure</p> <p>Work support: JEM based on occupational data imputed for 1968 to 1991; yearly percentages of time spent in each quartile of the distribution (high, medium high, medium low, low) calculated to estimate cumulative lifetime work support exposure as time-varying measure</p> <p>Job security: JEM based on occupational data imputed for 1968 to 1991; yearly percentages of time spent in each quartile of the distribution (high, medium high, medium low, low) calculated to estimate cumulative lifetime job security exposure as time-varying measure</p>	All-cause mortality	Yearly reports of the reasons for nonresponse	24
Boggild 1999 (14) Copenhagen Male Study, Denmark	general population	5207	100	40-59	Shift work: self-reported at baseline; response to question on working time (worked irregular hours, shift work, often had night work, day time work only) dichotomised into day worker (day time work only) and shift worker (all other working hours)	All-cause mortality	Danish Central Population Register	22
Åkerstedt 2004 (15)	general population	22411	48	25-64	Shift work: self-reported at baseline; response to question on working time (3-shift work, night work, evening work,	All-cause mortality	Swedish Cause-of-Death register	11.8

National Survey of Living Conditions, Sweden					roster work, other work, day time work only) dichotomised into day workers (day time work only) and shift workers (all other work time)			
Sabbath 2015 (16) Health and Retirement Study (HRS), United States	working mothers	7352	0	18-50	Job demands: JEM based on occupation-by-industry data at baseline; imputed scores summed and trichotomized at 33 rd and 67 th percentiles into low, medium or high tertiles of job demands Job control: JEM based on occupation-by-industry data at baseline; imputed scores summed and trichotomized at 33 rd and 67 th percentiles into low, medium or high levels of job control	All-cause mortality after age 50	National death Index (NDI) and supplemented by proxy reports for post-2008 deaths, for which NDI data were not yet available	Not reported
Perlman 2009 (17) Russia Longitudinal Monitoring Survey (RLMS)	general population	8723	52	18-59	Job insecurity: self-reported at baseline; responses from 1 item on concern about loss of job graded on 5-point scale (very concerned, a little concerned, yes and no, not very concerned, not at all concerned) grouped as very concerned versus moderately concerned or unconcerned about job loss	All-cause mortality	Household members were asked if absence of non-responders due to death	8
CHD mortality outcome (n=14)								
Johnson 1989 (18) Central Bureau of Statistics' survey of living conditions, Sweden	general population	7219	100	25-65	iso-strain (combination of social isolation and job strain): self-reported at baseline; subscales for job demands (2 items on binary scale), job control (11 items on 3-point Likert scale), and work social support (5 items on binary scale) scored such that high score represented adverse condition, standardised to mean (SD) 0 (1), and scaled to above one, and multiplied together. Quintiles calculated from frequency distribution and grouped into high (5 th quintile), medium (2 nd , 3 rd , 4 th quintiles), low (1 st quintile) levels of iso-strain	CVD mortality	Official Swedish personal identification number linked to National Death Register (ICD-8 codes 400-404, 410-414, 427, 429-436, 440-445, 454-458)	9
Kivimaki 2006 (19) METELI study, Finland	Valmet factories industrial employees	788	68	17-65	Job demands: self-reported at baseline; responses from 4 items on 5-point Likert scale averaged and standardised to mean (SD) 0 (1) Job control: self-reported at baseline; responses from 12 items on 5-point Likert scale averaged and standardised to mean (SD) 0 (1)	CVD mortality	Official Finnish personal identification number linked to Statistics Finland National Mortality Register; ICD-8, ICD-9, ICD-10 classifications converted to ICD-10 codes and deaths due to CVD identified from codes I20-I25, I30-I52, I60-I69, I00-I19, I26-I29, I70-I99	25.6
Kivimaki 2002 (20) METELI study, Finland	Valmet factories	812	67	17-65	Job demands: self-reported at baseline; responses from questions about responsibility, task difficulty and mental load on 5-point Likert scale summed and trichotomized at	CVD mortality	Official Finnish personal identification number linked to Statistics Finland	25.6

	industrial employees				<p>33rd and 67th percentiles into low, intermediate or high levels of job demands</p> <p>Job control: self-reported at baseline; responses from questions about decision authority and skill discretion with 5-point Likert scale summed and trichotomized at 33rd and 67th percentiles into low, intermediate or high levels of job control</p> <p>Job strain derived from job demands and job control high job strain: high/intermediate demands and low control, low job strain: low demands and high/intermediate control, intermediate job strain: all other combinations of job demands and job control</p> <p>Effort reward imbalance: questions on effort at work (pace of work, physical and mental load) and rewards (satisfaction with income, fairness, job security, promotion) on 5-point Likert scale self-reported at baseline; Effort and reward imbalance created by calculating ratio between sum response score in the effort scale and sum response score in reward scale and trichotomizing quotient at 33rd and 67th percentiles into low, intermediate or high levels of effort reward imbalance</p>		National Mortality Register and all deaths due to CVD diseases pooled from the register	
Elovainio 2006 (21) Valmet study, Finland	Valmet factories industrial employees	804	67	17-65	Justice at work: self-reported at baseline; response to one question on justice at work dichotomised into high or low/intermediate levels of justice at work	CVD mortality	Official Finnish personal identification number linked to Statistics Finland National Mortality Register and all deaths due to CVD disease pooled to indicate death due to cardiovascular diseases from <i>ICD-10</i> codes I20-I25, I30-I52, I60-I69, I00-I19, I26-I29, I70-I99	25.6
Lee 2002 (22) Nurses' Health Study, United States	Registered nurses	35038	0	46-71	Job strain: derived from self-reported job demands and job control at baseline; responses for subscales for job demands (5 items) and job control (9 items) on 4-point Likert scale summed and dichotomised into low or high levels using median split, and classified into 4 groups (low job strain: low demands and high control, active job strain: high demands and high control, passive job strain: low demands and low control, high job strain: high demands and low control)	Fatal CHD	Information from next of kin confirmed by National Death Index and Fatal CHD defined as fatal MI confirmed by hospital records or at autopsy or CHD recorded on death certificate	4

Slopen 2012 (23) Women's Health Study, United States	Health professionals	22068	0	mean 57.2 (SD 5.2)	<p>Job strain: derived from self-reported job demands and job control at baseline; responses for subscales for job demands (5 items) and job control (9 items) on 4-point Likert scale summed and dichotomised into low or high levels using median split, and classified into 4 groups (low job strain: low demands and high control, active job strain: high demands and high control, passive job strain: low demands and low control, high job strain: high demands and low control)</p> <p>Job insecurity: self-reported at baseline; response from 1 item scored on Likert scale from 1 (strongly disagree) to 4 (strongly agree) dichotomised into job insecure (strongly disagree and disagree) or job secure (agree and strongly agree) levels</p>	CVD death	National Death Index, reports from family members or the postal service. CVD deaths confirmed by medical record review included as events	10
Toivanen 2006 (24) Statistics Sweden Surveys of Living Conditions and Swedish Census, Sweden	general population	1858373	50	40-64	<p>Job control: JEM based on occupational data from census data imputed at baseline; 5 job control items with scores ranging from 0 to 5 dichotomised into low or high levels of job control using median split</p> <p>Job control index: JEM based on occupational data from census data imputed at baseline; 5 job control items with scores ranging from 0 to 5 dichotomised into low or high levels of job control using median split and each group further split into two equal size groups creating 4 levels of job control (lowest, low, intermediate, high)</p>	CVD mortality	Swedish Census data linked to National cause of death registry	5
Alterman 1994 (25) Chicago Western Electric Study, United States	Caucasian middle-aged men employed at Hawthorne Works	1683	100	38-56	<p>Decision latitude: JEM based on occupational data from census data imputed at baseline; weighted sum of responses for job control (10 items) on continuous scale</p> <p>Psychologic demand: JEM based on occupational data from census data imputed at baseline; sum of responses for job demands (5 items) on continuous scale</p> <p>Job strain derived from psychologic demand and decision latitude; scores for psychologic demand trichotomized into lower quarter, middle half, and upper quarter groups of the distribution, decision latitude scores divided into tertiles, and classified into high (1st tertile decision latitude and upper quarter group psychologic demand) or no (all other combinations of decision latitude and psychologic demand) levels of job strain</p>	CHD mortality	Death certificates and deaths due to CHD based on ICD-8 codes 410-414	25

Padyab 2014 (26) Vasterbotten Intervention Programme, Sweden	general population	74988	49	40-60	<p>Psychological demands: self-reported at baseline; scores from 4 items on 4-point Likert scale summed and dichotomised into low or high job demands using median split</p> <p>Decision latitude: self-reported at baseline; scores from 6 items on 4-point Likert scale summed and dichotomised into low or high job control using median split</p> <p>Job strain derived from job demands and job control high job strain: high job demands and low job control, low job strain: low job demands and high job control, passive job strain: low job demands and low job control, active job strain: high job demands and high job control</p> <p>Iso-strain (combination of social isolation and job strain): Social support at work self-reported at baseline, based on 5 items regarding contacts with co-workers during work and leisure time, dichotomised into low or high social support at work using gender-specific median split. Iso-strain (low social support and high job strain) or no iso-strain (all other combinations of social support and job strain)</p>	CVD mortality	Official Swedish personal identification number linked to National Death Register. Deaths due to stroke identified from <i>ICD-9</i> codes 431, 434, 436 and <i>ICD-10</i> codes I61, I63, I64; d deaths due to myocardial infarction identified from <i>ICD-9</i> codes: 410, 411, 412, 414, 427F and <i>ICD-10</i> codes I21, I22, I23, I25, I46	m: 11.3 f: 11.8
Hublin 2010 (27) Finnish Twin Cohort, Finland	general population	20142	49	24-70	Type of working time: self-reported (1975 and 1981); response to question on working time (mainly day, mainly night, mainly shift work, never worked) classified into 5 level categorical variable (daytime work both in 1975 & 1981, night-time work either in 1975 or 1981, shift-work in 1975 & daytime work in 1981, daytime work in 1975 & shift-work in 1981, shift-work both in 1975 & 1981)	CHD mortality	Population Register Centre of Finland and Statistics Finland. Deaths due to CHD identified from <i>ICD-8</i> and <i>ICD-9</i> codes 410-414 and <i>ICD-10</i> codes I20-I25	22
Johnson 1996 (28) Statistics Sweden, Sweden	general population	2943	100	25-74	<p>Psychological job demands: JEM based on occupational data used to assign scores for job demands to each year of employment as time-varying measure to estimate cumulative exposure; scores from 2 items for job demands summed and divided into quartiles of high, medium high, medium low and low levels of job demands</p> <p>Job control: JEM based on occupational data used to assign scores for job control to each year of employment as time-varying measure to estimate cumulative exposure; scores from 12 items for job control summed, and divided into quartiles of high, medium high, medium low, and low levels of job control</p>	CVD mortality	Official Swedish personal identification number linked to National Death Register. Deaths due to CVD from <i>ICD-8</i> codes 400-404, 410-414, 427, 430-436, 440-445	14

					Social support at work: JEM based on occupational data used to assign scores for social support at work to each year of employment as time-varying exposure to estimate cumulative exposure; scores from 4 items for social support summed and divided into quartiles of high, medium high, medium low, and low levels of social support at work			
Karasek 1981 (29) Level of Living Survey, Sweden	general population	88	100	15-67	Intellectual Discretion: self-reported in 1974 at second interview; response for 1 item on combination of skill level of job and level of repetitious/monotonous work classified into low (repetitive jobs requiring minimum education), medium low (non-repetitive jobs requiring minimum education or repetitive jobs requiring additional training), medium high (non-repetitive jobs requiring at least 1-4 years additional training, or high levels of intellectual discretion), or high (non-repetitive jobs requiring > 4 years additional training) levels of intellectual discretion Personal Schedule Freedom: self-reported in 1974 at second interview; responses for 3 items on binary scale classified into low (no to all 3 questions), medium low (no to 2 questions), medium high (yes to 2 questions), or high (yes to all questions) levels of personal schedule freedom Job demands: self-reported in 1974 at second interview; responses for 2 items on binary scale classified into low (no to both questions), medium (yes to 1 question), or high (yes to both questions) levels of job demands	cardiovascular-cerebrovascular deaths	verified death certificates cardiovascular-cerebrovascular deaths identified from ICD codes 400-404, 410-414, 427, 430-436, 440-445.	6
Yadegarfar 2008 (30) Industrial cohort, UK	male industrial workers	1270	100	<50	Shift work: assessed from company records; workers classified as shift worker (shift work > 1 month) or day workers (all other workers)	IHD mortality ≤ 75 years	UK Office of National Statistics cause of death classification on death certificate ICD codes 410-414	25.5
McNamee 1996 (31) Industrial cohort, UK	male industrial workers	934	100	<50	Shift work: assessed from company records; workers classified as shift worker (shift work > 1 month) or day workers (all other workers)	IHD mortality ≤ 75 years	UK Office of National Statistics cause of death classification on death certificate ICD codes 410-414	23
All-cause and CHD mortality outcomes (n=14)								

Brunner 2004 (32) Valmet study, Finland	Valmet factories industrial employees	812	67	17-65	<p>Job strain: derived from self-reported job demands and job control at baseline; responses for subscales for job demands and job control on 5-point Likert scale summed and trichotomized into low, intermediate or high levels using tertile split, and classified into 3 groups (low job strain: low demands and high/intermediate control, high job strain: high/intermediate demands and low control, and intermediate job strain: all other combinations of job demands and control)</p> <p>Effort reward imbalance: questions on effort at work (pace of work and physical and mental load) and rewards (satisfaction with income, fairness, job security and promotion) on 5-point Likert scale self-reported at baseline. Effort and reward imbalance derived by calculating ratio between summed response scores in effort and reward scales; and trichotomizing quotient into low, intermediate or high levels or effort reward imbalance using tertile split</p>	All-cause mortality; CVD mortality	Official Finnish personal identification number linked to Statistics Finland National Mortality Register and all deaths due to CVD diseases pooled from the register	25.6
Laszlo 2010 (33) Stockholm Heart Epidemiology Program (SHEEP), Sweden	Non-fatal AMI incident cases employed and < 65 years	674	79	40-65	<p>Job demands: self-reported at baseline; responses from 5 items on 4-point Likert scale (almost always to almost never) summed and divided into quartiles</p> <p>Job control: self-reported at baseline; responses from 6 items on 4-point Likert scale (almost always to almost never) summed and divided into quartiles</p> <p>Job strain: job demands and job control scores dichotomized using median split and classified into high (high demands and low control), low (low demands and high control), passive (low demands and low control), or active (job demands and high control) levels of job strain</p>	All-cause mortality; Cardiac mortality	Official Swedish personal identification number linked to National Death Register for death and cause of death data	8.5
Laszlo 2013 (34) Stockholm Heart Epidemiology Program (SHEEP), Sweden	Non-fatal AMI incident cases employed and < 65 years	676	79	40-65	<p>Job insecurity: self-reported at baseline; response to 1 item assessing concerns at work dichotomised into job insecurity (concerns about dismissal from work) and no job insecurity (all other responses)</p>	All-cause mortality; Cardiac mortality	Official Swedish personal identification number linked to National Death Register and deaths due to cardiac mortality identified from ICD-9 codes 410, 412, 414, 420–429; and ICD-10 codes I20, I21, I25, I38, I48, I50	8.5
Holtermann 2010 (35)	general population	4943	100	40-59	<p>Working weekly hours: self-reported at baseline; response to one question about weekly number of work hours</p>	All-cause mortality;	Official national registers	30

Copenhagen Male Study, Denmark					classified into 3 groups (≤ 40 , 41-45, and ≥ 46 hours per week)	IHD mortality	Deaths due to IHD identified from <i>ICD-8</i> codes 410-414, and <i>ICD-10</i> codes I20-I25	
Holtermann 2011 (36) Copenhagen Male Study, Denmark	general population	4931	100	40-59	Psychological pressure at work: self-reported at baseline; response to one question about psychological pressure when performing work (rarely, regularly) dichotomised into rarely or regularly levels of perceived exposure to psychological work pressure	All-cause mortality; IHD mortality	Official national registers Deaths due to IHD identified from <i>ICD-8</i> codes 410-414, and <i>ICD-10</i> codes I20-I25	30
Joensuu 2012 (37) Still Working Study, Finland	private sector industrial employees in multinational forest industry corporation	13510	77	16-65	Skill discretion: self-reported at baseline; responses to 5 items on 5-point Likert scale trichotomized into low, intermediate, or high levels of skill discretion using tertile split Decision authority: self-reported at baseline; responses to 5 items on 5-point Likert scale trichotomized into low, intermediate, or high levels of decision authority using tertile split	All-cause mortality; CVD mortality	Official Finnish personal identification number linked to Statistics Finland National Mortality Register; <i>ICD-8</i> , <i>ICD-9</i> , <i>ICD-10</i> classifications converted to <i>ICD-9</i> codes and deaths due to CVD identified from <i>ICD-9</i> codes 390-459, and <i>ICD-10</i> codes I00-I99	15.5
Joensuu 2014 (38) Finnish Public Sector study, Finland	municipal and public hospitals employees	60202	20	17-69	Skill discretion: self-reported at baseline; responses to 6 items on 5-point Likert scale trichotomized into low, intermediate, or high levels of skill discretion using tertile split Decision authority: self-reported at baseline; responses to 3 items on 5-point Likert scale trichotomized into low, intermediate, or high levels of decision authority using tertile split	All-cause mortality; CVD mortality	Statistics Finland National Death Registry; deaths due to cardiovascular diseases identified from <i>ICD-9</i> codes 390-459, and <i>ICD-10</i> I00-I99	8.8
Tsutsumi 2006 (39) Jichi Medical School Cohort Study, Japan	working population aged 65 years and younger	6509	49	18-65	Job demands: self-reported at baseline; scores from 5 items on 4-point Likert scale summarised and divided into quartiles (highest, higher middle, lower middle, lowest) Job control: self-reported at baseline; subscales for skill discretion (4 items) on 4-point Likert scale and autonomy for decision making (2 items) on 4-point Likert scale summarised and divided into quartiles (highest, higher middle, lower middle, lowest) Job strain derived from job demands and job control dichotomies of low and high levels using median split high job strain: high job demands and low job control,	All-cause mortality; CVD mortality	Cause-of-Death Register at public health centres in each community; deaths due to cardiovascular diseases identified from <i>ICD-10</i> codes I00-I52, I60-I69	9

					low job strain: low job demands and high job control, passive job strain: low job demands and low job control, active job strain: high job demands and high job control			
Yong 2014 (40) BASF Ludwigshafen, Sweden	production workers in chemical factory	31143	100	mean 41 (SD 11)	Shift work: assessed from company records; workers classified as rotating shift worker (rotating shift work > 1 year) or day workers (all other workers)	All-cause mortality; IHD mortality	Death certificates; deaths due to IHD identified from ICD 10 codes I20.0-I25.9	10
Kivimaki 2003 (41) 10-Town Study, Finland	municipal employees and long-term unemployed	92351	29	18-63	Employment status: assessed from employers' records from January 1990, to December 2000; permanent employees (permanent job contract between 1990 & 2000), employees who moved from a temporary to a permanent job, temporarily employed workers (fixed-term contract, but not permanent employment), long-term unemployed persons who obtained subsidised work contracts offered by municipalities	All-cause mortality; CVD mortality	Official Finnish personal identification number linked to Statistics Finland National Mortality Register; deaths from CVD identified from ICD-9 codes 390-459, ICD-10 codes I00-I99	7.7
Jorgensen 2017 (42) Danish nurse cohort, Denmark	female nurses	18015	0	≥44	Shift work: self-reported at baseline; one question on shift work status with 4 categories (day, evening, night, rotating shifts)	All-cause mortality; CVD mortality	Danish Register of Causes of Death and Civil Registration System; deaths due to CVD identified from ICD-10 codes I00-99, ICD-8 codes 4010, 4100, 4129, 4279, 4339, 4369, 4412, 4500	17.6
Gu 2015 (43) Nurses' Health Study, United States	female nurses	74862	0	30-55	Night shift work duration: self-reported at baseline (1988 survey); response to question on total number of years worked rotating night shifts at least 3 nights/month in addition to day or evening shifts (never, 1-2, 3-5, 6-9, 10-14, 15-19, 20-29, and ≥30 years) summarised into 4 categories (never, 1-5 years, 6-14 years, ≥15 years)	All-cause mortality; CVD mortality	Reports from next of kin and postal authorities. Non-responders searched in the NDI; cause of death based on medical records and death certificates, and deaths due to CVD identified from ICD-8 codes 390-459, 795	22
Karlsson 2005 (44) pulp and paper manufacturing employees, Sweden	male pulp and paper employees	5442	100	<60	Shift work: assessed from company records; total duration of years shift work summarised into 6 categories (never, <5 years, 5-9 years, 10-19 years, 20-29 years, ≥30 years)	All-cause mortality; CHD mortality	Official Swedish personal identification number linked to National Cause of Death Register; deaths due to CHD identified from ICD-6 codes 4200, 4201, 4202, 4203, 4209; ICD-7 codes 4200, 4201, 4202; ICD-8	30

							and <i>ICD-9</i> codes 410, 411, 412, 413, 414; <i>ICD-10</i> codes I20, I21, I22, I23, I24	
Fujino 2006 (45) Japan Collaborative Cohort Study, Japan	general population males	17649	100	40-59	Shift work: self-reported at baseline; response to question about patterns of shift work during working life (mainly daytime, mainly night, alternate night and daytime work)	All-cause mortality; CVD mortality	Regional research centres' population registration sheets; deaths due to CVD identified from <i>ICD-10</i> codes I00-I99	13.3

* Descriptive statistics for gender not reported hence the percentage of males in the study estimated from sub group analyses

Table S6: Results of 45 epidemiological studies of work stressors and risk of mortality

First author & year	Events (n)	Exposure comparisons	Minimal model Effect estimate and confidence intervals	Fully adjusted model Effect estimate and confidence intervals (highest category and lowest category)	Fully adjusted model Adjustment confounders
All-cause mortality outcome (n=17)					
Hibbard 1993 (1)	138	High social support at work		f: HR 0.8 (95% CI 0.7 - 1.0) m: HR 1.0 (95% CI: 0.8 - 1.1)	age, education, health status, parental role characteristics, marital role characteristics
		High job control		f: HR 1.0 (95% CI 0.9 - 1.2) m: HR 1.0 (95% CI: 0.9 - 1.1)	
Eaker 2004 (2)	214	High job demands (1 SD change in continuous measure)	f: RR 0.75 (95% CI 0.55 - 1.02) m: RR 1.01 (95% CI 0.85 - 1.21) (adjusted for age)	f: RR 0.96 (95% CI 0.91 - 1.01) m: RR 1.05 (95% CI 0.78 - 1.41)	age, SBP, ratio of total cholesterol to HDL cholesterol, BMI, smoking, diabetes
		High decision latitude (1 SD change in continuous measure)	f: RR 0.86 (95% CI 0.63 - 1.18) m: RR 0.91 (95% CI 0.76 - 1.08) (adjusted for age)	f: RR 0.98 (95% CI 0.96 - 1.02) m: RR 0.97 (95% CI 0.81 - 1.16)	
		Low job strain compared with high job strain		f: RR 0.98 (95% CI 0.76 - 2.42) m: RR 0.85 (95% CI 0.48 - 1.50)	
Falk 1992 (3)	87	High job demands compared with low job demands	RR 1.3 (95% CI 0.8 - 2.0) (restricted to 68-69 years at baseline)		restricted to 68-69 years at baseline, social class, cardiovascular risk factors
		Low personal schedule freedom compared with high personal schedule freedom	RR 0.7 (95% CI 0.5 - 1.2) (restricted to 68-69 years at baseline)		
		High job strain compared with no job strain	RR 1.7 (95% CI 1.0 - 2.3) (restricted to 68-69 years at baseline)	RR 1.6 (95% CI 1.0 - 2.5)	
Gonzalez-Mule 2017 (4)	189	High job demands		OR 0.92 (CI not reported)	age, sex, marital status, smoking, overall health, income, net worth, education, job prestige, managerial job, positive affect, negative affect, job demands, job control, interaction between job demands and job control
		High job control		OR 0.94 (CI not reported)	
		Interaction between high job demands and job control		OR 0.72 (CI not reported)	

Natti 2009 (5) (Study 1)	255	High physical demands compared with low physical demands		HR 0.97 (95% CI 0.74 - 1.26)	age, sex, marital status, education, county, long-standing illness, pain symptoms, psychological symptoms, smoking, physical work demands, psychological demands, demand for learning at work , employment relationship
		High psychological demands compared with low psychological demands		HR 0.92 (95% CI 0.70 - 1.19)	
		High demand for learning at work compared with low demand for learning		HR 0.88 (95% CI 0.67 - 1.16)	
		Temporary unsatisfied /involuntary (job insecurity) compared with permanent employees (no job insecurity)	HR 2.10 (95% CI 1.23 - 3.59) (adjusted for sex, age, marital status, education, country)	HR 1.95 (95% CI 1.13 - 3.35)	
Natti 2009 (5) (Study 2)	82	High physical demands compared with low physical demands		HR 1.47 (95% CI 0.91 - 2.37)	age, sex, marital status, education, county, long-standing illness, pain symptoms, psychological symptoms, smoking, physical work demands, psychological demands, demand for learning at work , employment relationship
		High psychological demands compared with low psychological demands		HR 1.12 (95% CI 0.70 - 1.80)	
		High demand for learning at work compared with low demand for learning		HR 1.05 (95% CI 0.66 - 1.68)	
		Temporary unsatisfied /involuntary (job insecurity) compared with permanent employees (no job insecurity)	HR 2.62 (95% CI 1.19–5.80) (adjusted for sex, age, marital status, education, country)	HR 2.59 (95% CI 1.16 - 5.80)	
Natti 2012 (6)	326	Worked most often (on a weekly basis) at night compared with dayworkers who did not work at night	f: HR 2.10 (95% CI 1.13 -3.93) m: HR 1.11 (95% CI 0.70 - 1.75) (no adjustments)	f: HR 2.25 (95% CI 1.20 -4.20) m: HR 1.16 (95% CI 0.73 - 1.84)	age, family situation (among men), longstanding illness, smoking
Niedhammer 2011 (7)	291	Low social support at work compared with high social support at work	HR 2.63 (95% CI 2.08 - 3.31) f: HR 2.72 (95% CI 1.76 - 4.20) m: HR 2.71 (95% CI 2.06 - 3.57) (no adjustments)	HR 1.28 (95% CI 1.00 - 1.65) f: HR 1.41 (95% CI 0.86 - 2.30) m: HR 1.23 (95% CI 0.91 - 1.66)	age, sex, SES, smoking, alcohol abuse, BMI, biomechanical exposure, physical exposure, temporary contract, social support
Nilsen 2016 (8)	221	High job demands compared with low job demands		Self-reported: HR 1.28 (95% CI 0.97 - 1.70) f: HR 1.55 (95% CI 1.00 - 2.38) m: HR 1.10 (95% CI 0.75 - 1.61) JEM: HR 1.41 (95% CI 1.04 - 1.92)	age, sex, physical work environment, education, occupation-based social class

				<i>f: HR 1.54 (95% CI 0.95 - 2.50)</i> <i>m: HR 1.30 (95% CI 0.84 - 2.03)</i>	
		Low job control compared with high job control		Self-reported: HR 1.00 (95% CI 0.97 - 1.04) <i>f: HR 0.97 (95% CI 0.92 - 1.03)</i> <i>m: HR 1.04 (95% CI 0.99 - 1.09)</i> JEM: HR 1.07 (95% CI 0.73 - 1.57) <i>f: HR 1.17 (95% CI 0.61 - 2.25)</i> <i>m: HR 1.00 (95% CI 0.62 - 1.61)</i>	
		High job strain compared with no job strain (all other job strain categories combined)		Self-reported: HR 1.02 (95% CI 0.71 - 1.48) <i>f: HR 1.21 (95% CI 0.74 - 1.98)</i> <i>m: HR 0.83 (95% CI 0.46 - 1.50)</i> JEM: HR 1.41 (95% CI 1.01 - 1.96) <i>f: HR 1.54 (95% CI 0.94 - 2.52)</i> <i>m: HR 1.26 (95% CI 0.79 - 2.03)</i>	
O'Reily 2013 (9)	5590	Number of working hours per week (41-48, 49-54, >55 hours) compared with normal weekly working hours (35-40 hours)	<i>f</i> 41-48 hrs/wk: HR 0.93 (95% CI 0.75 - 1.14) <i>f</i> 49-54 hrs/wk: HR 1.03 (95% CI 0.78 - 1.38) <i>f</i> ≥55 hrs/wk: HR 0.80 (95% CI 0.59 - 1.08) <i>m</i> 41-48 hrs/wk: HR 0.92 (95% CI 0.85 - 1.00) <i>m</i> 49-54 hrs/wk: HR 0.91 (95% CI 0.82 - 1.01) <i>m</i> ≥55 hrs/wk: HR 0.88 (95% CI 0.80 - 0.96) (adjusted for age, marital status)	<i>f</i> 41-48 hrs/wk: HR 0.98 (95% CI 0.80 - 1.21) <i>f</i> 49-54 hrs/wk: HR 1.17 (95% CI 0.87 - 1.57) <i>f</i> ≥55 hrs/wk: HR 0.86 (95% CI 0.63 - 1.17) <i>m</i> 41-48 hrs/wk: HR 0.96 (95% CI 0.88 - 1.05) <i>m</i> 49-54 hrs/wk: HR 1.02 (95% CI 0.92 - 1.13) <i>m</i> ≥55 hrs/wk: HR 0.97 (95% CI 0.88 - 1.07)	age, marital status, SES, dependent children, caregiver, limiting long-term illness, general health
Shirom 2011 (10)	53	High job demands		HR 0.80 (95% CI 0.56 - 1.13)	age, sex, education, workload, control, supervisor support, peer support
		High job control		HR 1.28 (95% CI 0.89 - 1.88) <i>f: HR 1.70 (95% CI 1.07 - 2.71)</i> <i>m: HR 0.48 (95% CI 0.21 - 0.99)</i>	
		High supervisor support		HR 0.79 (95% CI 0.61 - 1.03)	
		High peer support		HR 0.72 (95% CI 0.55 - 0.94)	
Tobiasz-Adamczyk 2013 (11)	59	High psychological demands and low control compared with low psychological demands and high control	<i>f: HR 2.73 (95% CI 0.35 - 21.5)</i> <i>m: HR 2.18 (95% CI 0.50 - 9.55)</i> (no adjustments)	<i>f: HR 3.38 (95% CI 0.42 - 27.1)</i> <i>m: HR 2.33 (95% CI 0.53 - 10.3)</i>	self-rated health, number of chronic conditions, independence in functional status, psychological well-being, depression, supervisor position, income
		High psychological efforts and low rewards compared with low psychological efforts and high rewards	<i>f: HR 1.63 (95% CI 0.30 - 8.91)</i> <i>m: HR 1.27 (95% CI 0.29 - 5.58)</i> (no adjustments)	<i>f: HR 2.10 (95% CI 0.38 - 11.8)</i> <i>m: HR 1.53 (95% CI 0.34 - 6.88)</i>	
Von Bonsdorff 2012 (12)	1836	High job demands compared with low job demands	<i>f: HR 0.82 (95% CI 0.71 - 0.95)</i> <i>m: HR 1.10 (95% CI 0.98 - 1.23)</i> (adjusted for age)	<i>f: HR 0.82 (95% CI 0.71 - 0.95)</i> <i>m: HR 1.05 (95% CI 0.93 - 1.18)</i>	age, occupation, smoking, alcohol, physical activity, CVD, metabolic disorders, cancer
		Low job control compared with high job control	<i>f: HR 1.07 (95% CI 0.93 - 1.24)</i> <i>m: HR 1.26 (95% CI 1.12 - 1.42)</i>	<i>f: HR 1.06 (95% CI 0.91 - 1.23)</i> <i>m: HR 1.08 (95% CI 0.95 - 1.22)</i>	

			(adjusted for age)		
		High job strain compared with low job strain	f: HR 0.88 (95% CI 0.72 - 1.08) m: HR 1.36 (95% CI 1.16 - 1.60) (adjusted for age)	f: HR 0.89 (95% CI 0.72 - 1.09) m: HR 1.14 (95% CI 0.96 - 1.35)	
Amick 2002 (13)	10-year employment lag: 726 5-year employment lag: 571	Low job demands (1 th quartile) compared with high job demands (4 th quartile)	10-year lag: HR 1.07 (95% CI 0.80 - 1.42) 5-year lag: HR 1.13 (95% CI 0.85 - 1.53) (adjusted for age, race, gender, current interview year)	10-year lag: HR 1.02 (95% CI 0.76 - 1.37) 5-year lag: HR 1.12 (95% CI 0.82 - 1.53)	age, race, gender, current interview year, family income, family size, retirement, unemployment, retirement by age interaction, race by age interaction, baseline disability
		Low job decision latitude (1 st quartile) compared with high decision latitude (4 th quartile)	10-year lag: HR 1.55 (95% CI 1.26 - 1.92) 5-year lag: HR 1.50 (95% CI 1.20 - 1.88) adjusted for age, race, gender, current interview year)	10-year lag: HR 1.43 (95% CI 1.13 - 1.81) 5-year lag: HR 1.50 (95% CI 1.18 - 1.91)	
		High job strain compared with low job strain	10-year lag: HR 1.42 (95% CI 1.10 - 1.84) 5-year lag: HR 1.36 (95% CI 1.03 - 1.80) adjusted for age, race, gender, current interview year)	10-year lag: HR 1.29 (95% CI not reported) 5-year lag: HR 1.33 (95% CI not reported)	
		Low work support (1 st quartile) compared with high low work support (4 th quartile)	10-year lag: HR 0.84 (95% CI 0.62 - 1.14) 5-year lag: HR 0.78 (95% CI 0.56 - 1.09) (adjusted for age, race, gender, current interview year)	10-year lag: HR 0.86 (95% CI 0.64 - 1.17) 5-year lag: HR 0.81 (95% CI 0.57 - 1.14)	
		Low job security (1 st quartile) compared with high job security (4 th quartile)	10-year lag: HR 0.90 (95% CI 0.67 - 1.20) 5-year lag: HR 0.95 (95% CI 0.70 - 1.30) (adjusted for age, race, gender, current interview year)	10-year lag: HR 0.98 (95% CI 0.73 - 1.32) 5-year lag: HR 0.98 (95% CI 0.70 - 1.35)	
Boggild 1999 (14)	1679	Shift worker (worked irregular hours, shift work, often had night work) compared with day worker (day time work only)	RR 1.10 (95% CI 0.90 - 1.20) (adjusted for age)	RR 0.90 (95% CI 0.80 - 1.10)	age, social class, sleep deviation, smoking, weight, height, fitness
Åkerstedt 2004 (15)	864	Shift worker (3-shift work, night work, evening work, roster work, other work) compared with day worker (day time work only)	Blue Collar f: HR 0.72 (95% CI 0.45 - 1.14) m: HR 0.86 (95% CI 0.68 - 1.01) White Collar f: HR 1.91 (95% CI 0.94 - 3.88) m: HR 0.95 (95% CI 0.58 - 1.56)	Blue Collar f: HR 0.79 (95% CI 0.50 - 1.26) m: HR 1.04 (95% CI 0.82 - 1.33) White Collar f: HR 2.61 (95% CI 1.26 - 5.41) m: HR 1.23 (95% CI 0.75 - 1.26)	age, stress, physically strenuous work, smoking, long-term disease
Sabbath 2015 (16)	933	Low job demands (1 st tertile) compared with high job demands (3 rd tertile)		HR 1.07 (95% CI 0.90 - 1.26)	age at HRS baseline, birth cohort, year of entry into HRS, race/ethnicity, region of birth in the US, parental education, own education, family status
		Low job control (1st tertile) compared with high job control (3rd tertile)		HR 1.31 (95% CI 1.10 - 1.56)	

Perlman 2009 (17)	285	Job insecure compared with job secure	f: HR 1.31 (95% CI 0.66 - 2.58) m: HR 1.08 (95% CI 0.83 - 1.40) (adjusted for age)	f: HR 1.15 (95% CI 0.58 - 2.30) m: HR 0.99 (95% CI 0.75 - 1.29)	age, education, occupation, alcohol, smoking, material goods
CHD mortality outcome (n=14)					
Johnson 1989 (18)	193	High iso-strain (5th quintile) compared with low iso-strain (1st quintile)	RR 1.92 (95% CI 1.15 - 3.21) (adjusted for age)		
Kivimaki 2006 (19)	67	High job demands		HR 1.13 (95% CI 0.86 - 1.47)	age, sex, education, occupational status, salary, second job, shift work, cholesterol, SBP, BMI, smoking, physical activity, alcohol, depression, lack of energy, fatigue, job control, job demands , insufficient recovery from work
		High job control		HR 0.69 (95% CI 0.51 - 0.93)	
Kivimaki 2002 (20)	73	High job demands (3 rd tertile) compared with low job demands (1 st tertile)	HR 1.35 (95% CI 0.77-2.36) (adjusted for age and sex)		age, sex, occupation group, smoking, physical activity, SBP, cholesterol, BMI
		Low job control (1 st tertile) compared with high job control (3 rd tertile)	HR 1.90 (95% CI 1.08-3.37) (adjusted for age and sex)	HR 1.42 (95% CI 0.72-2.82)	
		High job strain compared with low job strain	HR 2.20 (95% CI 1.16-4.17) (adjusted for age and sex)	HR 2.22 (95% CI 1.04-4.73)	
		High effort reward imbalance (3 rd tertile) compared with low effort reward (1 st tertile)	HR 2.36 (95% CI 1.26-4.42) (adjusted for age and sex)	HR 2.42 (95% CI 1.02-5.73)	
Elovainio 2006 (21)	73	High justice compared with low/intermediate justice	HR 0.55 (95% CI 0.34-0.88) (adjusted for age and sex)	HR 0.61 (95% CI 0.36-1.00)	age, sex, occupational group, smoking, physical activity, SBP, cholesterol, BMI, job strain, effort-reward imbalance
Lee 2002 (22)	38	High job strain compared with low job strain	RR 1.09 (95% CI 0.40 - 2.92) (adjusted for age)		
Slopen 2012 (23)	52	High job strain compared with low job strain	HR 1.07 (95% CI 0.45 - 2.55) (adjusted for age, race, study drug randomisation)	HR 0.84 (95% CI 0.35 - 2.06)	age, race, study drug randomisation, education, income, coronary revascularisation
		Job insecure compared with job secure	HR 1.52 (95% CI 0.81 - 2.85)	HR 1.41 (95% CI 0.75 - 2.65)	

			(adjusted for age, race, study drug randomisation)		
Toivanen 2006 (24)	10916	Low job control compared with high job control	RR 1.32 (95% CI 1.27 - 1.38) <i>f: RR 1.28 (95% CI 1.18 - 1.40)</i> <i>m: RR 1.34 (95% CI 1.28 - 1.40)</i> (adjusted for age)	RR 1.15 (95% CI 1.10 - 1.19); <i>f: RR 1.20 (95% CI 1.10 - 1.31)</i> <i>m: RR 1.14 (95% CI 1.08 - 1.19)</i>	age, sex, income
		Low level of job control index compared to high level of job control index	RR 1.52 (95% CI 1.44 - 1.61) <i>f: RR 1.60 (95% CI 1.35 - 1.89)</i> <i>m: RR 1.49 (95% CI 1.40 - 1.59)</i> (adjusted for age)	RR 1.24 (95% CI 1.17 - 1.31) <i>f: RR 1.40 (95% CI 1.18 - 1.67)</i> <i>m: RR 1.21 (95% CI 1.13 - 1.30)</i>	
Alterman 1994 (25)	283	Decision latitude (RR decision latitude calculated for 20-point change in scale score)	RR 0.76 (95% CI 0.59 - 0.97) (adjusted for age)	RR 0.85 (95% CI 0.70 - 1.03)	age, SBP, cholesterol, smoking, alcohol, family history CVD, education, occupational class
		Psychologic demand (RR for psychologic demand were calculated for 10-point change in scale score)	RR 0.79 (95% CI 0.48 - 1.28) (adjusted for age)	RR 0.76 (95% CI 0.55 - 1.05)	
		High job strain (scores for decision latitude in lowest category and psychologic demand in highest category) compared to no job strain	RR 1.48 (95% CI 0.98 - 2.24) (adjusted for age)	RR 1.03 (95% CI 0.75 - 1.41)	
Padyab 2014 (26)	595	High psychological demands compared with low psychological demands	<i>f: HR 0.58 (95% CI 0.39 - 0.86)</i> <i>m: HR 0.73 (95% CI 0.59 - 0.89)</i> (adjusted for age)	<i>f: HR 0.75 (95% CI 0.47 - 1.19)</i> <i>m: HR 0.81 (95% CI 0.64 - 1.03)</i>	age, work-stress (psychological demands, decision latitude), non-work stress (emotional support and social network), BMI, alcohol, physical activity, marital status, education, smoking
		Low decision latitude compared with high decision latitude	<i>f: HR 1.21 (95% CI 0.83 - 1.76)</i> <i>m: HR 1.37 (95% CI 1.12 - 1.67)</i> (adjusted for age)	<i>f: HR 0.91 (95% CI 0.58 - 1.43)</i> <i>m: HR 1.07 (95% CI 0.85 - 1.36)</i>	
		High job strain compared with low job strain	<i>f: HR 0.66 (95% CI 0.34 - 1.33)</i> <i>m: HR 0.87 (95% CI 0.61 - 1.24)</i> (adjusted for age)		
		Iso-strain (low social support and high job strain) compared with no iso-strain	<i>f: HR 0.51 (95% CI 0.21 - 1.26)</i> <i>m: HR 1.18 (95% CI 0.81 - 1.72)</i> (adjusted for age)		
Hublin 2010 (27)	857	Type of working time (night-time work 1975 or 1981, shift-work 1975 and daytime work 1981, daytime work 1975 and shift work 1981, shift-work 1975 and	Night-time work 1975 or 1981 <i>f: HR: 1.38 (95% CI 0.71, 2.69)</i> <i>m: HR 1.75 (95% CI 0.92, 3.33)</i> Shift-work 1975, daytime work 1981 <i>f: HR 1.16 (95% CI 0.66, 2.04)</i>	Night-time work 1975 or 1981 <i>f: HR 0.90 (95% CI 0.36, 2.23)</i> <i>m: HR 1.82 (95% CI 0.97, 3.41)</i> <i>healthy f: not computable</i> <i>healthy m: HR 1.17 (95% CI 0.35, 3.90)</i>	age, marital status, social class, education, smoking, binge drinking, grams of alcohol consumed daily, hypertension, BMI, conditioning physical

		1981 compared with daytime work 1975 and 1981)	<p>m: HR 1.09 (95% CI 0.68, 1.76)</p> <p>Daytime work 1975, shift work 1981</p> <p>f: HR 1.55 (95% CI 0.88, 2.74)</p> <p>m: HR 0.94 (95% CI 0.56, 1.56)</p> <p>Shift-work 1975 and 1981</p> <p>f: HR 1.22 (95% CI 0.83, 1.79)</p> <p>m: HR 1.09 (95% CI 0.82, 1.44)</p> <p>(adjusted for age)</p>	<p>Shift-work 1975, daytime work 1981</p> <p>f: HR 1.08 (95% CI 0.56, 2.08)</p> <p>m: HR 0.86 (95% CI 0.48, 1.54)</p> <p><i>healthy f: HR 0.67 (95% CI 0.09, 4.96)</i></p> <p><i>healthy m: HR 0.14 (95% CI 0.02, 1.05)</i></p> <p>Daytime work 1975, shift work 1981</p> <p>f: HR 1.52 (95% CI 0.82, 2.82)</p> <p>m: HR 0.79 (95% CI 0.44, 1.41)</p> <p><i>healthy f: HR 2.16 (95% CI 0.62, 7.55)</i></p> <p><i>healthy m: HR 0.91 (95% CI 0.39, 2.12)</i></p> <p>Shift-work 1975 and 1981</p> <p>f: HR 1.21 (95% CI 0.75, 1.93)</p> <p>m: HR 1.06 (95% CI 0.75, 1.50)</p> <p><i>healthy f: HR 1.02 (95% CI 0.27, 3.95)</i></p> <p><i>healthy m: HR 0.77 (95% CI 0.42, 1.39)</i></p>	activity, life satisfaction, diurnal type, sleep length, use of hypnotics and/or tranquilizers, physical load of work, working pace	
Johnson 1996 (28)	521	High psychosocial demands (4 th quartile) compared with low psychological demands (1 st quartile)		<p>5-year cumulative exposure period</p> <p>RR 0.76 (95% CI 0.52 - 1.13)</p> <p>26+ years cumulative exposure period</p> <p>RR 0.55 (95% CI 0.34 - 0.88)</p>	age, survey year, year last worked, social class, education, smoking, physical exercise, nationality	
		Low job control (1 st quartile) compared with high job control (4 th quartile)		<p>5-year cumulative exposure period</p> <p>RR 1.46 (95% CI 0.95 - 2.25)</p> <p>26+ years cumulative exposure period</p> <p>RR 1.09 (95% CI 0.68 - 1.74)</p>		
		Low social support (1 st quartile) compared with high social support (4 th quartile)		<p>5-year cumulative exposure period</p> <p>RR 0.96 (95% CI 0.68 - 1.37)</p> <p>26+ years cumulative exposure period</p> <p>RR 1.06 (95% CI 0.74 - 1.51)</p>		
		Combined low, medium low, medium high job control compared with high job control		<p>5-year cumulative exposure period</p> <p>RR 1.60 (95% CI 1.06 - 2.41)</p> <p>26+ years cumulative exposure period</p> <p>RR 1.10 (95% CI 0.67 - 1.80)</p>		age, survey year, year last worked, social class, education, smoking, physical exercise, nationality, psychological demands, job control, social support, hazards, physical demands
		Combined medium low, medium high, high psychological demands compared with low psychological demands		<p>5-year cumulative exposure period</p> <p>RR 0.95 (95% CI 0.71 - 1.24)</p> <p>26+ years cumulative exposure period</p> <p>RR 0.76 (95% CI 0.47 - 1.02)</p>		
		Combined low, medium low, medium high social support compared with high social support		<p>5-year cumulative exposure period</p> <p>RR 1.00 (95% CI 0.75 - 1.34)</p> <p>26+ years cumulative exposure period</p> <p>RR 1.10 (95% CI 0.79 - 1.53)</p>		

Karasek 1981 (29)	22	Low/medium low intellectual discretion compared with high/medium high intellectual discretion	OR 1.5 (95% CI 0.4 - 5.1) (cases matched with controls for age, smoking, education, CHD symptoms)		
		Low/medium low personal schedule freedom compared with high/medium high personal schedule freedom	OR 1.7 (95% CI 0.6 - 4.7) (cases matched with controls for age, smoking, education, CHD symptoms)		
		High job demands compared with medium or low job demands	OR 4.0 (95% CI 1.2 - 13.9) (cases matched with controls for age, smoking, education, CHD symptoms)		
		Low personal schedule freedom and high job demands	OR 4.0 (95% CI 1.1 - 14.4) (cases matched with controls for age, smoking, education, CHD symptoms)		
Yadegarfar 2008 (30)	635	Shift worker (shift work > 1 month) compared with day workers (all other workers)	OR 1.09 (90% CI 0.91 - 1.32) (cases matched with controls for age, year of starting work)	Total cohort OR 1.03 (90% CI 0.83 - 1.28) Surviving at least 10 years after hire OR 1.04 (90% CI 0.83 - 1.30)	SBP, DBP, BMI, smoking, height, duration of employment, social class
McNamee 1996 (31)	467	Shift worker (shift work > 1 month) compared with day workers (all other workers)	Total cohort OR 0.79 (90% CI 0.62 - 1.01) Deaths <60 years of age OR 0.72 (90% CI 0.49 - 1.04) Deaths ≥60 years of age OR 0.85 (90% CI 0.58 - 1.26) (cases matched with controls for age, year of starting work)	Total cohort OR 0.85 (90% CI 0.65 - 1.12) Surviving at least 10 years after first shift OR 0.90 (90% CI 0.68 - 1.21)	SBP, DBP, BMI, smoking, height, job status, duration of employment
All-cause and CHD mortality outcomes (n=14)					
Brunner 2004 (32)	Total: 180 CHD: 73	High job strain compared with low job strain		Total mortality HR 0.95 (95% CI 0.6 - 1.5)	age, sex, height, father's occupational group, education, occupational group, income
				CHD mortality HR 2.20 (95% CI 1.2 - 4.2) (adjusted for age, sex)	
				Total mortality HR 1.08 (95% CI 0.7 - 1.8)	

		High effort reward imbalance compared with low effort-reward imbalance	CHD mortality HR 2.36 (95% CI 1.3 - 4.4) (adjusted for age, sex)	CHD mortality HR 2.54 (95% CI 1.1 - 5.9)	
Laszlo 2010 (33)	Total: 96 CHD: 52	High job demands (4 th quartile) compared with low job demands (1 st quartile)		Total mortality HR 1.13 (95% CI 0.62 - 2.08)	age, sex, education, occupational class, managerial status, overtime work, shift work, household work, household work by age interaction
				CHD mortality HR 1.31 (95% CI 0.59 - 2.89)	
		Low job control (1 st quartile) compared with high job control (4 th quartile)		Total mortality HR 1.20 (95% CI 0.63 - 2.30)	
				CHD mortality HR 1.35 (95% CI 0.51 - 3.56)	
		High job strain compared with low job strain	Total mortality HR 1.38 (95% CI 0.80 - 2.39) (no adjustments)	Total mortality HR 1.65 (95% CI 0.91 - 2.98)	
CHD mortality HR 2.20 (95% CI 0.99 - 4.90) (no adjustments)	CHD mortality HR 2.81 (95% CI 1.16 - 6.82)				
Laszlo 2013 (34)	Total: 96 CHD: 52	job insecurity (concerns about dismissal from work) compared with no job insecurity	Total mortality HR 1.57 (95% CI 0.99 - 2.49) (no adjustments)	Total mortality HR 1.69 (95% CI 1.04 - 2.75)	age, sex, education, occupational class, employment type, managerial status, experience of unemployment, dismissal or unsuccessful job searching, marital status, diabetes mellitus, earlier hospitalisation for depression, history of chest pain, previous stroke or heart failure
			CHD mortality HR 1.52 (95% CI 0.81 - 2.85) (no adjustments)	CHD mortality HR 1.57 (95% CI 0.80 - 3.09)	
Holtermann 2010 (35)	Total: 2675 CHD: 587	Weekly number of work hours (41-45, and ≥46 compared with ≤40 hours per week)	Total mortality 41-45 hrs/wk: HR 1.07 (95% CI 0.95 - 1.20) ≥46 hrs/wk: HR 0.91 (95% CI 0.79 - 1.05) (adjusted for age)	Total mortality Lowest physical fitness 41-45 hrs/wk HR 1.00 (95% CI 0.76 - 1.30) Lowest physical fitness ≥46 hrs/wk HR 1.08 (95% CI 0.79 - 1.49) Medium physical fitness 41-45 hrs/wk HR 0.93 (95% CI 0.79 - 1.09) Medium physical fitness ≥46 hrs/wk	BMI, systolic blood pressure, diastolic blood pressure, diabetes (treatment for), hypertension (treatment of), alcohol use, smoking (current, never, previous), physical work

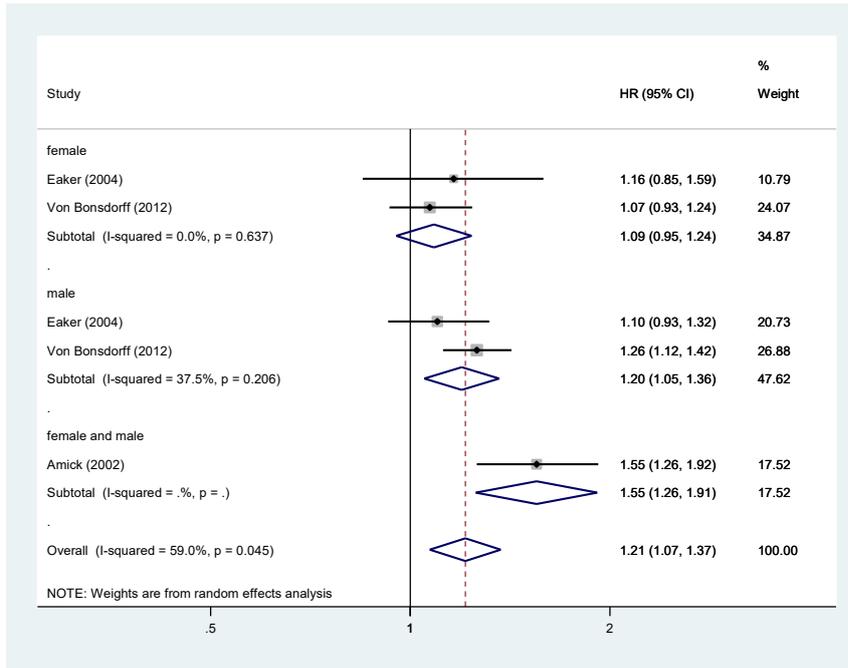
				HR 0.79 (95% CI 0.69 - 0.95) Highest physical fitness 41-45 hrs/wk HR 0.85 (95% CI 0.64 - 1.14) Highest physical fitness ≥46 hrs/wk HR 0.87 (95% CI 0.61 - 1.23)	
			CHD mortality 41-45 hrs/wk: HR 1.59 (95% CI 1.20 - 2.11) ≥46 hrs/wk: HR 1.28 (95% CI 0.91 - 1.78) (adjusted for age)	CHD mortality Lowest physical fitness 41-45 hrs/wk HR 1.49 (95% CI 0.76 - 2.89) Lowest physical fitness ≥46 hrs/wk HR 2.28 (95% CI 1.10 - 4.73) Medium physical fitness 41-45 hrs/wk HR 1.37 (95% CI 0.93 - 2.03) Medium physical fitness ≥46 hrs/wk HR 0.94 (95% CI 0.59 - 1.51) Highest physical fitness 41-45 hrs/wk HR 0.80 (95% CI 0.41 - 1.57) Highest physical fitness ≥46 hrs/wk HR 0.91 (95% CI 0.41 - 2.02)	
Holtermann 2011 (36)	Total: 2656 CHD: 585	Regular psychological pressure at work compared with rare psychological pressure at work	Total mortality HR 0.90 (95% CI 0.82 - 0.99) (adjusted for age)	Total mortality HR 0.98 (95% CI 0.89 - 1.07)	age, social class, work hours, physical work demands
			CHD mortality HR 0.87 (95% CI 0.71 - 1.07) (adjusted for age)	CHD mortality HR 0.94 (95% CI 0.75 - 1.17)	
Joensuu 2012 (37)	Total: 981 CHD: 375	High skill discretion (3 rd tertile) compared with low skill discretion (1 st tertile)	Total mortality HR 1.15 (95% CI 0.99 - 1.35) (no adjustments)	Total mortality HR 0.84 (95% CI 0.69 - 1.02)	both job control variables, age, sex, occupational status, physical health (hypertension, diabetes), supervisor position, supervisor support, co-worker support
			CHD mortality HR 1.22 (95% CI 0.94 - 1.58) (no adjustments)	CHD mortality HR 0.80 (95% CI 0.58 - 1.09)	
		High decision authority (3 rd tertile) compared with low decision authority (1 st tertile)	Total mortality HR 1.29 (95% CI 1.11 - 1.51) (no adjustments)	Total mortality HR 1.28 (95% CI 1.06 - 1.54)	
			CHD mortality HR 1.47 (95% CI 1.14 - 1.90) (no adjustments)	CHD mortality HR 1.49 (95% CI 1.11 - 2.02)	

Joensuu 2014 (38)	Total: 696 CHD: 128	High skill discretion (3rd tertile) compared with low skill discretion (1st tertile)	Total mortality HR 0.66 (95% CI 0.55 - 0.80) (no adjustments)	Total mortality HR 0.86 (95% CI 0.68 - 1.08)	both job control variables, age, sex, SES, physical health (hypertension, diabetes)
			CHD mortality HR 0.56 (95% CI 0.36 - 0.87) (no adjustments)	CHD mortality HR 0.80 (95% CI 0.47 - 1.36)	
		High decision authority (3rd tertile) compared with low decision authority (1st tertile)	Total mortality HR 0.85 (95% CI 0.69 - 1.04) (no adjustments)	Total mortality HR 0.93 (95% CI 0.74 - 1.17)	
			CHD mortality HR 0.76 (95% CI 0.47 - 1.23) (no adjustments)	CHD mortality HR 0.86 (95% CI 0.50 - 1.48)	
Tsutsumi 2006 (39)	Total: 221 CHD: 35	High job demands (4th quartile) compared with low job demands (1st quartile)		Total mortality f: RR 0.79 (95% CI 0.35 - 1.74) m: RR 0.76 (95% CI 0.48 - 1.19)	age, educational, occupation, smoking, alcohol, physical activity, BMI, cholesterol, hypertension, diabetes, community
		Low job control (1st quartile) compared with high job control (4th quartile)		Total mortality f: RR 0.82 (95% CI 0.33 - 2.04) m: RR 1.11 (95% CI 0.61 - 2.01)	
		High job strain compared with low job strain	Total mortality f: RR 0.76 (95% CI 0.38 - 1.51) m: RR 0.79 (95% CI 0.50 - 1.26) (adjusted for age)	Total mortality f: RR 0.72 (95% CI 0.32 - 1.64) m: HR 0.79 (95% CI 0.47 - 1.31)	
			CHD mortality RR 2.47 (95% CI 0.81 - 7.51) (adjusted for age and sex)	CHD mortality RR 1.98 (95% CI 0.59 - 6.70)	
Yong 2014 (40)	Total: 1062 CHD: 122	Rotating shift work (rotating shift work > 1 year) compared with day workers (all other workers)	Total mortality HR 0.96 (95% CI 0.84 - 1.10) (adjusted for age and manual work)	Total mortality HR 0.73 (95% CI 0.62 - 0.85)	age, manual work, smoking, alcohol, job duration, cancer, epilepsy, cerebral vascular disease, diseases of the liver, diabetes, IHD, COPD, conductive heart disorders, hypertensive diseases
			CHD mortality HR 0.77 (95% CI 0.52 - 1.14) (adjusted for age and manual work)	CHD mortality HR 0.62 (95% CI 0.39 - 0.99)	age, manual work, smoking, job duration, BMI, diseases of the liver, diabetes, hypertensive diseases
Kivimaki 2003 (41)	Total: 1332			Total mortality	age, occupational status, salary

	CHD: 300	Employment status (temporary to permanent, temporary, unemployed workers compared with permanent employees)		temporary to permanent f: HR 0.63 (95% CI 0.44 - 0.89) m: HR 0.87 (95% CI 0.53 - 1.44) temporary f: HR 1.24 (95% CI 1.01 - 1.54) m: HR 1.61 (95% CI 1.25 - 2.09) unemployed f: HR 2.91 (95% CI 2.16 - 3.91) m: HR 2.81 (95% CI 2.18 - 3.64)	
			CHD mortality temporary to permanent f: HR 0.35 (95% CI 0.11 - 1.11) m: HR 1.10 (95% CI 0.45 - 2.72) temporary f: HR 1.42 (95% CI 0.86 - 2.35) m: HR 0.99 (95% CI 0.55 - 1.80) unemployed f: HR 4.23 (95% CI 2.29 - 7.81) m: HR 2.36 (95% CI 1.43 - 3.89)		
Jorgensen 2017 (42)	Total: 1616 CHD: 217	Shift work (evening, night, rotating shifts compared with day shift)	Total mortality evening shifts: HR 1.53 (95% CI 1.33 - 1.77) night shifts: HR 1.74 (95% CI 1.48 - 2.07) rotating shifts: HR 0.98 (95% CI 0.86 - 1.12) (adj. for age)	Total mortality evening shifts: HR 1.29 (95% CI 1.11 - 1.49) night shifts: HR 1.26 (95% CI 1.05 - 1.51) rotating shifts: HR 1.00 (95% CI 0.88 - 1.15)	age, smoking, physical activity, BMI, alcohol, diet, pre-existing diseases, self-reported health, stressful work environment, marital status, female reproductive factors (birth, use of hormone therapy, oral contraceptives)
			CHD mortality evening shifts: HR 1.74 (95% CI 1.18 - 2.57) night shifts: HR 2.42 (95% CI 1.58 - 3.71) rotating shifts: HR 1.21 (95% CI 0.86 - 1.72) (adj. for age)	CHD mortality evening shifts: HR 1.47 (95% CI 0.98 - 2.18) night shifts: HR 1.71 (95% CI 1.09 - 2.69) rotating shifts: HR 1.24 (95% CI 0.87 - 1.77)	
Gu 2015 (43)	Total: 14181 CHD: 3062	Night shift work duration (1-5, 6-14, ≥15 years compared with never)	Total mortality 1-5 years: HR 0.97 (95% CI 0.94 - 1.01) 6-14 years: HR 1.19 (95% CI 1.13 - 1.25) ≥15 years: HR 1.24 (95% CI 1.17 - 1.32) (adj. for age)	Total mortality 1-5 years: HR 1.01 (95% CI 0.97 - 1.05) 6-14 years: HR 1.11 (95% CI 1.06 - 1.17) ≥15 years: HR 1.11 (95% CI 1.05 - 1.18)	age, alcohol, physical exercise, multivitamins, menopausal status, postmenopausal hormones, physical exam in the past 2 years, healthy eating score, smoking, pack years, BMI, husband's education
			CHD mortality 1-5 years: HR 0.97 (95% CI 0.90 - 1.06) 6-14 years: HR 1.30 (95% CI 1.16 - 1.45) ≥15 years: HR 1.45 (95% CI 1.29 - 1.63) (adj. for age)	CHD mortality 1-5 years: HR 1.02 (95% CI 0.94 - 1.11) 6-14 years: HR 1.19 (95% CI 1.07 - 1.33) ≥15 years: HR 1.23 (95% CI 1.09 - 1.38)	
Karlsson 2005 (44)	Total: 760		Total mortality		

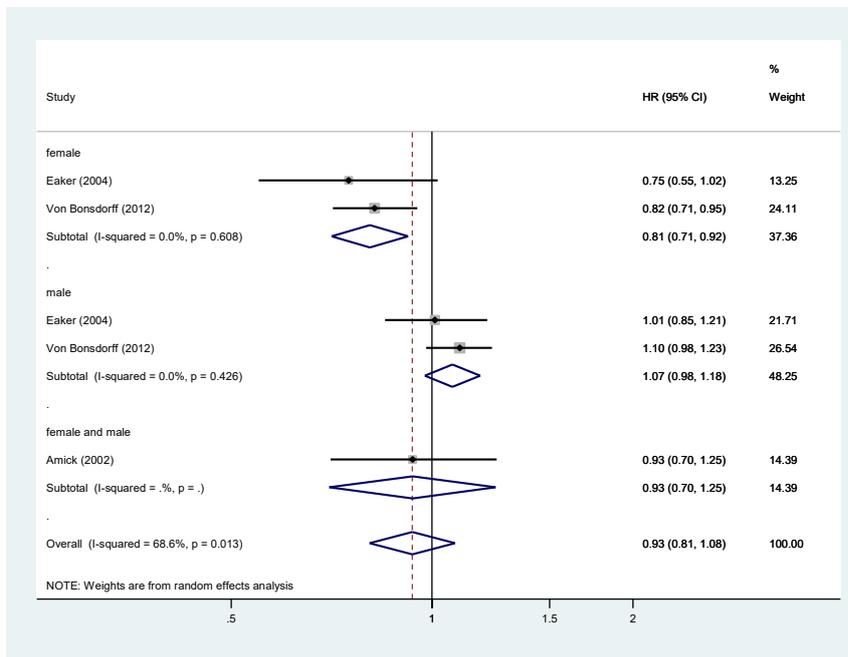
	CHD: 287	Total duration of years shift work (<5, 5-9, 10-19, 20-29, ≥30 years compared with dayworkers)	<p>All shiftworkers: SRR 1.02 (95% CI 0.93 - 1.11)</p> <p><5 years: SRR 0.99 (95% CI 0.65 - 1.50)</p> <p>5-9 years: SRR 0.94 (95% CI 0.65 - 1.36)</p> <p>10-19 years: SRR 0.93 (95% CI 0.76 - 1.14)</p> <p>20-29 years: SRR 1.06 (95% CI 0.90 - 1.25)</p> <p>≥30 years: SRR 0.98 (95% CI 0.88 - 1.10)</p> <p>(SRR calculated based on weights derived from unexposed group adjusted for age and calendar time)</p>		
			<p>CHD mortality</p> <p>All shiftworkers: SRR 1.11 (95% CI 0.95 - 1.30)</p> <p><5 years: SRR 0.85 (95% CI 0.30 - 2.38)</p> <p>5-9 years: SRR 0.97 (95% CI 0.56 - 1.67)</p> <p>10-19 years: SRR 0.83 (95% CI 0.58 - 1.19)</p> <p>20-29 years: SRR 1.02 (95% CI 0.77 - 1.36)</p> <p>≥30 years: SRR 1.24 (95% CI 1.04 - 1.49)</p> <p>(SRR calculated based on weights derived from unexposed group adjusted for age and calendar time)</p>		
Fujino 2006 (45)	Total: 1363 CHD: 304	Shift work (fixed-night, rotating-shift workers compared with daytime workers)	<p>Total mortality</p> <p>fixed-night: HR 1.13 (95% CI 0.90 - 1.42)</p> <p>rotating-shift: HR 1.00 (95% CI 0.84 - 1.19) (adjusted for age)</p>	<p>Total mortality</p> <p>fixed-night: HR 1.06 95% CI (0.85, 1.34)</p> <p>rotating-shift: HR 0.98 95% CI (0.82, 1.17)</p>	age, smoking, alcohol, education, perceived stress, past medical history, BMI, hours of walking, hours of exercise, job type
			<p>CHD mortality</p> <p>fixed-night: HR 1.41 (95% CI 0.90 - 2.21)</p> <p>rotating-shift: HR 1.62 (95% CI 1.19 - 2.21) (adjusted for age)</p>	<p>CHD mortality</p> <p>fixed-night: HR 1.29 (95% CI 0.82, 2.03)</p> <p>rotating-shift: HR 1.59 (95% CI 1.16 - 2.18)</p>	

Figure S1: Forest plot of the effect of low job control compared to high job control on all-cause mortality minimal analysis



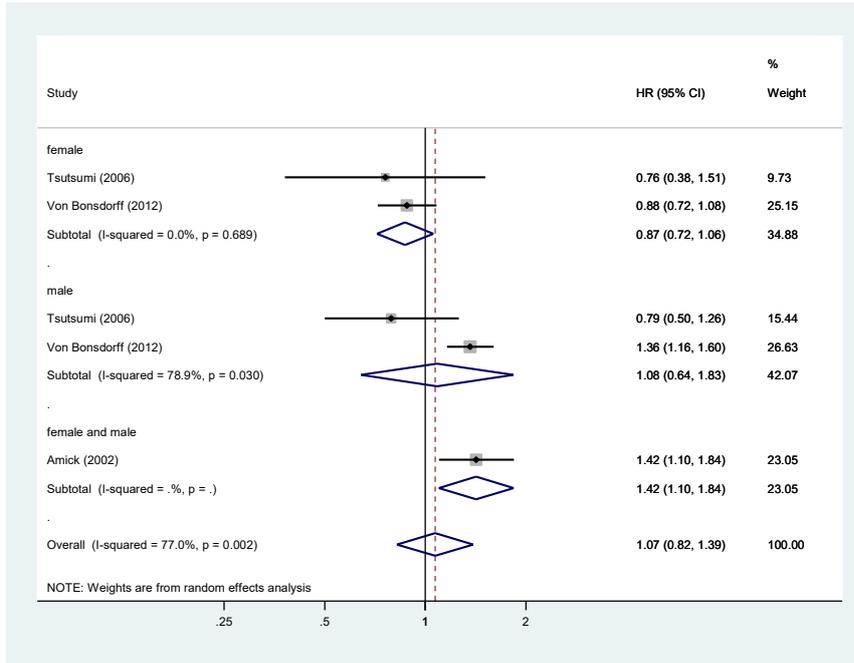
female Heterogeneity: $\text{Tau}^2 = 0.00$; test statistic = 0.22, $\text{df} = 1$ ($p = 0.637$); $I^2 = 0.0\%$; Test for overall effect: $z = 1.23$ ($p = 0.218$)
 male Heterogeneity: $\text{Tau}^2 = 0.004$; test statistic = 1.60, $\text{df} = 1$ ($p = 0.206$); $I^2 = 37.5\%$; Test for overall effect: $z = 2.69$ ($p = 0.007$)
 Total Heterogeneity: $\text{Tau}^2 = 0.01$; test statistic = 9.76, $\text{df} = 4$ ($p = 0.045$); $I^2 = 59.0\%$; Test for overall effect: $z = 3.03$ ($p = 0.002$)

Figure S2: Forest plot of the effect of high job demands compared to low job demands on all-cause mortality minimal analysis



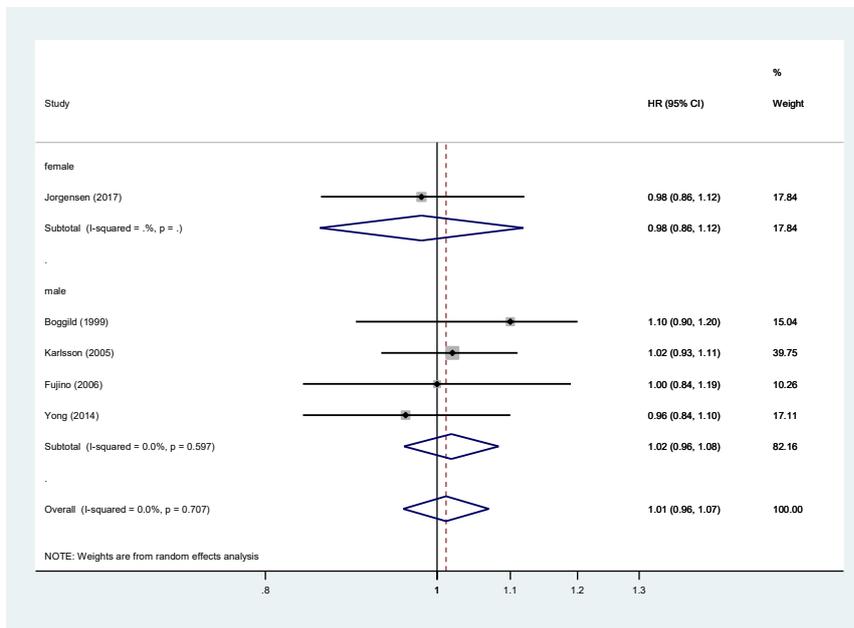
female Heterogeneity: $\text{Tau}^2 = 0.00$; test statistic = 0.26, $\text{df} = 1$ ($p = 0.608$); $I^2 = 0.0\%$; Test for overall effect: $z = 3.19$ ($p = 0.001$)
 male Heterogeneity: $\text{Tau}^2 = 0.00$; test statistic = 0.63, $\text{df} = 1$ ($p = 0.426$); $I^2 = 0.0\%$; Test for overall effect: $z = 1.44$ ($p = 0.149$)
 Total Heterogeneity: $\text{Tau}^2 = 0.02$; test statistic = 12.8, $\text{df} = 4$ ($p = 0.013$); $I^2 = 68.6\%$; Test for overall effect: $z = 0.91$ ($p = 0.365$)

Figure S3: Forest plot of the effect of job strain compared to no job strain on all-cause mortality minimal analysis



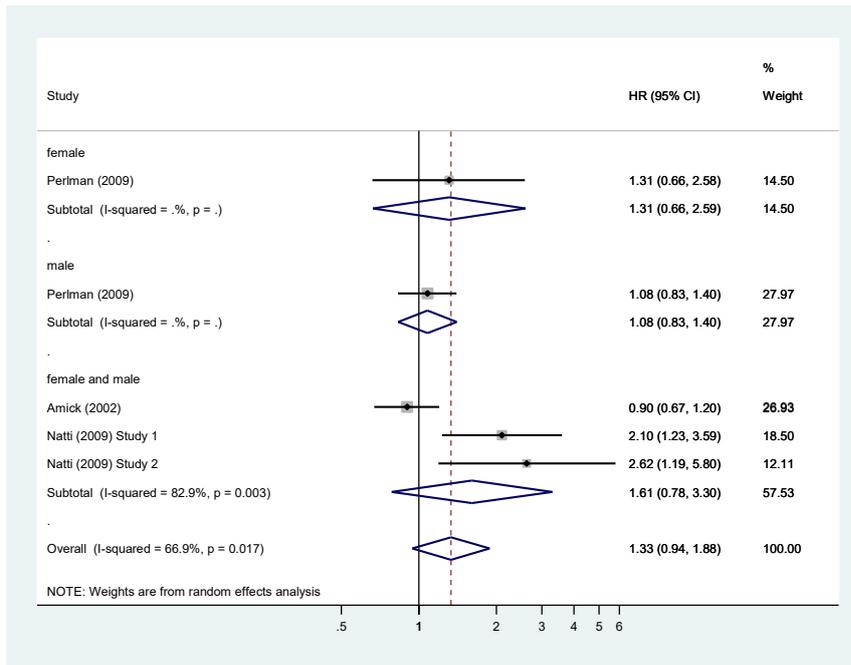
female Heterogeneity: $\text{Tau}^2 = 0.00$; test statistic = 0.16, df = 1 (p = 0.689); $I^2 = 0.0\%$; Test for overall effect: z = 1.41 (p = 0.160)
 male Heterogeneity: $\text{Tau}^2 = 0.12$; test statistic = 4.73, df = 1 (p = 0.030); $I^2 = 78.9\%$; Test for overall effect: z = 0.30 (p = 0.763)
 Total Heterogeneity: $\text{Tau}^2 = 0.06$; test statistic = 17.4, df = 4 (p = 0.002); $I^2 = 77.0\%$; Test for overall effect: z = 0.50 (p = 0.615)

Figure S4: Forest plot of the effect of shift workers compared to day workers on all-cause mortality minimal analysis



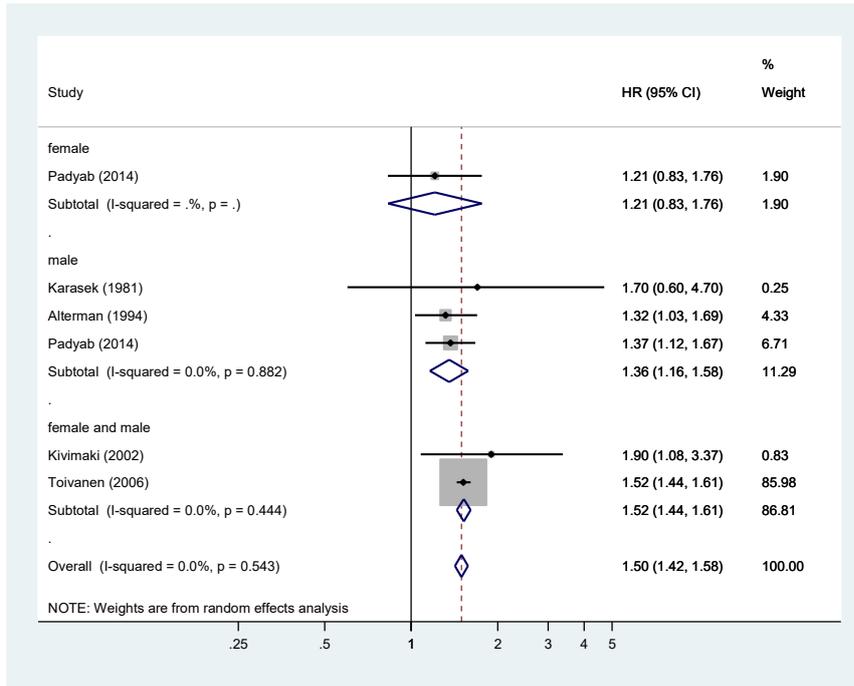
male Heterogeneity: $\text{Tau}^2 = 0.00$; test statistic = 1.88, df = 3 (p = 0.597); $I^2 = 0.0\%$; Test for overall effect: z = 0.59 (p = 0.555)
 Total Heterogeneity: $\text{Tau}^2 = 0.00$; test statistic = 2.15, df = 4 (p = 0.707); $I^2 = 0.0\%$; Test for overall effect: z = 0.41 (p = 0.683)

Figure S5: Forest plot of the effect of job insecurity compared to no job insecurity on all-cause mortality minimal analysis



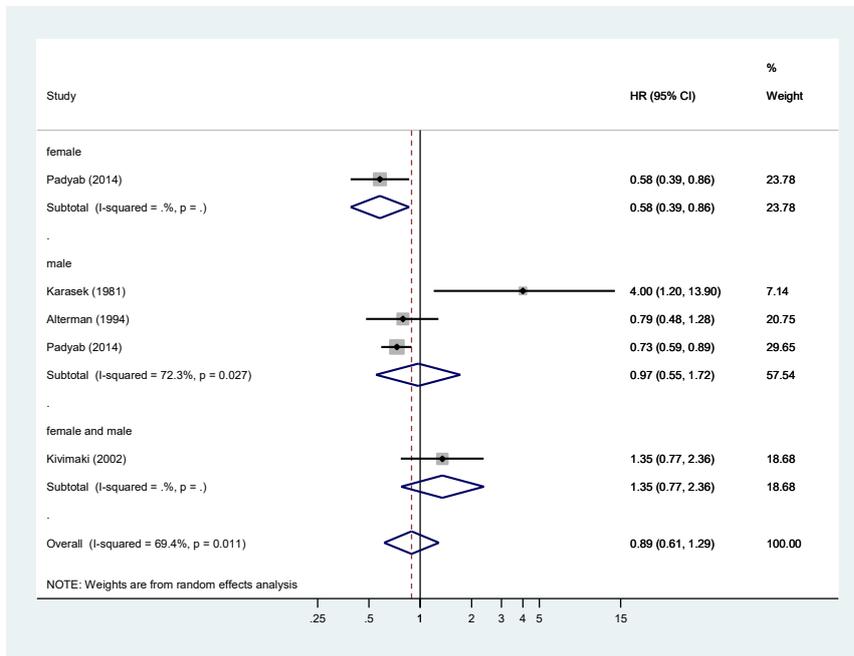
female and male Heterogeneity: $\tau^2 = 0.32$; test statistic = 11.66, df = 2 ($p = 0.003$); $I^2 = 82.9\%$; Test for overall effect: $z = 1.29$ ($p = 0.196$)
 Total Heterogeneity: $\tau^2 = 0.09$; test statistic = 12.1, df = 4 ($p = 0.017$); $I^2 = 66.9\%$; Test for overall effect: $z = 1.62$ ($p = 0.104$)

Figure S6: Forest plot of the effect of low job control compared to high job control on CHD mortality minimal analysis



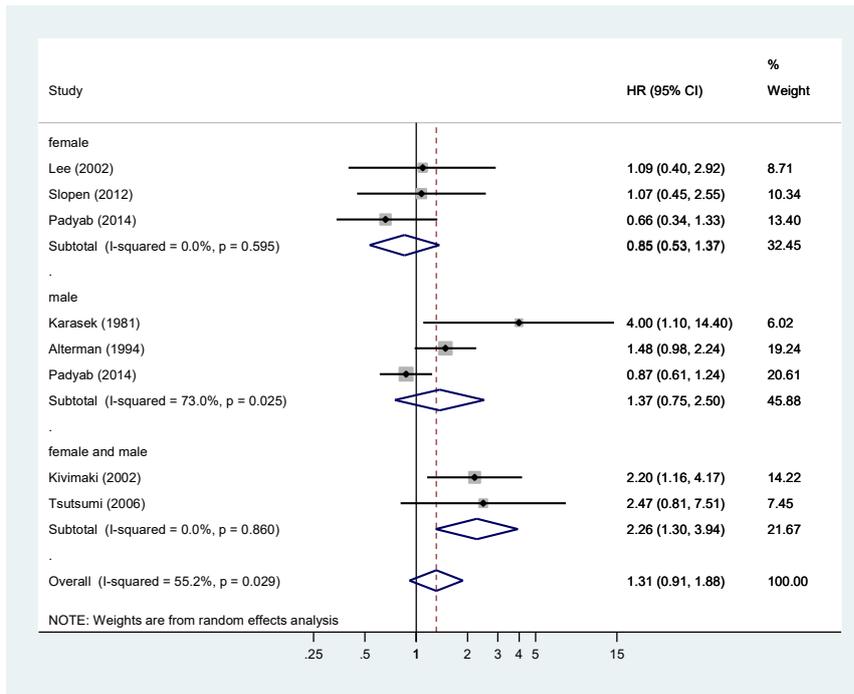
male Heterogeneity: $\text{Tau}^2 = 0.00$; test statistic = 0.25, $\text{df} = 2$ ($p = 0.882$); $I^2 = 0.0\%$; Test for overall effect: $z = 3.87$ ($p < 0.001$)
 female and male Heterogeneity: $\text{Tau}^2 = 0.00$; test statistic = 0.59, $\text{df} = 1$ ($p = 0.444$); $I^2 = 0.0\%$; Test for overall effect: $z = 14.9$ ($p < 0.001$)
 Total Heterogeneity: $\text{Tau}^2 = 0.00$; test statistic = 4.04, $\text{df} = 5$ ($p = 0.543$); $I^2 = 0.0\%$; Test for overall effect: $z = 15.3$ ($p < 0.001$)

Figure S7: Forest plot of the effect of high job demands compared to low job demands on CHD mortality minimal analysis



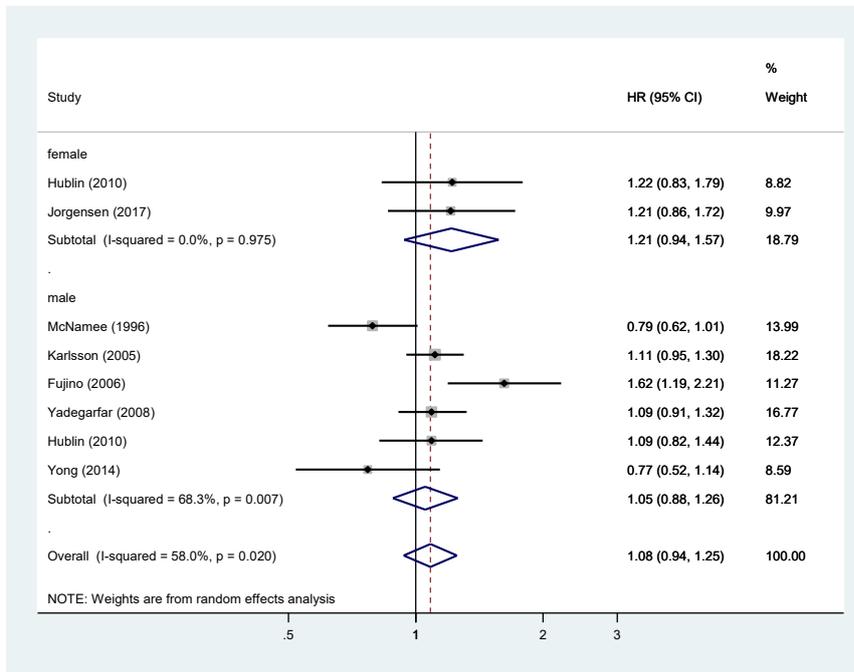
male Heterogeneity: $\text{Tau}^2 = 0.17$; test statistic = 7.22, $\text{df} = 2$ ($p = 0.027$); $I^2 = 72.3\%$; Test for overall effect: $z = 0.09$ ($p = 0.925$)
 Total Heterogeneity: $\text{Tau}^2 = 0.11$; test statistic = 13.1, $\text{df} = 4$ ($p = 0.011$); $I^2 = 69.4\%$; Test for overall effect: $z = 0.62$ ($p = 0.537$)

Figure S8: Forest plot of the effect of job strain compared to no job strain on CHD mortality minimal analysis



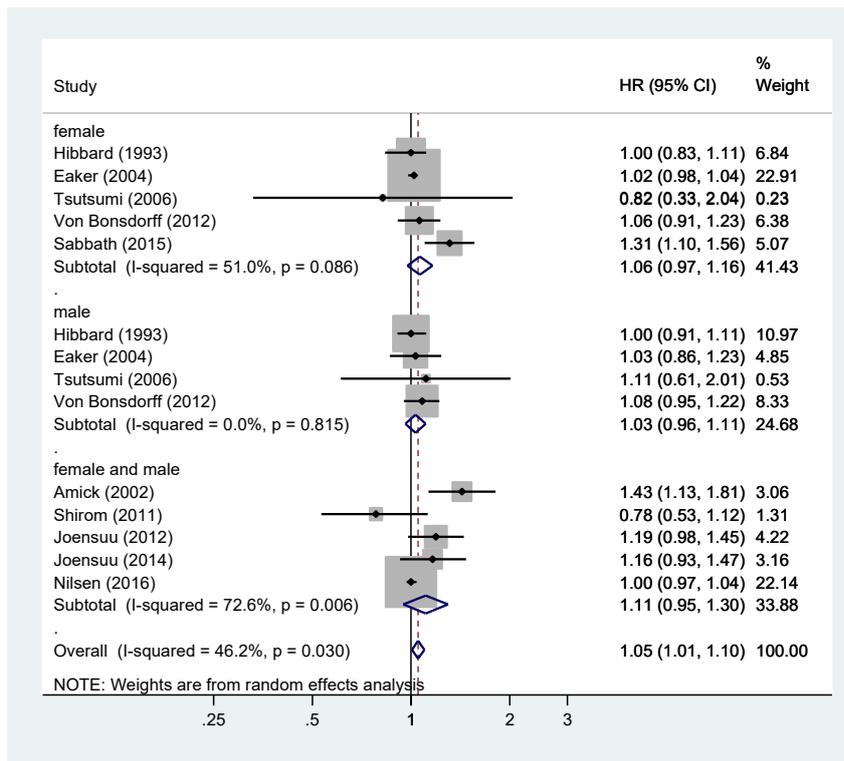
female Heterogeneity: $Tau^2 = 0.00$; test statistic = 1.04, df = 2 (p = 0.595); $I^2 = 0.0\%$; Test for overall effect: z = 0.66 (p = 0.508)
 male Heterogeneity: $Tau^2 = 0.19$; test statistic = 7.42, df = 2 (p = 0.025); $I^2 = 73.0\%$; Test for overall effect: z = 1.02 (p = 0.307)
 female and male Heterogeneity: $Tau^2 = 0.00$; test statistic = 0.03, df = 1 (p = 0.860); $I^2 = 0.0\%$; Test for overall effect: z = 2.89 (p = 0.004)
 Total Heterogeneity: $Tau^2 = 0.13$; test statistic = 15.6, df = 7 (p = 0.029); $I^2 = 55.2\%$; Test for overall effect: z = 1.46 (p = 0.144)

Figure S9: Forest plot of the effect of shift workers compared to day workers on CHD mortality minimal analysis



female Heterogeneity: $Tau^2 = 0.00$; test statistic = 0.00, df = 1 (p = 0.975); $I^2 = 0.0\%$; Test for overall effect: z = 1.48 (p = 0.139)
 male Heterogeneity: $Tau^2 = 0.03$; test statistic = 15.8, df = 5 (p = 0.007); $I^2 = 68.3\%$; Test for overall effect: z = 0.58 (p = 0.563)
 Total Heterogeneity: $Tau^2 = 0.02$; test statistic = 16.7, df = 7 (p = 0.020); $I^2 = 58.0\%$; Test for overall effect: z = 1.08 (p = 0.282)

Figure S10: Forest plot of the effect of low job control compared to high job control on all-cause mortality multivariable-adjusted analysis



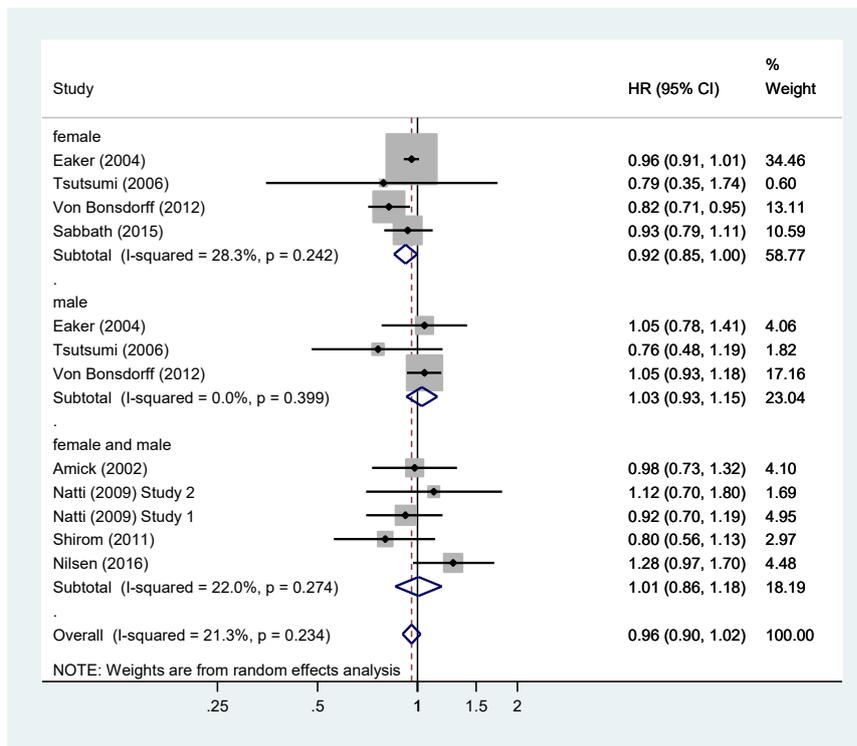
female Heterogeneity: $\text{Tau}^2 = 0.005$; test statistic = 8.16, df = 4 ($p = 0.086$); $I^2 = 51.0\%$; Test for overall effect: $z = 1.38$ ($p = 0.169$)

male Heterogeneity: $\text{Tau}^2 = 0.00$; test statistic = 0.94, df = 3 ($p = 0.815$); $I^2 = 0.0\%$; Test for overall effect: $z = 0.86$ ($p = 0.390$)

female and male Heterogeneity: $\text{Tau}^2 = 0.02$; test statistic = 14.6, df = 4 ($p = 0.006$); $I^2 = 72.6\%$; Test for overall effect: $z = 1.28$ ($p = 0.202$)

Total Heterogeneity: $\text{Tau}^2 = 0.002$; test statistic = 24.2, df = 13 ($p = 0.030$); $I^2 = 46.2\%$; Test for overall effect: $z = 2.23$ ($p = 0.026$)

Figure S11: Forest plot of the effect of high job demands compared to low job demands on all-cause mortality multivariable-adjusted analysis



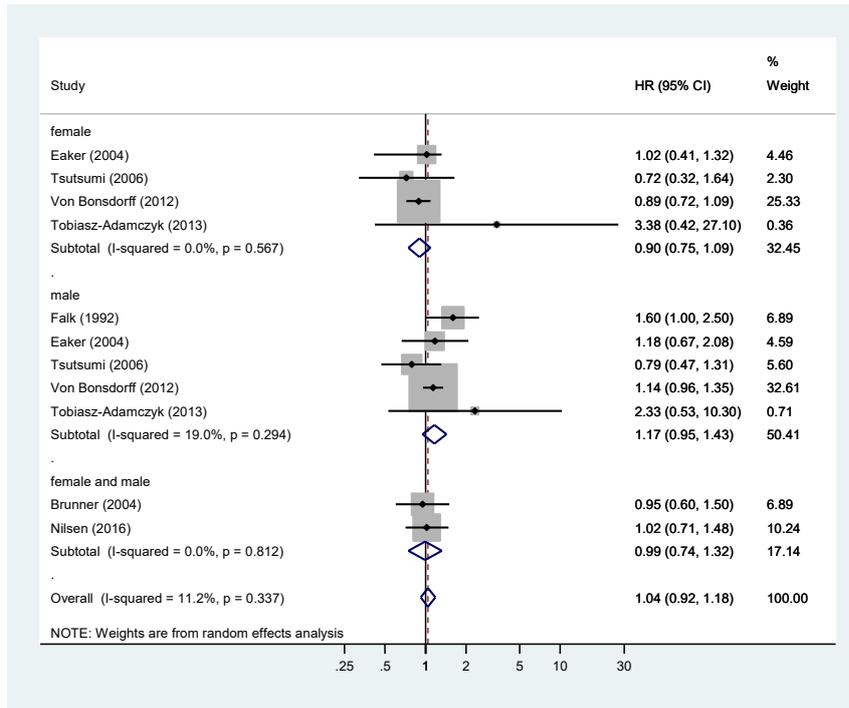
female Heterogeneity: $\text{Tau}^2 = 0.002$; Test statistic = 4.19, $\text{df} = 3$ ($p = 0.242$); $I^2 = 28.3\%$; Test for overall effect: $z = 2.00$ ($p = 0.045$)

male Heterogeneity: $\text{Tau}^2 = 0.00$; Test statistic = 1.84, $\text{df} = 2$ ($p = 0.399$); $I^2 = 0.0\%$; Test for overall effect: $z = 0.56$ ($p = 0.575$)

female and male Heterogeneity: $\text{Tau}^2 = 0.01$; Test statistic = 5.1, $\text{df} = 4$ ($p = 0.274$); $I^2 = 22.0\%$; Test for overall effect: $z = 0.08$ ($p = 0.933$)

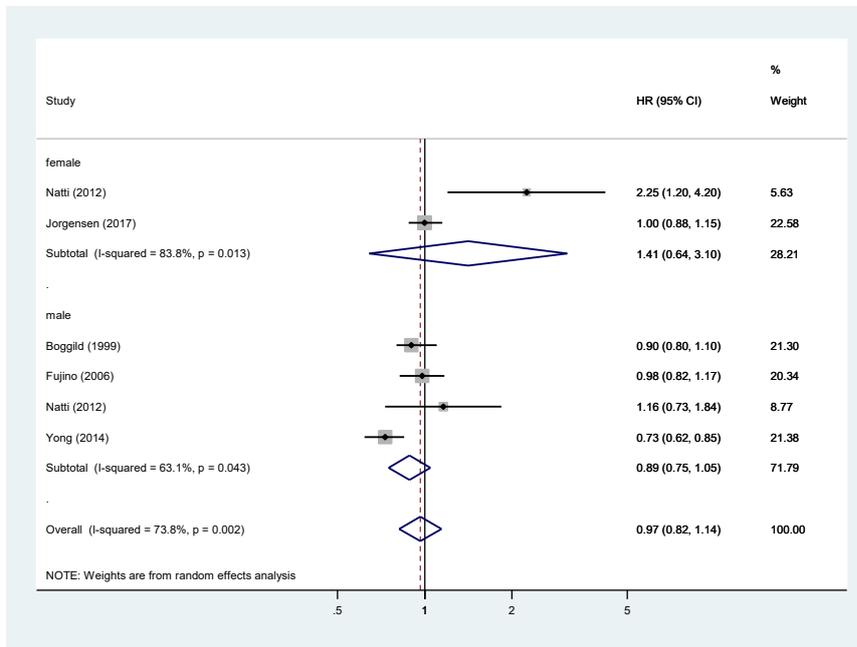
Total Heterogeneity: $\text{Tau}^2 = 0.002$; Test statistic = 14.0, $\text{df} = 11$ ($p = 0.234$); $I^2 = 21.3\%$; Test for overall effect: $z = 1.31$ ($p = 0.189$)

Figure S12: Forest plot of the effect of job strain compared to no job strain on all-cause mortality multivariable-adjusted analysis



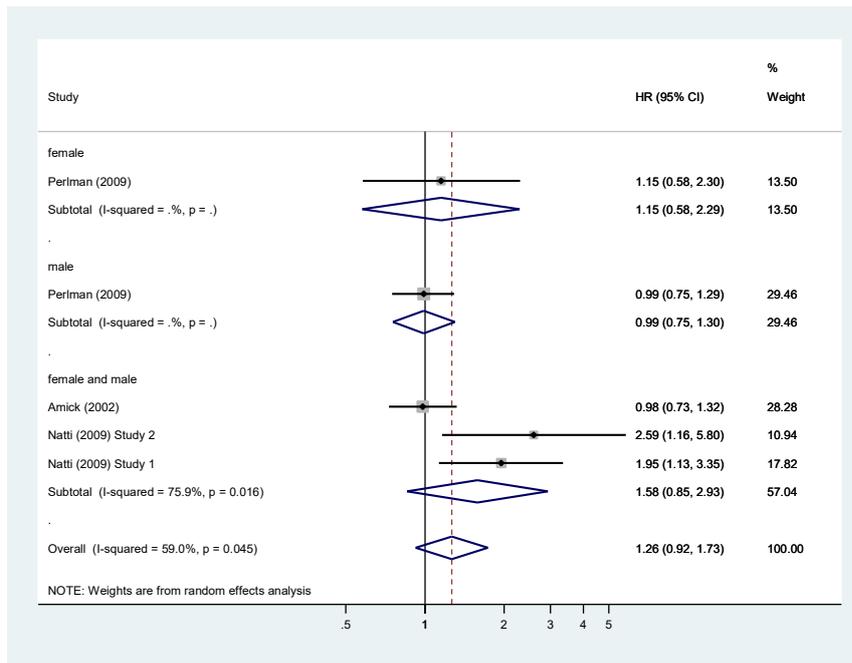
female Heterogeneity: $\text{Tau}^2 = 0.00$; Test statistic = 2.03, df = 3 (p = 0.567); $I^2 = 0.0\%$; Test for overall effect: z = 1.06 (p = 0.289)
 male Heterogeneity: $\text{Tau}^2 = 0.01$; Test statistic = 4.94, df = 4 (p = 0.294); $I^2 = 19.0\%$; Test for overall effect: z = 1.46 (p = 0.144)
 female and male Heterogeneity: $\text{Tau}^2 = 0.00$; Test statistic = 0.06, df = 1 (p = 0.812); $I^2 = 0.0\%$; Test for overall effect: z = 0.05 (p = 0.956)
 Total Heterogeneity: $\text{Tau}^2 = 0.005$; Test statistic = 11.3, df = 10 (p = 0.337); $I^2 = 11.2\%$; Test for overall effect: z = 0.66 (p = 0.511)

Figure S13: Forest plot of the effect of shift workers compared to day workers on all-cause mortality multivariable-adjusted analysis



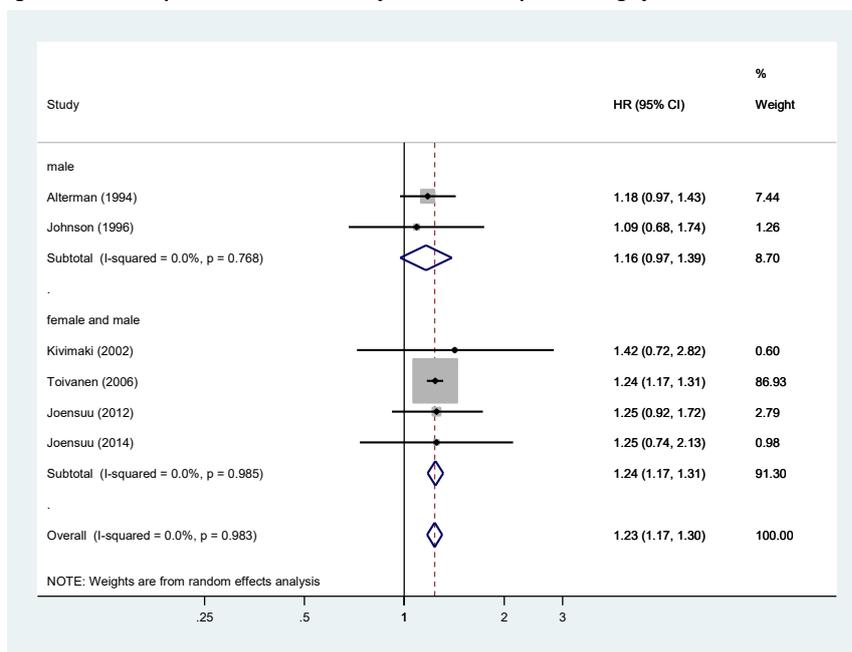
female Heterogeneity: $\text{Tau}^2 = 0.28$; test statistic = 6.16, df = 1 (p = 0.013); $I^2 = 83.8\%$; Test for overall effect: z = 0.86 (p = 0.389)
 male Heterogeneity: $\text{Tau}^2 = 0.02$; test statistic = 8.13, df = 3 (p = 0.043); $I^2 = 63.1\%$; Test for overall effect: z = 1.42 (p = 0.154)
 Total Heterogeneity: $\text{Tau}^2 = 0.03$; test statistic = 19.1, df = 5 (p = 0.002); $I^2 = 73.8\%$; Test for overall effect: z = 0.41 (p = 0.681)

Figure S14: Forest plot of the effect of job insecurity compared to no job insecurity on all-cause mortality multivariable-adjusted analysis



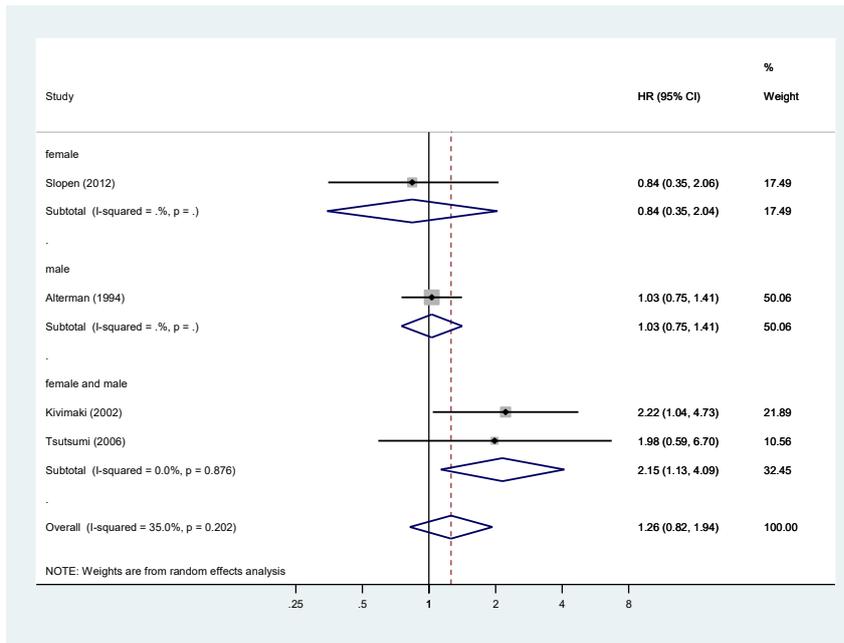
female and male Heterogeneity: $\tau^2 = 0.22$; Test statistic = 8.31, df = 2 (p = 0.016); $I^2 = 75.9\%$; Test for overall effect: z = 1.46 (p = 0.145)
 Total Heterogeneity: $\tau^2 = 0.07$; Test statistic = 9.75, df = 4 (p = 0.045); $I^2 = 59.0\%$; Test for overall effect: z = 1.45 (p = 0.148)

Figure S15: Forest plot of the effect of low job control compared to high job control on CHD mortality multivariable-adjusted analysis



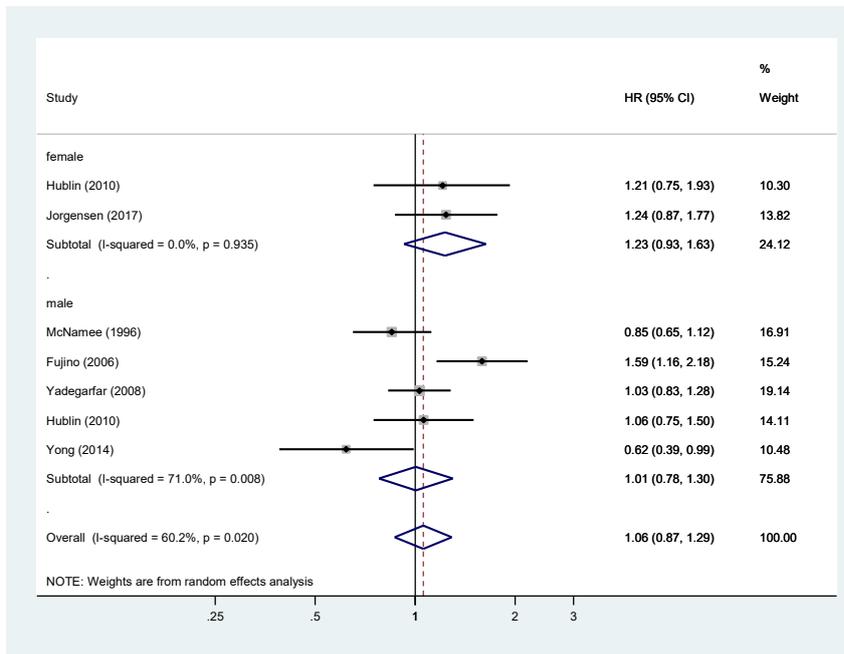
male Heterogeneity: $\tau^2 = 0.00$; Test statistic = 0.09, df = 1 (p = 0.768); $I^2 = 0.0\%$; Test for overall effect: z = 1.66 (p = 0.096)
 female and male Heterogeneity: $\tau^2 = 0.00$; Test statistic = 0.15, df = 3 (p = 0.985); $I^2 = 0.0\%$; Test for overall effect: z = 7.69 (p < 0.001)
 Total Heterogeneity: $\tau^2 = 0.00$; Test statistic = 0.70, df = 5 (p = 0.983); $I^2 = 0.0\%$; Test for overall effect: z = 7.84 (p < 0.001)

Figure S16: Forest plot of the effect of job strain compared to no job strain on CHD mortality multivariable-adjusted analysis



female and male Heterogeneity: $\tau^2 = 0.00$; Test statistic = 0.02, $df = 1$ ($p = 0.876$); $I^2 = 0.0\%$; Test for overall effect: $z = 2.33$ ($p = 0.020$)
 Total Heterogeneity: $\tau^2 = 0.07$; Test statistic = 4.62, $df = 3$ ($p = 0.202$); $I^2 = 35.0\%$; Test for overall effect: $z = 1.02$ ($p = 0.308$)

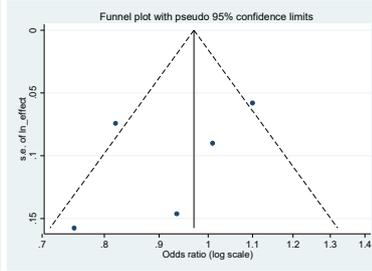
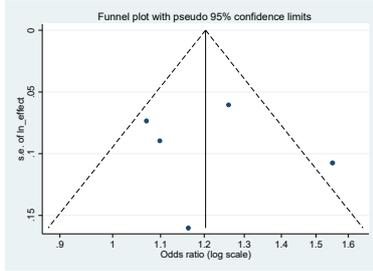
Figure S17: Forest plot of the effect of shift workers compared to day workers on CHD mortality multivariable-adjusted analysis



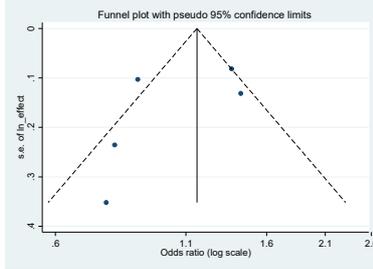
female Heterogeneity: $\tau^2 = 0.00$; test statistic = 0.01, $df = 1$ ($p = 0.935$); $I^2 = 0.0\%$; Test for overall effect: $z = 1.42$ ($p = 0.154$)
 male Heterogeneity: $\tau^2 = 0.06$; test statistic = 13.8, $df = 4$ ($p = 0.008$); $I^2 = 71.0\%$; Test for overall effect: $z = 0.04$ ($p = 0.967$)
 Total Heterogeneity: $\tau^2 = 0.04$; test statistic = 15.1, $df = 6$ ($p = 0.020$); $I^2 = 60.2\%$; Test for overall effect: $z = 0.56$ ($p = 0.578$)

Figure S18: Funnel plots of psychosocial work stressors and all-cause mortality minimally adjusted analysis

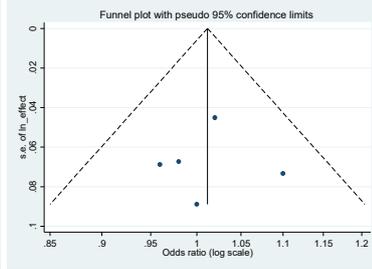
a) Job control (Egger's test p value = 0.825) b) Job demands (Egger's test p value = 0.343)



c) Job strain (Egger's test p value = 0.403)



d) Shift work (Egger's test p value = 0.928)



e) Job insecurity (Egger's test p value = 0.092)

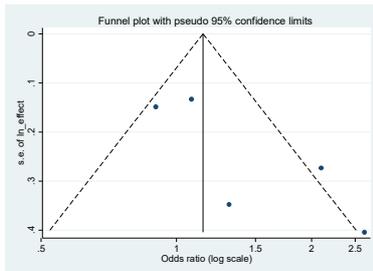
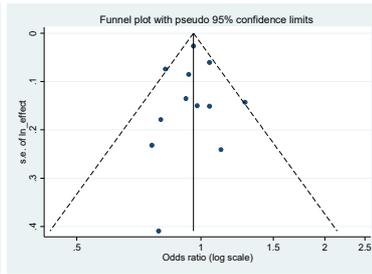
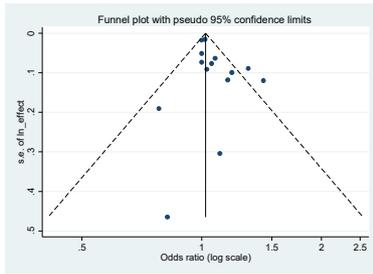
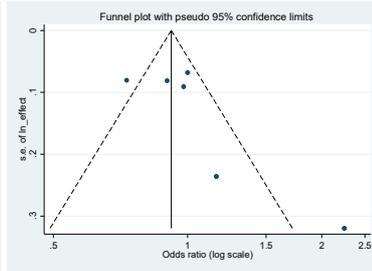
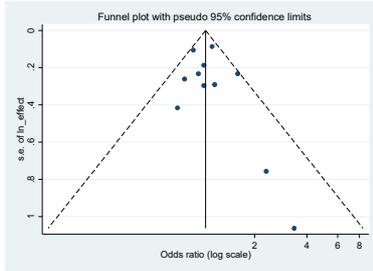


Figure S19: Funnel plots of psychosocial work stressors and all-cause mortality multivariable-adjusted analysis

a) Job control (Egger's test p value = 0.116) b) Job demands (Egger's test p value = 0.886)



c) Job strain (Egger's test p value = 0.532) d) Shift work (Egger's test p value = 0.217)



e) Job insecurity (Egger's test p value = 0.081)

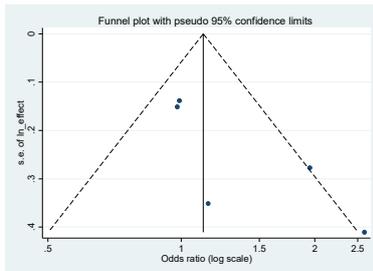
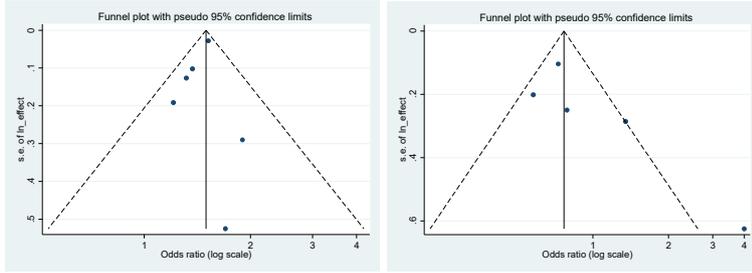


Figure S20: Funnel plots of psychosocial work stressors and CHD mortality minimally adjusted analysis

a) Job control (Egger's test p value = 0.450) b) Job demands (Egger's test p value = 0.171)



c) Job strain (Egger's test p value = 0.264) d) Shift work (Egger's test p value = 0.878)

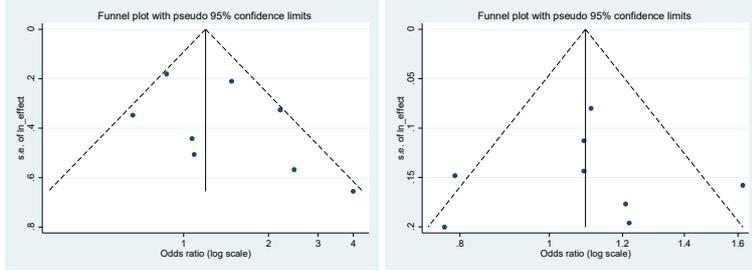
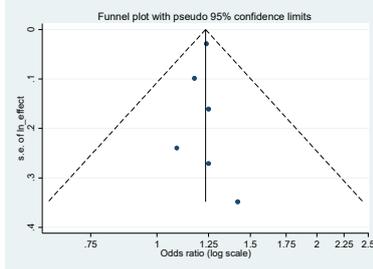
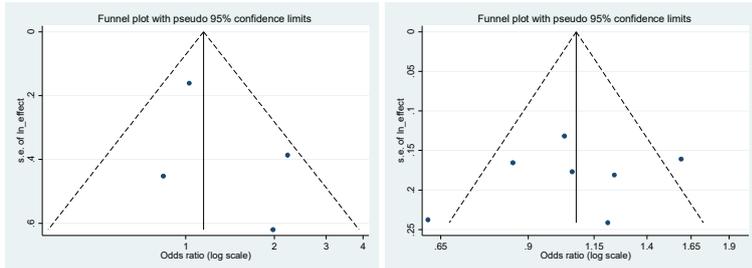


Figure S21: Funnel plots of psychosocial work stressors and CHD mortality multivariable-adjusted analysis

a) Job control (Egger's test p value = 0.678)



c) Job strain (Egger's test p value = 0.440) d) Shift work (Egger's test p value = 0.598)



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