

Overview of publications

Published articles

- De Wind A, Geuskens GA, Reeuwijk KG, Westerman MJ, Ybema JF, Burdorf A, Bongers PM, van der Beek AJ. "Pathways through which health influences early retirement: a qualitative study". *BMC Public Health* 2013;13:292.
- De Wind A, Ybema JF, Van der Beek AJ. Psychosocial job characteristics and older persons' early exit from the workforce. [Psychosociale werkkenmerken en vervroegde uittreding ouderen] *Economische Statistische Berichten* 2013;98(4655):152-155. [Dutch]
- De Wind A, Geuskens GA, Ybema JF, Blatter BM, Burdorf A, Bongers PM, van der Beek AJ. Health, job characteristics, skills, and social and financial factors in relation to early retirement - results from a longitudinal study in the Netherlands. *Scand J Work Environ Health* 2014;40(2):186-194.
- Leijten F, Van den Heuvel S, Geuskens G, Ybema JF, de Wind A, Burdorf A, Robroek S. How do older employees with health problems remain productive at work?: a qualitative study. *J Occup Rehabil* 2013 Mar;23(1):115-24.
- Leijten FR, van den Heuvel SG, Ybema JF, Robroek SJ, Burdorf A. Do work factors modify the association between chronic health problems and sickness absence among older employees? *Scand J Work Environ Health* 2013;39(5):477-85.
- Munderlein M, Ybema JF, Koster F. Happily ever after? Explaining turnover and retirement intentions of older workers in the Netherlands, *Career Development International* 2013;18(6).
- Reeuwijk KG, de Wind A, Westerman MJ, Ybema JF, van der Beek AJ, Geuskens GA. "All those things together made me retire': qualitative study on early retirement among Dutch employees". *BMC Public Health* 2013;13:516.
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- van de Vijfeijke H, Leijten FR, Ybema JF, van den Heuvel SG, Robroek SJ, van der Beek AJ, Burdorf A, Taris TW. Differential effects of mental and physical health and coping style on work ability: a 1-year follow-up study among aging workers. *J Occup Environ Med* 2013;55(10):1238-43.
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- Leijten FR, van den Heuvel SG, Ybema JF, van der Beek AJ, Robroek SJ, Burdorf A. The influence of chronic health problems on work ability and productivity at work: a longitudinal study among older employees. *Scand J Work Environ Health* 2014;40(5):473-82.
- de Wind A, Geuskens GA, Ybema JF, Bongers PM, van der Beek AJ. The role of ability, motivation, and opportunity to work in the transition from work to early retirement - testing and optimizing the Early Retirement Model. *Scand J Work Environ Health* 2015 Jan;41(1):24-35.
- Leijten FR, van den Heuvel SG, van der Beek AJ, Ybema JF, Robroek SJ, Burdorf A. Associations of Work-Related Factors and Work Engagement with Mental and Physical Health: A 1-Year Follow-up Study Among Older Workers. *J Occup Rehabil* 2015 Mar;25(1):86-95.
- van der Meer L, Leijten FR, van den Heuvel SG, Ybema JF, de Wind A, Burdorf A, Geuskens GA. Company Policies on Working Hours and Night Work in Relation to Older Workers' Work Ability

and Work Engagement: Results From a Dutch Longitudinal Study with 2 Year Follow-Up. *J Occup Rehabil* 2016;26(2):182.

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- Sanders J, Blonk R, Geuskens G, de Grip A. Learning lags behind events; does training help older employees recover from perceived skills shortages? [Achter de feiten aan leren. Helpt scholing oudere werknemers te herstellen van kennistekorten? *Tijdschrift voor Arbeidsvraagstukken* 2015;31. [Dutch]
- Ybema JF, van der Meer L, Leijten FR. Longitudinal Relationships Between Organizational Justice, Productivity Loss, and Sickness Absence Among Older Employees. *Int J Behav Med* 2016;23(5):645-54.
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- Sewdas R, van der Beek AJ, de Wind A, van der Zwaan LGL, Boot CRL. Determinants of working until retirement compared to a transition to early retirement among older workers with and without chronic diseases: Results from a Dutch prospective cohort study. *Scand J Public Health* 2018;46(3):400-408.
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Other reports

Ybema JF, Geuskens G, van den Heuvel S. Sustainable employability of older persons: Results from the first STREAM measurement [Duurzame inzetbaarheid van ouderen: Resultaten van de eerste meting van STREAM]. 2011, TNO. [Dutch]

Van den Heuvel S, Ybema JF, Leijten FRM, De Wind A. Sustainable employability of older persons: results from the first two STREAM measurements [Duurzame inzetbaarheid van ouderen: Resultaten van de eerste twee metingen van STREAM]. 2012, TNO. [Dutch]

Ybema JF, Vos, F, Geuskens GA. Sustainable employability: from research to practical approaches [Duurzame inzetbaarheid: van onderzoek tot aanpak in de praktijk]. In: De Lange AH, Van der Heijden BIJM, editors. Sustainable employability of older employees: Best practices and interventions [Een leven lang inzetbaar? Duurzame inzetbaarheid op het werk: Interventies, best practices en integrale benaderingen]. Alphen aan de Rijn: Vakmedianet; 2013. p. 185-217. [Dutch]

Geuskens G, Van den Heuvel S, De Wind A, Leijten F. Study on Transitions in Employment, Ability and Motivation (STREAM): Overview of results [Study on Transitions in Employment, Ability and Motivation (STREAM): Overzicht van de resultaten]. TNO, 2014. [Dutch]

Van den Heuvel S, Leijten F, De Vroome E, Geuskens G. The relative contribution of determinants of sustainable employability among ageing workers: STREAM analysis 2010-2013 [Het relatieve belang van determinanten van duurzame inzetbaarheid bij oudere werknemers: Integrale analyses STREAM 2010-2013]. TNO, 2016 [Dutch]

Van de Meerakker, S. The Planned Retirement Age of Self-Employed and Employees. Master thesis Leiden University, Faculty Governance and Global Affairs, 2017.

Van den Heuvel S, Van Dam L, Oude Hengel K. Quality of work – effect on early retirement [Kwaliteit van werk – invloed op vervroegde uitstroom]. In: Niks I, Sanders J, Van den Heuvel S, Venema A, editors. Sustainable employability in the Netherlands [Duurzame inzetbaarheid in Nederland]. Leiden: TNO, 2018. [Dutch]

Bom J, Bakx P, Schut F, Van Doorslaer E. Health effects of caring for and about parents and spouses. Netspar Academic Series, 2018.

Damman M, Zwier D, Van den Heuvel SG. Differences in retirement preferences between the self-employed and employees: Do job characteristics play an explanatory role? Netspar Design Paper 154, 2020.

Van den Heuvel S, Koopmans L. Duurzame Inzetbaarheid – Wat is de invloed van factoren als werk, gezondheid, kennis en vaardigheden, motivatie en financiën? Leiden, TNO, 2020.

Newsletters

[No 1 - 2013 June; Introduction](#)

[No 2 - 2013 September; Qualitative studies](#)

[No 3 - 2014 January; Transitions out of work](#)

[No 4 - 2014 June; Employment transitions and health](#)

[No 5 - 2014 September; Personal resources and sustainable employability](#)

[No 6 - 2015 March; Mobility](#)

[No 7 - 2015 November; New PhD projects](#)

[No 8 - 2016 April; The fifth wave/transitions](#)

[No 9 - 2016 August; Wellbeing at work conference](#)

[No 10 - 2017 March; Mental retirement, employability low skilled workers](#)

[No 11 - 2017 June; Introducing CODI: A new cohort study](#)

[No 12 – 2017 December; Working beyond the retirement age](#)

[No 13 – 2018 April; Working with a chronic disease](#)

[No 14 - 2018 September; Health and working longer](#)

[No 15 – 2019 Mei; Sustainable Employability in the Netherlands](#)

[No 16 - 2019 August; Multiple job holding](#)

Published articles

De Wind A, Geuskens GA, Reeuwijk KG, Westerman MJ, Ybema JF, Burdorf A, Bongers PM, van der Beek AJ. "Pathways through which health influences early retirement: a qualitative study". BMC Public Health 2013;13:292.

Background

Due to the aging of the population, there is a societal need for workers to prolong their working lives. In the Netherlands, many employees still leave the workforce before the official retirement age of 65. Previous quantitative research showed that poor self-perceived health is a risk factor of (non-disability) early retirement. However, little is known on how poor health may lead to early retirement, and why poor health leads to early retirement in some employees, but not in others. Therefore, the present qualitative study aims to identify in which ways health influences early retirement.

Methods

Face-to-face semi-structured interviews were conducted with 30 employees (60-64 years) who retired before the official retirement age of 65. Participants were selected from the Study on Transitions in Employment, Ability and Motivation. The interviews were transcribed verbatim, a summary was made including a timeline, and the interviews were open coded.

Results

In 15 of the 30 persons, health played a role in early retirement. Both poor and good health influenced early retirement. For poor health, four pathways were identified. First, employees felt unable to work at all due to health problems. Second, health problems resulted in a self-perceived (future) decline in the ability to work, and employees chose to retire early. Third, employees with health problems were afraid of a further decline in health, and chose to retire early. Fourth, employees with poor health retired early because they felt pushed out by their employer, although they themselves did not experience a reduced work ability. A good health influenced early retirement, since persons wanted to enjoy life while their health still allowed to do so. The financial opportunity to retire sometimes triggered the influence of poor health on early retirement, and often triggered the influence of good health. Employees and employers barely discussed opportunities to prolong working life.

Conclusions

Poor and good health influence early retirement via several different pathways. To prolong working life, a dialogue between employers and employees and tailored work-related interventions may be helpful.

Data

Qualitative interviews

Link:

[PMID: 23551994](#)

De Wind A, Ybema JF, Van der Beek AJ. Psychosocial job characteristics and older persons' early exit from the workforce. [Psychosociale werkkenmerken en vervroegde uittreding ouderen] *Economische Statistische Berichten* 2013;98(4655):152-155. [Dutch]

Abstract

A longitudinal study with one year follow-up among older employees shows that psychosocial job characteristics are of influence on early exit from the workforce to disability pension, unemployment, and early retirement. Physical load is not of influence on these routes of exit from the workforce.

In Dutch:

[Een longitudinale studie met een follow-up van één jaar onder oudere werknemers laat zien dat psychosociale werkkenmerken van invloed zijn op vervroegde uitstroom uit werk via arbeidsongeschiktheid, werkloosheid en vroegpensioen. Fysieke belasting heeft geen invloed op deze routes van vervroegde uitstroom uit werk.]

Data

T1+T2

Link:

[Economisch Statistische Berichten](#)

De Wind A, Geuskens GA, Ybema JF, Blatter BM, Burdorf A, Bongers PM, van der Beek AJ. Health, job characteristics, skills, and social and financial factors in relation to early retirement - results from a longitudinal study in the Netherlands. *Scand J Work Environ Health* 2014;40(2):186-194.

Objectives

This study aimed to investigate the relative contribution of health, job characteristics, skills and knowledge, and social and financial factors to the transition from work to (non-disability) early retirement.

Methods

Employees aged 59-63 years (N=2317) were selected from the Study on Transitions in Employment, Ability and Motivation in the Netherlands (STREAM). Individual characteristics, health, job characteristics, skills and knowledge, and social and financial factors were measured using a questionnaire at baseline. Information on early retirement was derived from the one-year follow-up questionnaire. Logistic regression analyses were used to identify predictors of early retirement. Population Attributable Fractions (PAF) were calculated.

Results

Older age [odds ratio (OR) 1.79], poor physical health (OR 1.78), a positive attitude of the partner with respect to early retirement (OR 3.85), and the financial possibility to stop working before the age of 65 (OR 10.2) predicted the transition to early retirement, whereas employees that reported high appreciation at work (OR 0.58) and higher focus on development of skills and knowledge (OR 0.54) were less likely to retire early. PAF were 0.75 for the financial possibility to stop working, 0.43 for a positive attitude of the partner with respect to early retirement, 0.27 for low appreciation at work, 0.23 for a low focus on development, and 0.21 for poor health.

Conclusions: The financial possibility to stop working before the age of 65 importantly contributes to early retirement. In the context of rapidly diminishing financial opportunities to retire early in the Netherlands, the prolongation of working life might be promoted by workplace health promotion and disability management, and work-related interventions focusing on appreciation and the learning environment.

Data

T1+T2

Link

[PMID: 24132500](#)

Leijten F, Van den Heuvel S, Geuskens G, Ybema JF, de Wind A, Burdorf A, Robroek S. How do older employees with health problems remain productive at work?: a qualitative study. *J Occup Rehabil* 2013 Mar;23(1):115-24.

Purpose The goal of this qualitative study was to gain insight into how older employees remain productive at work in spite of health problems.

Methods Twenty-six semi-structured telephone interviews were conducted with older employees, 46–63 years of age, who reported a poor health in the Study on Transitions in Employment, Ability, and Motivation. Demographic, health, and work information was gathered, followed by information on adjustments made in response to health problems. Inductive and deductive analyses were done independently by two researchers.

Results Four pathways through which poor health could influence productivity were identified: (1) poor health did not influence productivity; (2) poor health created a temporary imbalance in demands and external and internal resources after which adjustments were made and productivity was maintained; (3) adjustments were made in response to an imbalance, but productivity remained reduced; and (4) no adjustments were made and productivity was reduced. Whether and which adjustments occurred was influenced by factors in various domains, such as: visibility of the problem (health), autonomy (work-related), support (relational), and the ability to ask for help (personal). Sustainable productivity was influenced by internal factors that enhanced or hindered the creation of a balance, and by whether appropriate adjustments were made.

Conclusions The influence that health can have on productivity depends on the individuals' unique imbalance and personal disposition. Helpful a priori work place characteristics and personal well-being should be promoted so that a balance between demands and resources can be found in times of poor health.

Data

Qualitative interview study (purposeful participant selection on T1 & T2)

Link:

[PMID: 23054226](https://pubmed.ncbi.nlm.nih.gov/23054226/)

Leijten FR, van den Heuvel SG, Ybema JF, Robroek SJ, Burdorf A. Do work factors modify the association between chronic health problems and sickness absence among older employees? *Scand J Work Environ Health* 2013;39(5):477-85.

Objectives

The aim of this study was to (i) assess how common chronic health problems and work-related factors predict sickness absence and (ii) explore whether work-related factors modify the effects of health problems on sickness absence.

Methods

A one-year longitudinal study was conducted among employed persons aged 45-64 years from the Study on Transitions in Employment, Ability and Motivation (N=8984). The presence of common chronic health problems and work-related factors was determined at baseline and self-reported sickness absence at one-year follow-up by questionnaire. Multinomial multivariate logistic regression analyses were conducted to assess associations between health, work factors, and sickness absence, and relative excess risk due to interaction (RERI) techniques were used to test effect modification.

Results

Common health problems were related to follow-up sickness absence, most strongly to high cumulative sickness absence (>9 days per year). Baseline psychological health problems were strongly related to high sickness absence at follow-up [odds ratio (OR) 3.67, 95% confidence interval (95% CI) 2.80-4.82]. Higher job demands at baseline increased the likelihood of high sickness absence at follow-up among workers with severe headaches [RERI 1.35 (95% CI 0.45-2.25)] and psychological health problems [RERI 3.51 (95% CI 0.67-6.34)] at baseline. Lower autonomy at baseline increased the likelihood of high sickness absence at follow-up among those with musculoskeletal [RERI 0.57 (95% CI 0.05-1.08)], circulatory [RERI 0.82 (95% CI 0.00-1.63)], and psychological health problems [RERI 2.94 (95% CI 0.17-5.70)] at baseline.

Conclusions

Lower autonomy and higher job demands increased the association of an array of common chronic health problems with sickness absence, and thus focus should be placed on altering these factors in order to reduce sickness absence and essentially promote sustainable employability.

Data

T1+T2

Link:

[PMID: 23440271](#)

Münderlein M, Ybema JF, Koster F, Happily ever after? Explaining turnover and retirement intentions of older workers in the Netherlands, *Career Development International* 2013;18(6).

Purpose

This study aims to provide the following empirical and theoretical contributions to the literature. First, the study provides an empirical test of theories proposed in the literature stating that turnover and retirement (two kinds of work withdrawal) involve different employee decisions. Second, it aims at providing a more general theoretical framework understanding turnover and retirement intentions integrating insights from different theories.

Design/methodology/approach

Research hypotheses are tested using the Study on Transitions in Employment, Ability and Motivation (STREAM). This dataset includes information from approximately 15,000 respondents in the Netherlands. Respondents between the age of 45 and 64 were the target group in order to model transitions in the labour market for older workers. This dataset provides a unique opportunity to test turnover and retirement intentions.

Findings

First, the results show that personal characteristics such as income, age or health add more to the explanation of retirement intentions compared to turnover intentions and that work characteristics provide a better explanation of the turnover intention compared to retirement intention. Secondly, by focusing more closely on retirement intentions, the results show that organizational motivators can increase older workers labour market participation.

Data

T1

Link

[Emerald](#)

Reeuwijk KG, de Wind A, Westerman MJ, Ybema JF, van der Beek AJ, Geuskens GA. "All those things together made me retire": qualitative study on early retirement among Dutch employees". *BMC Public Health* 2013;13:516.

Background

Due to the aging of the population and, subsequently, higher pressure on public finances, there is a need for employees in many European countries to extend their working lives. Factors predicting early retirement have been identified in quantitative research, but little is known on why and how these factors influence early retirement. Therefore, the present quantitative study aimed to explore which factors influence retirement before the age of 65 in Dutch employees, and why and how these factors influence early retirement. Focus was on non-health related factors.

Methods

A qualitative study among 30 employees (60-64 years) who retired before the age of 65 was performed by means of face-to-face interviews. Participants were selected from the Study on Transitions in Employment, Ability and Motivation (STREAM).

Results

For most employees, a combination of factors played a role in the transition from work to early retirement, and the specific factors involved differed between individuals. Participants reported various factors that pushed towards early retirement ('push factors'), including organizational changes at work, conflicts at

work, high work pressure, high physical job demands, and insufficient use of their skills and knowledge by others in the organization. Employees who reported such push factors towards early retirement often felt unable to find another job. Factors attracting towards early retirement ('pull factors') included the wish to do other things outside of work, enjoy life, have more flexibility, spend more time with a spouse or grandchildren, and care for others. In addition, the financial opportunity to retire early played an important role. Factors influenced early retirement via changes in the motivation, ability and opportunity to continue working or retire early.

Conclusion

To support the prolongation of working life, it seems important to improve the fit between the physical and psychosocial job characteristics on the one hand, and the abilities and wishes of the employee on the other hand. Alongside improvements in the work environment that enable and motivate employees to prolong their careers, a continuous dialogue between the employer and employee on the (future) person-job fit and tailored interventions might be helpful.

Data

Qualitative interviews

Link:

[PMID: 23714371](#)

Sanders J, Van Wijk E, Boneschansker O, Ybema JF. From employment to employment mobility among low educated persons aged 45 and above [Van baan naar baanmobiliteit bij laagopgeleide 45-plussers]. *Tijdschrift voor Arbeidsvraagstukken* 2012;28:474-490. [Dutch]

Abstract

Continued employment is an important challenge for lower educated persons aged 45 and above. Job changes are a meaningful and sometimes necessary strategy for continued employment. Voluntary external job-job mobility is rare among lower educated persons aged 45 and above. In this report the central question is whether increasing confidence in ability (self-efficacy) to find a new employer is important for stimulating voluntary external mobility among lower educated employees aged 45 to 64. To answer this question we use data of 11,987 employees aged 45 to 64, of which 3,212 were had a lower education. The data come from the Study on Transitions in Employment, Ability and Motivation (STREAM). It appears that confidence in ones own ability is positively related to the intention to change jobs and with actual job changes. Higher educated pesons aged 45 and above appear to score higher in both confidence in own ability and the intention to change jobs. The association between both concepts however does not differ for lower and higher educated persons. This finding suggests that confidence among lower educated employees aged 45 and above in successful job-job transitions could lead to an increase in voluntary external mobility. An important further research question is then if such mobility leads to a less susceptible position in the labor market.

In Dutch:

[Langer doorwerken vormt een belangrijke uitdaging voor laagopgeleide 45-plussers. Verandering van baan is daarbij een zinvolle, soms zelfs noodzakelijke, strategie. Vrijwillige externe mobiliteit is echter onder laagopgeleide 45-plussers zeldzaam. In deze bijdrage staat de vraag centraal of de versterking van vertrouwen in eigen kunnen (self-efficacy) bij het vinden van een nieuwe werkgever een aangrijpingspunt is voor bevordering van vrijwillige externe mobiliteit onder laagopgeleide 45- tot 64-jarige werknemers. Om de vraag te beantwoorden gebruiken we data van 11.987 werknemers van 45 tot 64 jaar, van wie er 3.212 laagopgeleid zijn. De data zijn afkomstig van de Study on Transitions in Employment, Ability and Motivation (STREAM). Uit het onderzoek blijkt dat vertrouwen in eigen kunnen een positief verband heeft met zowel de intentie tot baanverandering als met daadwerkelijke baanverandering. Hoger opgeleide 45-plussers blijken hoger te scoren op zowel vertrouwen in eigen kunnen als op intentie tot baanverandering. De relatie tussen beide concepten verschilt echter niet tussen laag- en hoger opgeleiden. Deze bevinding impliceert dat versterking van het vertrouwen bij laagopgeleide 45-plussers in een succesvolle baan-baantransitie kan leiden tot een versterking van de vrijwillige externe mobiliteit. Een belangrijke vervolgvraag is dan of die mobiliteit ook tot een minder kwetsbare arbeidsmarktpositie leidt.]

Data

T1+T2

Link

van de Vijfeijke H, Leijten FR, Ybema JF, van den Heuvel SG, Robroek SJ, van der Beek AJ, Burdorf A, Taris TW. Differential effects of mental and physical health and coping style on work ability: a 1-year follow-up study among aging workers. *J Occup Environ Med* 2013;55(10):1238-43.

Objective

This study examines whether mental and physical health relate differently to work ability and whether these associations vary with coping style.

Methods

A 1-year longitudinal study was conducted among 8842 employees aged 45 to 64 years from the Study on Transitions in Employment, Ability and Motivation. On-line questionnaires measured self-perceived mental and physical health at baseline and coping and work ability at follow-up. The data were analyzed using hierarchical regression analysis.

Results

Active coping and good mental and especially physical health predicted high work ability at follow-up. Avoidant coping was negatively related to work ability. Seeking support was unrelated to work ability. interaction effects of coping and health on work ability were weak.

Conclusions

Successful coping styles and good health predict high work ability, and thus, promoting such factors can help improve sustainable employability.

Data

T1+T2

Link

[PMID: 24064781](#)

Ybema JF, Geuskens GA, van den Heuvel SG, de Wind A, Leijten FRM, Joling C, Blatter BM, Burdorf A, van der Beek AJ, Bongers PM. Study on Transitions in Employment, Ability and Motivation (STREAM): The design of a four-year longitudinal cohort study among 15,118 persons aged 45 to 64 years. *British Journal of Medicine and Medical Research* 2014; 4(6):1383-1399.

Aims

The objective of the Study on Transitions in Employment, Ability and Motivation (STREAM) is to acquire knowledge on determinants of transitions in employment and work productivity among persons aged 45-64 years.

Research framework

A research framework was developed, in which transitions in employment (e.g. leaving the workforce, entering the workforce, job change) and work productivity are influenced by the following determinants: health, job characteristics, skills and knowledge, social factors, and financial factors. Central explanatory variables in the framework are the ability to work, the motivation to work, and the opportunity to work.

Study Design

STREAM is a prospective cohort study among 12,055 employees, 1,029 self-employed persons, and 2,034 non-working persons, all aged 45 to 64 years at baseline. The study sample was stratified by age and employment status (employed, self-employed, non-working), and was drawn from an existing internet panel. The baseline measurement was carried out in 2010 (response: 70%), and with yearly follow-up measurements in 2011 (response: 82%), 2012 (response: 80%), and 2013. At each wave, participants fill out an online questionnaire covering all aspects of the research framework.

Place and Duration of Study

The Netherlands, between October 2010 and December 2013.

Methodology

Quantitative data on all aspects of the research framework were assessed with an online questionnaire, qualitative data were assessed with interview studies, and the questionnaire data can be linked to register data at Statistics Netherlands for 89% of the participants.

Results: Transitions in employment between the first three waves of data among the participants are described.

Conclusion

STREAM will provide insight in the determinants of healthy and productive labour participation among persons aged 45 years and older, which will support the development of interventions prolonging working life in good health, while maintaining good work productivity.

Link

<http://sciencedomain.org/download>

Rob Gründemann, Jan Fekke Ybema & Jos Sanders. Work values of low-skilled older workers. [Werkwaarden van laagopgeleide oudere werknemers] Gedrag & Organisatie 2014;(27)2:117-138. [Dutch]

Abstract

Recently, the Dutch government raised the retirement age of workers in the Netherlands. In this study we focused on the work values of low-skilled older workers, the extent to which their jobs fulfill these values, and the effect of work values on the willingness of these workers to extend their working life. This study is based on a literature review and a secondary analysis on a large database of persons aged 45 and older (STREAM). The study shows that extrinsic work values are more important for low-skilled older workers, and intrinsic work values more relevant for high-skilled older workers. The most important work values for lowskilled older workers are fulfilled slightly more often than those of high-skilled older workers. The extent to which important work values are fulfilled in the jobs of low-skilled older workers is positively correlated with job satisfaction and with their own assessment of whether or not to continue working for another 12 months. Based on this research, we formulated recommendations for HR practices on the employability of low-skilled older workers.

In Dutch:

[Het kabinet heeft besloten om vanaf 2013 de AOW-leeftijd versneld te verhogen. Dit heeft tot gevolg dat werknemers in Nederland langer door zullen moeten werken. Dat lijkt moeilijker voor laagopgeleide werknemers dan voor hun hoger opgeleide collega's. In deze studie hebben we gekeken naar de werkwaarden van laagopgeleide oudere werknemers en deze vergeleken met die van middelbaar en hoogopgeleide oudere werknemers. We hebben gebruik gemaakt van een literatuurstudie en van secundaire analyse op basis van een grote database van personen van 45 jaar en ouder. Vastgesteld is dat oudere laagopgeleide werknemers extrinsieke werkwaarden belangrijker vinden dan oudere hoogopgeleide werknemers. Ook hebben wij geconstateerd dat de belangrijkste werkwaarden bij laagopgeleide oudere werknemers iets vaker in het werk vervuld worden. Laagopgeleide oudere werknemers blijken meer tevreden met hun werk en zijn beter in staat om te blijven werken naarmate (belangrijke) werkwaarden meer vervuld worden in hun werk. Voor de gewenste pensioenleeftijd is het belang van werkwaarden en de vervulling daarvan gering. Op basis van deze resultaten zijn aanbevelingen geformuleerd voor de HR-praktijk, gericht op de inzetbaarheid van laaggeschoolde oudere werknemers.]

Data

T1

Link

[TNO repository](#)

Leijten FR, van den Heuvel SG, Ybema JF, van der Beek AJ, Robroek SJ, Burdorf A. The influence of chronic health problems on work ability and productivity at work: a longitudinal study among older employees. Scand J Work Environ Health 2014;40(5):473-82.

Objectives:

This study aimed to assess the influence of chronic health problems on work ability and productivity at work among older employees using different methodological approaches in the analysis of longitudinal studies.

Methods:

Data from employees, aged 45-64, of the longitudinal Study on Transitions in Employment, Ability and Motivation was used (N=8411). Using three annual online questionnaires, we assessed the presence of

seven chronic health problems, work ability (scale 0-10), and productivity at work (scale 0-10). Three linear regression generalized estimating equations were used. The time-lag model analyzed the relation of health problems with work ability and productivity at work after one year; the autoregressive model adjusted for work ability and productivity in the preceding year; and the third model assessed the relation of incidence and recovery with changes in work ability and productivity at work within the same year.

Results:

Workers with health problems had lower work ability at one-year follow-up than workers without these health problems, varying from a 2.0% reduction with diabetes mellitus to a 9.5% reduction with psychological health problems relative to the overall mean (time-lag). Work ability of persons with health problems decreased slightly more during one-year follow-up than that of persons without these health problems, ranging from 1.4% with circulatory to 5.9% with psychological health problems (autoregressive). Incidence related to larger decreases in work ability, from 0.6% with diabetes mellitus to 19.0% with psychological health problems, than recovery related to changes in work ability, from a 1.8% decrease with circulatory to an 8.5% increase with psychological health problems (incidence-recovery). Only workers with musculoskeletal and psychological health problems had lower productivity at work at one-year follow-up than workers without those health problems (1.2% and 5.6%, respectively, time-lag).

Conclusions:

All methodological approaches indicated that chronic health problems were associated with decreased work ability and, to a much lesser extent, lower productivity at work. The choice for a particular methodological approach considerably influenced the strength of the associations, with the incidence of health problems resulting in the largest decreases in work ability and productivity at work.

Data

T1+T2+T3

Link

[PMID: 24973976](#)

de Wind A, Geuskens GA, Ybema JF, Bongers PM, van der Beek AJ. The role of ability, motivation, and opportunity to work in the transition from work to early retirement - testing and optimizing the Early Retirement Model. *Scand J Work Environ Health* 2015 Jan;41(1):24-35.

Objectives:

Determinants in the domains health, job characteristics, skills, and social and financial factors may influence early retirement through three central explanatory variables, namely, the ability, motivation, and opportunity to work. Based on the literature, we created the Early Retirement Model. This study aims to investigate whether data support the model and how it could be improved.

Methods:

Employees aged 58-62 years (N=1862), who participated in the first three waves of the Dutch Study on Transitions in Employment, Ability and Motivation (STREAM) were included. Determinants were assessed at baseline, central explanatory variables after one year, and early retirement after two years. Structural equation modeling was applied.

Results:

Testing the Early Retirement Model resulted in a model with good fit. Health, job characteristics, skills, and social and financial factors were related to the ability, motivation and/or opportunity to work (significant β range: 0.05-0.31). Lower work ability ($\beta=-0.13$) and less opportunity to work (attitude colleagues and supervisor about working until age 65: $\beta=-0.24$) predicted early retirement, whereas the motivation to work (work engagement) did not. The model could be improved by adding direct effects of three determinants on early retirement, ie, support of colleagues and supervisor ($\beta=0.14$), positive attitude of the partner with respect to early retirement ($\beta=0.15$), and not having a partner ($\beta=-0.13$).

Conclusions:

The Early Retirement Model was largely supported by the data but could be improved. The prolongation of working life might be promoted by work-related interventions focusing on health, work ability, the social work climate, social norms on prolonged careers, and the learning environment.

Data

T1+T2+T3

Link

[PMID: 25393088](#)

Leijten FR, van den Heuvel SG, van der Beek AJ, Ybema JF, Robroek SJ, Burdorf A. Associations of Work-Related Factors and Work Engagement with Mental and Physical Health: A 1-Year Follow-up Study Among Older Workers. *J Occup Rehabil* 2015 Mar;25(1):86-95.

Purpose

The goals of this study were to determine whether, among older employees, unfavourable physical and psychosocial work-related factors were associated with poorer mental and physical health and whether high work engagement buffered the associations between unfavourable work-related factors and poorer health. **Methods**

A 1-year longitudinal study with employed persons aged 45-64 was conducted within the Study on Transitions in Employment, Ability and Motivation (n = 8,837). Using an online questionnaire, work-related factors (physical: physical load; psychosocial: psychological job demands, autonomy, and support) and work engagement were measured at baseline and health at baseline and 1-year follow-up. General linear models were used to assess associations of work-related factors and work engagement with health. Tests of interaction terms assessed whether work engagement buffered the work-related factor-health associations. **Results**

Unfavourable psychosocial work-related factors at baseline were associated with poorer mental health at follow-up. Higher physical load, higher psychological job demands, and lower autonomy at baseline were associated with poorer physical health at follow-up. Higher work engagement at baseline was related to better physical and especially better mental health during the 1-year follow-up. Work engagement had a small effect on the associations between work-related factors and health. **Conclusions**

Among older employees, especially the promotion of a high work engagement and, to a lesser extent, favourable work-related factors can be beneficial for mental health in particular.

Data

T1+T2

Link

[PMID: 24928413](#)

van der Meer L, Leijten FR, van den Heuvel SG, Ybema JF, de Wind A, Burdorf A, Geuskens GA. Company Policies on Working Hours and Night Work in Relation to Older Workers' Work Ability and Work Engagement: Results From a Dutch Longitudinal Study with 2 Year Follow-Up. *J Occup Rehabil* 2016;26(2):182.

Purpose

To longitudinally investigate (1) whether lower work ability and work engagement predict the use of company policies on reduced working hours and exemption from evening/night work among older workers, and (2) whether using such policies subsequently contribute to higher work ability and work engagement. **Methods**

In total 6922 employees (45-64 years) participating in the first three waves of the Study on Transitions in Employment, Ability and Motivation were included. Participants yearly filled out an online questionnaire. Regression analyses were applied to study the influence of baseline work ability and work engagement on the incident use of policies during the first year of follow-up, and the incident use of these policies on work ability and work engagement during the second year of follow-up. **Results**

Employees with a higher work ability were less likely to start using the policy 'reduced working hours' [OR 0.91 (95 % CI 0.83-0.98)]. Starting to use this policy was in turn related to lower work ability 1 year later [B - 0.28 (95 % CI -0.47 to -0.08)]. Starting to use the policy 'exemption from evening/night work' was related to higher work engagement 1 year later [B 0.23 (95 % CI 0.07-0.39)]. **Conclusions**

Low work ability precedes the use of some company policies aiming to support sustainable employability of older workers. Further research is needed to explore whether company policies result in a (longstanding) improvement, or reduced deterioration, of older workers' employability.

Data

T1+T2+T3

Link[PMID: 26250870](#)

Leijten FR, de Wind A, van den Heuvel SG, Ybema JF, van der Beek AJ, Robroek SJ, Burdorf A. The influence of chronic health problems and work-related factors on loss of paid employment among older workers. *J Epidemiol Community Health* 2015;69(11):1058-65.

Background

With an ageing society and increasing retirement ages, it is important to understand how employability can be promoted in older workers with health problems. The current study aimed to determine whether (1) different chronic health problems predict transitions from paid employment to disability benefits, unemployment and early retirement, and (2) how work-related factors modify these associations.

Methods

Self-report questionnaire data was used from the Dutch longitudinal Study on Transitions in Employment, Ability and Motivation with 3 years of follow-up (2010-2013), among employees aged 45-64 years (N=8149). The influence of baseline chronic health problems and work-related factors on transitions from paid employment to disability benefits, unemployment and early retirement during follow-up was estimated in a competing risks proportional hazards model. Relative excess risk of transitions due to the interaction between chronic health problems and work-related factors was assessed.

Results

Severe headache, diabetes mellitus and musculoskeletal, respiratory, digestive and psychological health problems predicted an increased risk of disability benefits (HR range 1.78-2.79). Circulatory (HR=1.35) and psychological health problems (HR=2.58) predicted unemployment, and musculoskeletal (HR=1.23) and psychological health problems (HR=1.57) predicted early retirement. Work-related factors did not modify the influence of health problems on unemployment or early retirement. Psychosocial work-related factors, especially autonomy, modified the influence of health problems on disability benefits. Specifically, among workers with health problems, higher autonomy, higher support and lower psychological job demands reduced the risk of disability benefits by 82%, 49%, and 11%, respectively.

Conclusions

All health problems affected disability benefits to a similar extent, but psychological health problems especially predicted unemployment and early retirement. For older workers with health problems, promoting an optimal work environment has the potential to contribute to sustainable employment.

Data

T1+T2+T3+T4

Link[PMID: 26112957](#)

Dorenbosch L, Boneschansker O, Fermin B, Andriessen S, Sanders J, Geuskens G. Multi-jobbing as an employability strategy [Multi-jobbing als employability-strategie]. *Tijdschrift voor Arbeidsvraagstukken* 2015;31:165-185. [Dutch]

Abstract

Employees who hold multiple jobs are no exception on the Dutch labour market. However, little is known about the motives behind 'multi-jobbing'. This study addresses a qualitative exploration among twenty multi-jobbers of 45 years and older who recently made a transition from one job in paid employment to multiple jobs – either with multiple employers or in combination with self-employment. We examine whether multi-jobbing in a late career phase is a relevant alternative to regular job mobility which is far less common among older workers. We describe push and pull motives for making a transition toward multiple jobs that we found to characterize multi-jobbing as either an 'emergency situation', 'ideal situation' or a 'transition situation'. Furthermore, the multi-jobbers in this study were found to use their second job as a personal employability-strategy. We discuss multi-jobbing as late career labour market behaviour which averts the insecurities that come with job change.

In Dutch:

[Werkenden voor wie de werksituatie bestaat uit een combinatie van twee of meer banen, vormen geen uitzondering op de Nederlandse arbeidsmarkt. Toch weten we nog weinig over de motieven voor het combineren van meerdere banen – ofwel multi-jobbing. Dit artikel betreft een kwalitatieve verkenning onder twintig multi-jobbers van 45 jaar en ouder die recentelijk een transitie hebben gemaakt van één baan in loondienst naar meerdere banen in loondienst of een baan gecombineerd met een zzp-schap. Multi-jobbing als alternatieve (tussen)vorm van arbeidsmobiliteit is nog een erg onderbelicht onderzoeksthema en relevant voor werkenden in een latere loopbaanfase waarvoor reguliere baanmobiliteit veel minder vanzelfsprekend is. We beschrijven de diverse push- en pullmotieven voor het aangaan van een combinatiebaan of hybride baan die duiden op multi-jobbing als noodsituatie, ideaalsituatie of overgangssituatie. De studie maakt verder duidelijk dat een groot deel van de geïnterviewden een tweede baan bewust gebruikt als persoonlijke employability-strategie. We bediscussiëren multi-jobbing als arbeidsmarktgedrag dat in een latere loopbaanfase inspeelt op de onzekerheid die gepaard gaat met mobiliteit.]

Data

Qualitative interviews

Link

[Boom Lemma tijdschriften](#)

Sanders J, Blonk R, Geuskens G, de Grip A. Learning lags behind events; does training help older employees recover from perceived skills shortages? [Achter de feiten aan leren. Helpt scholing oudere werknemers te herstellen van kennistekorten? Tijdschrift voor Arbeidsvraagstukken 2015;31. [Dutch]

Abstract

Organizational and technological changes are occurring ever more rapidly, and employees are faced with increasing deficits in their knowledge. Because of this, not only is individual employability under pressure, but also the competitiveness and innovativeness of companies and institutions. Remedying or even preventing these knowledge deficits are therefore an important challenge for both employer and employee. The need to address these deficits is even more applicable for the vulnerable group of workers that are low skilled and older. Using data from more than 7,000 older workers who participated in the longitudinal STREAM panel study, this study shows that only substantial training contributes to the reduction of a knowledge deficit. Instructions at work and short courses do not. Between older workers with lower levels of education and intermediate or highly educated older workers and between older workers in stable organizations and older workers in unstable organizations were found in the contribution of substantial training to the reduction of knowledge deficits.

In Dutch:

[Organisatorische en technologische veranderingen volgen elkaar steeds sneller op. Werknemers zien zichzelf daardoor in toenemende mate geconfronteerd met tekorten aan kennis. Niet alleen de inzetbaarheid van werknemers, maar ook de concurrentiekracht en innovativiteit van bedrijven en instellingen staan daarmee onder druk. Het herstellen of zelfs voorkomen van kennistekorten is daarom een belangrijke uitdaging voor zowel werkgever als werknemer, zeker in zeer instabiele organisaties. Dat geldt mogelijk in versterkte mate voor de kwetsbare groep van laagopgeleide oudere werknemers. Dit artikel laat aan de hand van data, afkomstig van ruim 7.000 oudere werknemers (45-64 jaar) die deelnamen aan het longitudinale STREAM-onderzoek, zien dat alléén deelname aan substantiële leeractiviteiten bijdraagt aan het herstel van een kennistekort. Instructies op de werkplek en korte trainingen doen dat niet. Dat geldt voor zowel laagopgeleide oudere werknemers als voor middelbaar en hoger opgeleide oudere werknemers en dat geldt voor zowel oudere werknemers in stabiele organisaties als voor oudere werknemers in instabiele organisaties.]

Data

T1+T2+T3

Link

[Tijdschrift voor Arbeidsvraagstukken](#)

Ybema JF, van der Meer L, Leijten FR. Longitudinal Relationships Between Organizational Justice, Productivity Loss, and Sickness Absence Among Older Employees. *Int J Behav Med* 2016;23(5):645-54.

Purpose:

The aim of this study was to assess whether organizational justice lowers productivity loss and sickness absence, and whether there are reverse effects of productivity loss and sickness absence on organizational justice.

Method:

A longitudinal study with 2 years of follow-up was conducted among employed persons aged 45-64 years from the Study on Transitions in Employment, Ability and Motivation (STREAM). Participants (N = 7011) yearly filled out an online questionnaire. Structural equation modeling in LISREL was conducted to assess the longitudinal relationships between distributive justice of salary, distributive justice of appreciation, procedural justice, productivity loss, and sickness absence.

Results:

Both distributive justice of appreciation and procedural justice contributed to lower productivity loss and lower sickness absence at 1-year follow-up. Productivity loss increased perceptions of distributive justice of appreciation at 1-year follow-up, whereas sickness absence lowered both perceptions of distributive justice of appreciation and procedural justice at follow-up.

Conclusion:

Improving organizational justice lowers the risk of productivity loss and sickness absence and may be a useful tool to improve the productivity of organizations.

Data

T1+T2+T3

Link

[PMID: 26915029](#)

de Wind A, van der Pas S, Blatter BM, van der Beek AJ. A life course perspective on working beyond retirement-results from a longitudinal study in the Netherlands. *BMC Public Health* 2016(10);16:499.

Background

There is a societal need that workers prolong their working lives. By adopting a life course perspective, this study aimed to investigate the influence of work motives and motivation, health, job characteristics, skills, and financial and social situation on working beyond retirement, and differences between 'on time' and 'off time' retirees (retirement age 65 and <65 years, respectively).

Methods

Retirees aged 57 to 67 years (N = 1,054) who participated in the Dutch Study on Transitions in Employment, Ability and Motivation were included in this study. Participants filled out a questionnaire in 2010, 2011, 2012, and 2013. Predictors of working beyond retirement were identified using logistic regression analyses, and stratified analyses were performed to investigate differences between 'off time' and 'on time' retirees.

Results

High work engagement (OR = 1.3), good physical health (OR = 1.8), poor financial situation (OR = 2.4), and voluntary work (OR = 1.5) predicted working beyond retirement. For 'off time' retirees, no financial possibility to retire early (OR = 1.8) and not having a partner (OR = 1.9) predicted working beyond retirement. 'On time' retirees reporting more support at work (OR = 0.7) and without the financial possibility to retire early (OR = 0.5), worked beyond retirement less often.

Conclusions

The results indicated that especially the motivation to work, physical health and the financial situation were the most relevant aspects with regard to working beyond retirement, which supports the idea that the principle of 'human agency' of the life course perspective is useful to understand factors that impact working beyond retirement. Most aspects of the life course principles of 'linked lives' and 'timing' seemed to be less relevant.

Data

T1+T2+T3+T4

Link

[PMID: 27287303](#)

De Wind A, Leijten FR, Hoekstra T, Geuskens GA, Burdorf A, van der Beek AJ. "Mental retirement?" Trajectories of work engagement preceding retirement among older workers. *Scand J Work Environ Health* 2017 1;43(1):34-41.

Objectives Before actual retirement, employees may already distance themselves from work, which could be referred to as "mental retirement". However, trajectories of work motivation, ie, work engagement, have not been studied yet. The present study aimed to (i) identify different trajectories of work engagement among older workers approaching the retirement age, and (ii) examine their associations with actual retirement.

Methods In total 3171 employees aged 55–62 years, who participated in the Dutch Study on Transitions in Employment, Ability and Motivation were included in this study. Participants completed questionnaires in 2010, 2011, 2012, and 2013. Latent class growth mixture modeling was performed to identify groups of employees with similar three-year trajectories in work engagement. Logistic regression analyses were performed to study whether trajectory membership was associated with retirement.

Results Of the 3171 employees, 16.2% made a transition from work to (early) retirement (N=513). Four trajectories of work engagement were identified: steady high (76.3%), steady low (12.7%), decreasing (6.2%), and increasing (4.8%). A steady low work engagement trajectory was associated with retirement [odds ratio (OR) 1.46], compared to a steady high work engagement trajectory. Although not statistically significant, an increasing work engagement trajectory seemed to be associated with retirement as well (OR 1.60).

Conclusions This study did not support the concept of mental retirement before actual retirement, ie, a decrease in work engagement among those facing retirement. However, as one in eight employees did experience steady low work engagement in the years before retirement, interventions promoting work motivation are recommended to support the employability of these employees.

Data

T1+T2+T3+T4

Link

[PMID: 27907223](#)

Oakman J, de Wind A, van den Heuvel SG, van der Beek AJ. Work characteristics predict the development of multi-site musculoskeletal pain. *Int Arch Occup Environ Health* 2017;90(7):653-661.

Purpose:

Musculoskeletal pain in more than one body region is common and a barrier to sustaining employment. We aimed to examine whether work characteristics predict the development of multi-site pain (MSP), and to determine differences in work-related predictors between age groups. **Methods**

This study is based on 5136 employees from the Study on Transitions in Employment, Ability and Motivation (STREAM) who reported no MSP at baseline. Measures included physical, emotional, mental, and psychological job demands, social support and autonomy. Predictors of MSP were studied by logistic regression analyses. Univariate and multivariate analyses with age stratification (45-49, 50-54, 55-59, and 60-64 years) were done to explore differences between age groups.

Results

All work characteristics with the exception of autonomy were predictive of the development of MSP, with odds ratios varying from 1.21 (95% CI 1.04-1.40) for mental job demands to 1.63 (95% CI 1.43-1.86) for physical job demands. No clear pattern of age-related differences in the predictors of MSP emerged, with the exception of social support, which was predictive of MSP developing in all age groups except for the age group 60-64 years.

Conclusions

Adverse physical and psychosocial work characteristics are associated with MSP. Organisations need to comprehensively assess work environments to ensure that all relevant workplace hazards, physical and psychosocial, are identified and then controlled for across all age groups.

Data

T1+T2+T3+T4

Link

[PMID: 28488112](#)

Scharn M, van der Beek AJ, Huisman MA, de Wind A, Lindeboom M, Elbers CT, Geuskens GA, Boot CR. Predicting working beyond retirement in the Netherlands: an interdisciplinary approach involving occupation epidemiology and economics. *Scand J Work Environ Health* 2017;43(4):326-336.

Objectives

No study so far has combined register-based socioeconomic information with self-reported information on health, demographics, work characteristics, and the social environment. The aim of this study was to investigate whether socioeconomic, health, demographic, work characteristics and social environmental characteristics independently predict working beyond retirement.

Methods

Questionnaire data from the Study on Transitions in Employment, Ability and Motivation were linked to data from Statistics Netherlands. A prediction model was built consisting of the following blocks: socioeconomic, health, demographic, work characteristics and the social environment. First, univariate analyses were performed ($P < .15$), followed by correlations and logistic multivariate regression analyses with backward selection per block ($P < .15$). All remaining factors were combined into one final model ($P < .05$).

Results

In the final model, only factors from the blocks health, work and social environmental characteristics remained. Better physical health, being intensively physically active for >2 days/week, higher body height, and working in healthcare predicted working beyond retirement. If respondents had a permanent contract or worked in handcraft, or had a partner that did not like them to work until the official retirement age, they were less likely to work beyond retirement.

Conclusion

Health, work characteristics and social environment predicted working beyond retirement, but register-based socioeconomic and demographic characteristics did not independently predict working beyond retirement. This study shows that working beyond retirement is multifactorial.

Data

T1+T2+T3+T4

Link

[PMID: 28560378](#)

de Wind A, Boot CRL, Sewdas R, Scharn M, van den Heuvel SG, van der Beek AJ. Do Work Characteristics Predict Health Deterioration Among Employees with Chronic Diseases? *J Occup Rehabil* 2018;28(2):289-297.

Purpose

In our ageing workforce, the increasing numbers of employees with chronic diseases are encouraged to prolong their working lives. It is important to prevent health deterioration in this vulnerable group. This study aims to investigate whether work characteristics predict health deterioration over a 3-year period among employees with (1) chronic diseases, and, more specifically, (2) musculoskeletal and psychological disorders.

Methods

The study population consisted of 5600 employees aged 45–64 years with a chronic disease, who participated in the Dutch Study on Transitions in Employment, Ability and Motivation (STREAM). Information on work characteristics was derived from the baseline questionnaire. Health deterioration was defined as a decrease in general health (SF-12) between baseline and follow-up (1–3 years). Crude and adjusted logistic regression analyses were performed to investigate prediction of health deterioration by work characteristics. Subgroup analyses were performed for employees with musculoskeletal and psychological disorders.

Results

At follow-up, 19.2% of the employees reported health deterioration (N = 1075). Higher social support of colleagues or supervisor predicted health deterioration in the crude analyses in the total group, and the

groups with either musculoskeletal or psychological disorders (ORs 1.11–1.42). This effect was not found any more in the adjusted analyses. The other work characteristics did not predict health deterioration in any group.

Conclusions

This study did not support our hypothesis that work characteristics predict health deterioration among employees with chronic diseases. As our study population succeeded continuing employment to 45 years and beyond, it was probably a relatively healthy selection of employees.

Data

T1+T2+T3+T4

Link

[Springer](#)

Bouwhuis S, Geuskens GA, Boot CRL, Bongers PM, van der Beek AJ. Predictors of transitions from single to multiple job holding: Results of a longitudinal study among employees aged 45-64 in the Netherlands. *Am J Ind Med* 2017;60(8):696-710.

Objectives

To construct prediction models for transitions to combination multiple job holding (MJH) (multiple jobs as an employee) and hybrid MJH (being an employee and self-employed), among employees aged 45-64.

Methods

A total of 5187 employees in the Netherlands completed online questionnaires annually between 2010 and 2013. We applied logistic regression analyses with a backward elimination strategy to construct prediction models.

Results

Transitions to combination MJH and hybrid MJH were best predicted by a combination of factors including: demographics, health and mastery, work characteristics, work history, skills and knowledge, social factors, and financial factors. Not having a permanent contract and a poor household financial situation predicted both transitions. Some predictors only predicted combination MJH, e.g., working part-time, or hybrid MJH, e.g., work-home interference.

Conclusions

A wide variety of factors predict combination MJH and/or hybrid MJH. The prediction model approach allowed for the identification of predictors that have not been previously studied.

Data

T1+T2+T3+T4

Link

[PMID: 28692193](#)

Havermans BM, Boot CRL, Hoekstra T, Houtman ILD, Brouwers EPM, Anema JR, van der Beek AJ. The association between exposure to psychosocial work factors and mental health in older employees, a 3-year follow-up study. *Int Arch Occup Environ Health* 2018;91(1):57-66.

Purpose

Unfavourable exposure to psychosocial work factors threatens older employees' mental health, and their sustained employment. This study assesses whether an improved compared to stable unfavourable and stable favourable exposure to psychosocial work factors is associated with a change in mental health in older employees at 3-year follow-up.

Methods

The current study used data from the Study on Transitions in Employment, Ability and Motivation (STREAM), in workers aged 45-65 years (n = 5249). Two-year (2010-2012) exposure was assessed for psychological demands, autonomy, support, mental load, and distributive justice. Linear regression analyses were performed to compare improved exposure to unfavourable psychosocial work factors with stable unfavourable and stable favourable exposure and mental health at follow-up (2013), corrected for confounders. Analyses were stratified for age groups (45-54 and 55-65 years) and gender.

Results

In certain subgroups, stable unfavourable exposure to psychological demands, autonomy, support, and distributive justice was associated with a significantly lower mental health score than improved exposure. Stable favourable exposure to support was associated with a higher mental health score than improved support, whereas stable favourable exposure to autonomy was associated with a lower mental health score compared to improved exposure.

Conclusions

There is a longitudinal association between changes in exposure to psychosocial work factors and mental health. Improvement in unfavourable exposure to psychosocial work factors was associated with improved mental health. This is important information for organisations that consider deploying measures to improve the psychosocial work environment of older workers.

Data

T1+T2+T3+T4

Link

[Springer](#)

Sewdas R, de Wind A, van der Zwaan LGL, van der Borg WE, Steenbeek R, van der Beek AJ, Boot CRL. Why older workers work beyond the retirement age: a qualitative study. *BMC Public Health* 2017;17(1):672.

Background

The aims of the present study were to: 1) gain insight into reasons for working beyond the statutory retirement age from older workers' perspectives, and 2) explore how the domains of the research framework Study on Transitions in Employment, Ability and Motivation (STREAM) can be applied to working beyond retirement age.

Methods

A qualitative research design included individual interviews (n = 15) and three focus groups (n = 18 participants) conducted with older workers aged 65 years and older continuing in a paid job or self-employment. Interview participants were recruited from an existing STREAM cohort study. Focus group participants were recruited from companies and employment agencies. The data were subjected to thematic analysis.

Results

The most important motives for working beyond retirement age were maintaining daily routines and financial benefit. Good health and flexible work arrangements were mentioned as important preconditions. The themes emerging from the categorization of the motives and preconditions corresponded to the domains of health, work characteristics, skills and knowledge, and social and financial factors from the STREAM research framework. However, our analysis revealed one additional theme-purpose in life.

Conclusion

This study offers important new insights into the various preconditions and motives that influence working beyond retirement age. In addition, the five domains of the STREAM research framework, including the additional domain of 'purpose in life', seem to be applicable to working beyond retirement age. This knowledge contributes to the development of work-related interventions that enhance older workers' motivation to prolong their working lives.

Data

Qualitative interviews

Link

[PMID: 28830399](#)

Sewdas R, van der Beek AJ, de Wind A, van der Zwaan LGL, Boot CRL. Determinants of working until retirement compared to a transition to early retirement among older workers with and without chronic diseases: Results from a Dutch prospective cohort study. *Scand J Public Health* 2018;46(3):400-408.

Aim

The ageing society and recent policy changes may lead to an increase of older workers with chronic diseases in the workforce. To date, it is unclear whether workers with chronic diseases have specific needs while employed. The aim of this study is to explore the differences in determinants of working until retirement compared to a reference group who have transitioned to early retirement among workers with and without chronic diseases.

Methods

Dutch workers aged 57-62 years (n = 2445) were selected from an existing prospective cohort study, 'STREAM'. The potential determinants were categorized into: individual, health, work-related and social factors. Logistic regression analyses were performed to determine the associations between these determinants and working until retirement - once for workers with and once for those without chronic diseases. To test differences, we included an interaction term between the determinant and the covariate 'having a chronic disease yes/no' in the analyses of the total population.

Results

In total, 1652 (68%) persons were employed from 2011 to 2013. The majority of the determinants appeared to be similar for workers with or without a chronic disease; the interaction terms for these determinants and the covariate 'having a chronic disease' showed a p-value higher than 0.05, except for one individual factor (i.e. mastery) and one work-related factor (i.e. autonomy), which showed a p-value below 0.05. Higher mastery and higher autonomy were statistically significantly associated with working until retirement for those with chronic diseases, whereas they were not for those without chronic diseases.

Conclusions

Differences between workers with and without chronic diseases may exist for working until a statutory retirement age. Interventions aimed at encouraging work participation of older workers should make a distinction between the two groups. Autonomy at work and mastery were found to be factors that may promote work participation until higher age, specifically for older workers with chronic diseases.

Data

T1+T2+T3+T4

Link

[PMID: 29059016](#)

de Wind A, Scharn M, Geuskens GA, van der Beek AJ, Boot CRL. Predictors of working beyond retirement in older workers with and without a chronic disease - results from data linkage of Dutch questionnaire and registry data. *BMC Public Health* 2018;18(1):265.

Background

An increasing number of retirees continue to work beyond retirement despite being eligible to retire. As the prevalence of chronic disease increases with age, working beyond retirement may go along with having a chronic disease. Working beyond retirement may be different for retirees with and without chronic disease. We aim to investigate whether demographic, socioeconomic and work characteristics, health and social factors predict working beyond retirement, in workers with and without a chronic disease.

Methods

Employees aged 56-64 years were selected from the Study on Transitions in Employment, Ability and Motivation (N = 1125). Questionnaire data on demographic and work characteristics, health, social factors, and working beyond retirement were linked to registry data from Statistics Netherlands on socioeconomic characteristics. Separate prediction models were built for retirees with and without chronic disease using multivariate logistic regression analyses.

Results

Workers without chronic disease were more likely to work beyond retirement compared to workers with chronic disease (27% vs 23%). In retirees with chronic disease, work and health factors predicted working beyond retirement, while in retirees without a chronic disease, work, health and social factors predicted working beyond retirement. In the final model for workers with chronic disease, healthcare work, better physical health, higher body height, lower physical load and no permanent contract were positively predictive of working beyond retirement. In the final model for workers without chronic disease, feeling full of life and being intensively physically active for ≥ 2 days per week were positively predictive of working beyond retirement; while manual labor, better recovery, and a partner who did not support working until the statutory retirement age, were negatively predictive of working beyond retirement.

Conclusions

Work and health factors independently predicted working beyond retirement in workers with and without chronic disease, whereas social factors only did so among workers without chronic disease. Demographic and socioeconomic characteristics did not independently contribute to prediction of working beyond retirement in any group. As prediction of working beyond retirement was more difficult among workers with a chronic disease, future research is needed in this group.

Data

T1+T2+T3+T4

Link

[PMID: 29454334](#)

Bouwhuis S, De Wind A, De Kruif A, Geuskens GA, Van der Beek AJ, Bongers PM, Boot CRL. Experiences with multiple job holding: a qualitative study among Dutch older workers. *BMC Public Health* 2018;18(1):1054.

Background

Multiple job holding (MJH) is a common and growing phenomenon in many countries. Little is known about experiences with MJH among older workers. The objective of the present study is to gain insight in experiences with MJH among Dutch workers aged 45 years and older.

Methods

Multiple job holders were selected from the Study on Transitions in Employment, Ability, and Motivation (STREAM), a Dutch cohort study among persons aged 45 years and older. Purposive sampling was applied to assure heterogeneity regarding gender, educational level, health, financial situation, willingness to continue MJH, and type of MJH (only jobs as employee or also being self-employed). Interviews were conducted until data saturation occurred. Fifteen multiple job holders participated in this study (eight men, seven women). Interviews were digitally recorded, transcribed verbatim and analyzed, along with field notes, using thematic content analysis. The data were openly coded, after which codes were aggregated into themes, which formed a thematic map. In each phase of the analysis at least two researchers were involved to increase reliability.

Results

Experiences with MJH varied from positive to negative. They were influenced by characteristics of individual jobs, e.g. social support at work, as well as characteristics of the combination of jobs, e.g. positive spill-over effects, and conflicts between work schedules. The personal context of multiple job holders, e.g. their age, or reason for MJH, affected how work characteristics influenced experiences. Negative experiences with one job often coincided with negative experience in the other job(s), and problems in the personal context. Some multiple job holders were able to make changes to their situation when desired. For some, this was not possible, which augmented their negative experience.

Conclusions

This study adds to existing knowledge that experiences with MJH are not only influenced by work characteristics but also by the personal context of multiple job holders, and that some workers are able to change their situation when desired, while others are not. Future research should study how different combinations of work and personal characteristics influence sustainable employability of multiple job holders. Policies facilitating life-long learning could increase opportunities to change the MJH situation when desired.

Data

interviews

Link

[PMID: 30134871](#)

Bouwhuis S, Hoekstra T, Bongers PM, Boot CRL, Geuskens GA, van der Beek AJ. Distinguishing groups and exploring health differences among multiple job holders aged 45 years and older. *Int Arch Occup Environ Health* 2019;92(1):67-79.

Purpose

To identify distinct groups of older multiple job holders and to explore health differences between these groups.

Methods

We selected respondents from STREAM, a Dutch cohort study among persons aged 45 years and older, who reported having multiple jobs (N = 702). We applied latent class analysis to identify groups of multiple job holders. The association between these groups and health, measured with the SF-12, was studied cross-sectionally and longitudinally (1 year of follow-up), using linear regression analyses.

Results

Four groups of older multiple job holders were identified: (1) a vulnerable group (N = 145), who preferred having one job, and had jobs with high demands and low resources; (2) an indifferent group (N = 134), who did not experience many benefits or disadvantages of multiple job holding (MJH); (3) a satisfied hybrid group, who were all self-employed in their second job (N = 310); and (4) a satisfied combination group, who all had a second job as an employee (N = 113). Both the satisfied hybrid and satisfied combination groups preferred MJH and experienced benefits of it. At baseline, the vulnerable group experienced significantly lower physical and mental health than the other groups. We found no significant differences regarding changes in health after 1 year.

Conclusions

Four groups of older multiple job holders could be distinguished. The vulnerable group experienced lower physical and mental health at baseline than the other three groups. Policies and interventions supporting vulnerable multiple job holders may need to be developed. Future research is recommended to take heterogeneity among multiple job holders into account.

Data

T5+T6

Link

[PMID: 30196318](#)

Kadijk EA, van den Heuvel S, Ybema JF, Leijten FRM. The Influence of Multi-morbidity on the Work Ability of Ageing Employees and the Role of Coping Style. *J Occup Rehabil* 2019;29(3);503-513.

Purpose

With an ageing workforce, employees are increasingly confronted with multi-morbidity. Especially physical and mental health problems often occur together. This study aims to (i) explore the effect of multi-morbidity on work ability of ageing employees, more specifically the effects of the number of health problems and the combination of physical and mental health problems, and to (ii) explore to what extent the effects of physical and mental health problems on work ability are explained by applying differing coping styles.

Methods

A 1 year follow up study (2012-2013) was conducted among 7175 employees aged 45-64 years. Linear regression analyses were conducted to examine longitudinal relationships between multi-morbidity, coping styles and work ability. To determine whether coping styles mediate the effects of multi-morbidity on work ability, Sobel tests were conducted.

Results

A higher number of health problems was related to poorer work ability, but this negative effect stabilized from three health problems onwards. The combination of physical and mental health problem(s) was more strongly related to poorer work ability than only physical health problems. The negative relation between physical health problems and work ability was partly suppressed by active coping, while the negative relation between the combination of physical and mental health problem(s) on work ability was partly explained by avoidant coping.

Conclusions

Ageing employees with multi-morbidity have a reduced work ability, especially when mental health problems are present. The greater negative effects of the combination of physical and mental health problems on work ability are partially due to unfavorable coping styles.

Data

T3+T4

Link

[PMID: 30178434](#)

Sewdas R, Tamminga SJ, Boot CRL, van den Heuvel SG, de Boer AG, van der Beek AJ. Differences in self-rated health and work ability between self-employed workers and employees: Results from a prospective cohort study in the Netherlands. *PLoS One* 2018;13(11):e0206618.

Background

With the increase of the statutory retirement age, the number of self-employed older workers will most likely increase. Therefore, this study aimed to explore: 1) the differences in self-rated health and work ability of self-employed workers and employees, 1) whether self-employment is associated with better self-rated health and work ability across three years, than employment, and 3) the role of sociodemographic, health- and work-related characteristics (e.g., mental load, physical load, and autonomy) in these relationships.

Methods

Data was used from the Study on Transitions in Employment, Ability and Motivation, where self-employed (n = 1,029) and employees (n = 12,055) aged 45-64 years were followed during 2010-2013. Linear regression and generalized estimating equations analyses were carried out to study the differences in self-rated health and work ability (i.e., self-assessed work ability in relation to an individual's resources and work demands) of self-employed and employees. To explore the role of sociodemographic, health-and work-related characteristics in these associations, we included interaction terms between these characteristics and employment status.

Results

The self-employed had better work ability (8.3 versus 8.2), and better self-rated health (3.4 versus 3.3) than employees. Work ability of self-employed improved over time, compared to the changes over time in work ability among employees, but not no difference in change over time in self-rated health was found. None of the interaction terms were statistically significant ($p > 0.05$).

Conclusion

We observed higher scores in self-rated health and work ability among the self-employed than employees. Being self-employed leads to an increase in work ability across three years. The differences in work ability can be considered small, and more research is needed to establish the role of self-employment as a potential facilitator for sustainable employment.

Data

T1+T2+T3+T4

Link

[PMID: 30418978](https://pubmed.ncbi.nlm.nih.gov/30418978/)

van der Zwaan GL, Oude Hengel KM, Sewdas R, de Wind A, Steenbeek R, van der Beek AJ, Boot CRL. The role of personal characteristics, work environment and context in working beyond retirement: a mixed-methods study. *Int Arch Occup Environ Health* 2019;92(4):535-549.

Objective

To investigate the role of personal characteristics, work environment and context in working beyond retirement.

Methods

In the current study, a mixed-methods design was applied including quantitative survey data and semi-structured telephone interviews. Respondents (N = 568) were selected from the Study on Transitions in Employment, Ability and Motivation (STREAM). Personal characteristics, work characteristics and contextual factors were measured using a questionnaire at baseline. Concurrently, qualitative data of 30 persons aged over 65 years were gathered. Logistic regression analyses were used to identify quantitative associations and thematic analyses were used for qualitative purposes.

Results

Quantitative data revealed that being in good physical health (OR = 1.80), developmental proactivity (OR = 1.38), interesting work (OR = 2.02), appreciation (OR = 1.62) and voluntary work (OR = 1.58) were associated with working beyond the statutory retirement age. Additionally, qualitative findings suggested that working beyond retirement was mainly driven by the desire to contribute to society (e.g., mentor younger coworkers), and identified the employers' willingness to hire an older worker despite existing stereotypes as an important precondition.

Conclusion

Working beyond retirement is influenced by physical health and work characteristics, as well as motivational determinants such as the desire to contribute to society. However, to meet the increasing demands for paid jobs by individuals aged over 65 years, the willingness of employers to actually hire them is crucial. Therefore, recognition and utilization of older workers' potentials is of great importance.

Data

T1+T2+T3+T4

Link

[PMID: 30515561](#)

Oude Hengel K, Robroek SJW, Eekhout I, van der Beek AJ, Burdorf A. Educational inequalities in the impact of chronic diseases on exit from paid employment among older workers: a 7-year prospective study in the Netherlands. *Occup Environ Med* 2019;76(10):718-725.

Objectives

The study aimed to investigate the relative and absolute risks of early exit from paid employment among older workers with a chronic disease, and to assess whether these risks differ across educational groups.

Methods

Data on chronic diseases and demographics from 9160 Dutch workers aged 45-64 years were enriched with monthly information on employment status from Statistics Netherlands. Subdistribution hazard ratios (SHR) and 7-year probabilities among workers with a chronic disease of exit from paid employment through disability benefits, unemployment benefits, early retirement benefits or economic inactivity were estimated using competing risks regression analyses based on Fine and Gray's models.

Results

Workers with one chronic disease had a higher risk to exit paid employment through disability benefits (SHR 4.48 (95%CI 3.22 to 6.25)) compared with workers without chronic disease, and this risk further increased for multiple chronic diseases (SHR 8.91 (95%CI 6.33 to 12.55)). As occurrence of chronic diseases was highest among low educated workers, the 7-year probabilities to exit paid employment through disability benefits were highest among this group. Cardiovascular, musculoskeletal, psychological and respiratory diseases were associated with disability benefits (SHRs ranging from 2.11 (95%CI 1.45 to 3.07) to 3.26 (95%CI 2.08 to 5.12)), whereas psychological diseases were also related to unemployment (SHR 1.78 (95%CI 1.33 to 2.38)).

Conclusions

Older workers with a chronic disease have a higher risk to exit paid employment through disability benefits. As multimorbidity has an additive effect, addressing multimorbidity as a risk factor for sustainable employment is needed.

Data

T1 → SSB (Dutch tax registers stored in the social statistical database (SSB))

Link:

[PMID: 31409626](#)

Bom J, Bakx P, Schut F, Van Doorslaer E. Health effects of caring for and about parents and spouses. *Journal of the Economics of Ageing* 2019;14:100196

Abstract

Informal caregiving is a potentially attractive alternative to formal care but may entail health costs for the caregiver. We examine the mental and physical health impact of providing informal care and disentangle the caregiving effect – the effect of caring for someone in need – from the family effect – the effect of caring about someone in need. We account for the main sources of endogeneity in the caregiving decision using Arellano- Bond difference GMM models. We use four waves (2010–2013) of panel data from the Dutch Study on Transitions in Employment, Ability and Motivation (STREAM).

We find that caregiving harms the mental health of caregivers; the effect is more prominent for spousal caregivers. On top of this, a negative health shock of a family member also has a direct negative effect on mental health, providing evidence of a family effect. Our findings thus highlight that the total effect of having a sick relative may be underestimated when the family effect is not adequately accounted for. As the

caregiving effect differs substantially between various types of caregivers, policies to cushion these effects should specifically target those subgroups of caregivers that carry the largest burden of informal caregiving.

Data

T1-T4 → SSB (Dutch tax registers stored in the social statistical database (SSB))

Link:

[sciencedirect](#)

Van den Heuvel, SG, Niks, I. Gezondheid en langer doorwerken: resultaten uit de Study on Transitions in Employment, Ability and Motivation (STREAM) [Health and the prolonged work participation] Tijdschrift voor Arbeidsvraagstukken 2019;35(4): 407-420 [Dutch]

Abstract

De relatie tussen gezondheid en arbeidsparticipatie is over het algemeen sterk, maar niet eenduidig. Binnen de Study on Transitions in Employment, Ability and Motivation (STREAM) is deze relatie regelmatig onderwerp van studie geweest. In dit artikel vatten we de resultaten van die studies samen. Hierbij gaan we in op de volgende onderzoeksvragen: Hoe houden gezondheidsproblemen verband met langer doorwerken? Om welke gezondheidsproblemen gaat het? In hoeverre kunnen werkkenmerken het langer doorwerken met gezondheidsproblemen bevorderen of belemmeren? Uit de STREAM-data blijkt allereerst dat gezondheidsproblemen van oudere werknemers inderdaad het langer doorwerken kunnen belemmeren, vooral wanneer er sprake is van een verminderd werkvermogen en van beperkingen in het functioneren. Dat is niet bij alle gezondheidsproblemen in dezelfde mate het geval. Werknemers met psychische klachten stromen vaker uit dan werknemers met andere klachten. Daarentegen stromen werknemers met een slechtere ervaren mentale gezondheid minder vaak uit dan werknemers met een slechtere ervaren fysieke gezondheid. Veel autonomie en sociale steun op het werk verlagen de kans op uitstroom door gezondheidsproblemen. In de discussie gaan we verder in op deze resultaten.

In general, the relation between health and work participation is strong but ambiguous. In the Study on Transitions in Employment, Ability and Motivation (STREAM), this relation has often been studied. In this article, we summarize the results. Research questions were the following: how are health issues related to prolonged work participation? Which health issues have the most impact? To what extent can work characteristics affect prolonged work participation of workers with health issues? Results confirm the adverse effect of health issues on work participation, in particular in case of reduced work ability and functional limitations. However, effects differ per type of health issue. Workers with psychological health issues leave the workforce more often prematurely than workers with other types of health issues. On the other hand, workers with poor self-perceived mental health leave the workforce less often prematurely than workers with poor self-perceived physical health. High levels of autonomy and social support decrease the risk of an early exit from work due to health issues. In the discussion we elaborate on these results.

Link:

[TvA](#)

Rellstab S, Bakx P, García-Gómez P, van Doorslaer E. The kids are alright - labour market effects of unexpected parental hospitalisations in the Netherlands. J Health Econ 2020;69:102275.

Abstract

Unexpected negative health shocks of a parent may reduce adult children's labour supply via informal caregiving and stress-induced mental health problems. We link administrative data on labour market outcomes, hospitalisations and family relations for the full Dutch working age population for the years 1999-2008 to evaluate the effect of an unexpected parental hospitalisation on the probability of employment and on conditional earnings. Using an event study difference-in-differences model combined with coarsened exact matching and individual fixed effects, we find no effect of an unexpected parental hospitalisation on either employment or earnings for Dutch men and women, and neither for the full population nor for the subpopulations most likely to become caregivers. These findings suggest that the extensive public coverage of formal long-term care in the Netherlands combined with widespread acceptance of part-time work provides sufficient opportunities to deal with adverse health events of family members without having to compromise one's labour supply.

Data

T1-T4 → SSB (Dutch tax registers stored in the social statistical database (SSB))

Link:

[sciencedirect](#)

Schram JLD, Robroek SJW, Ots P, Brouwer S, Burdorf A, van Zon SKR, Oude Hengel KM. Influence of changing working conditions on exit from paid employment among workers with a chronic disease. *Occup Environ Med* 2020;77(9):628-633.

Objectives: To investigate the relation between changes in working conditions and exit from paid employment among workers with a chronic disease.

Methods: Six waves from the longitudinal Study on Transitions in Employment, Ability and Motivation (2010-2016), enriched with tax-based employment information from Statistics Netherlands (2011-2017), were available for 4820 chronically ill workers aged 45-63 years (mean 55.3 years, SD 5.1). A change in working conditions (physical workload, psychological job demands, job autonomy, emotional job demands and social support) was defined as an increase or decrease between two consecutive waves of at least one SD. Discrete-time survival models with repeated measurements were used to estimate the relative risk (RR) of a change in working conditions on exiting paid employment in the following year compared with no change and consecutive favourable working conditions.

Results: A favourable change in physical workload lowered the risk to exit paid employment (RR 0.46, 95% CI 0.22 to 0.94). An adverse change in psychosocial working conditions, especially a decrease in social support (RR 2.07, 95% CI 1.52 to 2.81), increased the likelihood to exit paid employment. In contrast, a favourable change in psychological job demands increased the risk to exit paid employment (RR 1.57, 95% CI 1.09 to 2.24). Multiple adverse changes increased the risk to exit paid employment up to six times (RR 6.06, 95% CI 2.83 to 12.98).

Conclusions: Changes in working conditions among workers with chronic diseases influence exit from paid employment. Ensuring that working conditions can be adapted to the needs of workers with a chronic disease may help to extend working life.

Link:

[PMID: 32439828](#)

van der Burg LRA, van Kuijk SMJ, Ter Wee MM, Heymans MW, de Rijk AE, Geuskens GA, Ottenheijm RPG, Dinant GJ, Boonen A. Long-term sickness absence in a working population: development and validation of a risk prediction model in a large Dutch prospective cohort. *BMC Public Health* 2020;20(1):699.

Background: Societal expenditures on work-disability benefits is high in most Western countries. As a precursor of long-term work restrictions, long-term sickness absence (LTSA) is under continuous attention of policy makers. Different healthcare professionals can play a role in identification of persons at risk of LTSA but are not well trained. A risk prediction model can support risk stratification to initiate preventative interventions. Unfortunately, current models lack generalizability or do not include a comprehensive set of potential predictors for LTSA. This study is set out to develop and validate a multivariable risk prediction model for LTSA in the coming year in a working population aged 45-64 years.

Methods: Data from 11,221 working persons included in the prospective Study on Transitions in Employment, Ability and Motivation (STREAM) conducted in the Netherlands were used to develop a multivariable risk prediction model for LTSA lasting ≥ 28 accumulated working days in the coming year. Missing data were imputed using multiple imputation. A full statistical model including 27 pre-selected predictors was reduced to a practical model using backward stepwise elimination in a logistic regression analysis across all imputed datasets. Predictive performance of the final model was evaluated using the Area Under the Curve (AUC), calibration plots and the Hosmer-Lemeshow (H&L) test. External validation was performed in a second cohort of 5604 newly recruited working persons.

Results: Eleven variables in the final model predicted LTSA: older age, female gender, lower level of education, poor self-rated physical health, low weekly physical activity, high self-rated physical job load, knowledge and skills not matching the job, high number of major life events in the previous year, poor self-rated work ability, high number of sickness absence days in the previous year and being self-employed. The

model showed good discrimination (AUC 0.76 (interquartile range 0.75-0.76)) and good calibration in the external validation cohort (H&L test: $p = 0.41$).

Conclusions: This multivariable risk prediction model distinguishes well between older workers with high- and low-risk for LTSA in the coming year. Being easy to administer, it can support healthcare professionals in determining which persons should be targeted for tailored preventative interventions.

Link:

[PMID: 32414410](#)

Zwier D, Damman M, Van den Heuvel SG. Explaining differences in retirement timing preferences between the solo self-employed and employees. *IJM* 2020;

Purpose: Previous research has shown that self-employed workers are more likely than employees to retire late or to be uncertain about retirement timing. However, little is known about the underlying mechanisms. This study aims to fill this gap, by focusing on the explanatory role of various job characteristics – flexibility, autonomy, skills-job match and job security – for explaining differences in retirement preferences between the solo self-employed and employees.

Design/methodology/approach: Data were used of 8,325 employees and 663 solo self-employed respondents (age 45–64) in the Netherlands, who participated in 2016 in the Study on Transitions in Employment, Ability, and Motivation (STREAM). The outcome variable distinguished between early, on-time, late and uncertain retirement preferences. Multinomial logistic regression models were estimated, and mediation was tested using the Karlson-Holm-Breen (KHB) method.

Findings: The solo self-employed are more likely than employees to prefer late retirement (vs “on-time”) and to be uncertain about their preferred retirement age. Job characteristics mediate 21% of the relationship between solo self-employment and late retirement preferences: the self-employed experience more possibilities than employees to work from home and to choose their own working times, which partly explains why they prefer to retire late.

Originality/value: In discussions about retirement, often reference is made to differences in retirement savings and retirement regulations between the solo self-employed and employees. The current study shows that differences in job characteristics also partly explain the relatively late preferred retirement timing of solo self-employed workers.

Link:

[Emerald](#)

Pak K, Kooij DT, De Lange AH, van den Heuvel S, Van Veldhoven MJ. The influence of human resource practices on perceived work ability and the preferred retirement age: A latent growth modelling approach. *Hum Resour Manag J* 2021;31:311-325.

Abstract

Organisations are challenged to extend working lives of older workers. However, there is little empirical evidence available on how organisations should do this. This study aims to fill this gap by testing the effect of Human Resource (HR) practices on perceived work ability and the preferred retirement age. Based on the Conversation of Resources theory, we expected that the use of HR practices has a positive effect on perceived work ability and preferred retirement age. We have conducted latent growth curve modelling to test our hypotheses amongst 12,444 employees aged 45 and older at four time points. The results indicate that developmental practices are positively related to work ability, whereas maintenance practices are negatively related to work ability and the preferred retirement age. Accommodative practices are negatively related to the intercepts of both outcomes but not to the slopes, whereas utilisation practices are not related to the outcomes at all.

Link:

[Wiley](#)

Bom J, Stöckel J. Is the grass greener on the other side? The health impact of providing informal care in the UK and the Netherlands. *Soc Sci Med* 2021;269:113562.

Abstract

Facing rapidly ageing populations, many Western countries aim to stimulate informal care provision as a way to meet the growing long-term care (LTC) demand. While various studies report the impact of providing informal care on the health of caregivers, it is less clear whether and to what extent this impact differs across countries. Using propensity score matching we match caregivers to similar non-caregiving individuals using four waves of the Dutch Study on Transitions in Employment, Ability and Motivation and the UK Household Longitudinal Study. The samples consist of 8129 Dutch and 7186 UK respondents, among which respectively 1711 and 1713 individuals are identified as caregivers. We explore whether the health impact of providing informal care differs by country once similar caregivers, in terms of the intensity of provided care, are compared. In both countries we find negative mental health effects of providing informal care. While these effects slightly differ by country, the main differences arise between subgroups of caregivers. Individuals that provide more than 20 hours of informal care per week, and those who face a double burden of care and full-time employment experience the most severe negative mental health effects. These results indicate that health effects of providing informal care are mediated by the specific caregiving context, allowing policymakers to use information on this context to provide targeted aid. In addition, it suggests that previously reported differences of caregiving effects across countries could be driven by differences in the population of informal caregivers which are shaped by countries' LTC policies.

Link:

[Sciencedirect](#)

Troelstra SA, Boot CRL, Harting J, Geuskens GA, Kunst AE, van der Beek AJ. Associations of sustained smoking and smoking cessation with work-related outcomes: a longitudinal analysis. *Int Arch Occup Environ Health* 2021;94(3):529-537.

Purpose: The aim of this study was to assess the association between sustained smoking and quitting with work-related outcomes among older workers.

Methods: We categorized a sample of older employees into non-smokers, sustained smokers and quitters. Multivariable regression models were used to test longitudinal associations of sustained smoking and smoking cessation with sickness absence, productivity loss and work ability.

Results: We included 3612 non-smokers, 673 sustained smokers and 246 quitters. Comparing sustained smokers to non-smokers, we found higher (but not statistically significant) sickness absence for sustained smokers [1.01, 95% confidence interval (CI) - 0.16-2.17]. We did not find differences in productivity loss (OR 0.82, 95% CI 0.60-1.13) and work ability (0.05, 95% CI -0.05-0.15). For employees with a relatively high physical health at baseline, comparing quitters to sustained smokers, we found higher (but not statistically significant) productivity loss for quitters (OR 2.23, 95% CI 0.94-5.31), and no difference in sickness absence (0.10, 95% CI - 2.67-2.87), and work ability (- 0.10, 95% CI - 0.36-0.16). For employees with a relatively low physical health at baseline, comparing quitters to sustained smokers, we found a statistically significant lower work ability (- 0.31, 95% CI - 0.57-0.05), and no difference in sickness absence (2.53, 95% CI - 1.29-6.34) and productivity loss (OR 1.26, 95% CI 0.66-2.39).

Conclusions: We found no evidence that sustained smokers have less favorable work-related outcomes than non-smokers or that quitters have more favorable work-related outcomes than sustained smokers. The benefits of smoking cessation for employers might take a longer time to develop.

Link:

[Springer](#)

Roobol C, Pruijt H, Koster F, Leijten FRM. Developmental proactivity and professional ability as older workers' employability resources. A longitudinal study explaining career events. *International Journal of Business Science and Applied Management* 2021;16(2):64-88.

This four-year longitudinal study examines how two facets of employability—professional ability and developmental proactivity—are linked to career events among workers ages 45 years and older. We construe employability as a personal resource that predicts a higher likelihood of experiencing positive career events and a lower likelihood of experiencing negative ones. Results reveal that developmental proactivity leads to a higher probability of internal promotion, while professional ability leads to a lower

probability of salary loss, demotion, and unemployment. The findings indicate that these two facets of employability can offer critical insights for understanding the career events of older workers.

Link:

[business and management org](#)

Bijnsdorp FM, van der Beek AJ, Broese van Groenou MI, Proper KI, van den Heuvel SG, Boot CRL. Associations of combining paid work and family care with gender-specific differences in depressive symptoms among older workers and the role of work characteristics. *Scand J Work Environ Health* 2022; Feb 7:4014.

Objectives: This study aims to provide insight into (i) how the combination of paid work and family care is longitudinally associated with gender-related differences in depressive symptoms and (ii) the role of work characteristics in this association.

Methods: Data were derived from STREAM, a Dutch prospective cohort study of older workers aged 45-64 years. Respondents were included if they were employed in at least one measurement between 2015 and 2017 (N=12 447). Mixed-models were applied to disentangle between-person (BP) and within-person (WP) effects of family caregiving on depressive symptoms. Analyses were stratified by gender. Work characteristics (social support, autonomy, emotional and mental workload) were separately added to the multivariable models.

Results: For older employees, family caregiving was positively associated with depressive symptoms between and within persons for both women [BP B=0.80, 95% confidence interval (CI) 0.52-1.08; WP B=0.32, 95% CI 0.08-0.56] and men (BP B=0.75, 95% CI 0.45-1.05; WP B=0.25, 95% CI 0.01-0.48). Social support at work reduced the adverse effect of family care on depressive symptoms for women (BP) and men (BP and WP). Emotional workload partly explained the effect of family care for both women and men (BP).

Conclusions: The longitudinal association between family care and mental health was similar for male and female employees. Resources at work (ie, social support) could protect caregiving employees against depressive symptoms. More research is needed regarding the relative impact of the care context compared to the work context of working family caregivers.

Link:

[siweh](#)

van de Ven D, Robroek SJW, Oude Hengel KM, Burdorf A, Schuring M. Changes in health among 45-64-year-old Dutch persons before, during and after becoming unemployed or employed: a seven year follow-up study. *Scand J Work Environ Health*. 2022 Mar 8:4016. [Epub ahead of print.](#)

Objectives: This study aimed to evaluate the extent to which physical and mental health and body mass index (BMI) changed before, during and after becoming unemployed or employed, and whether these associations differ across psychosocial and physical working conditions.

Methods: Participants from seven waves (2010-2017) of the Dutch longitudinal Study on Transitions in Employment, Ability, and Motivation (STREAM) aged 45-64 years were included. STREAM provides information on physical and mental health, BMI and working conditions, and was enriched with monthly information on income components from Statistics Netherlands to define employment status during 2010-2017. Annual changes in physical and mental health (0-100 scales), and BMI (kg/m²) before, during and after becoming unemployed (N=13 279) and employed (N=1902) were estimated with generalized linear mixed-effect models.

Results: Before employed persons became unemployed they had poorer health than continuously employed persons, which worsened in the period before becoming unemployed. During the year of becoming unemployed, physical [b=1.45, 95% confidence interval (CI) 0.89-2.01] and mental health (b=1.46, 95% CI 0.85-2.07) improved, in particular among persons with unfavorable working conditions. After becoming unemployed physical health deteriorated (b=-0.52, 95% CI -0.80- -0.24) and BMI (b=0.11, 95% CI 0.03-0.19) increased, but mental health improved (b=0.33, 95% CI 0.02-0.63). Unemployed persons had better health before entering employment than continuously unemployed persons. The health of persons who entered employment did not statistically significantly change before or during the year of the transition. After entering employment, physical health deteriorated and BMI increased.

Conclusions: Maintaining a healthy workforce and limiting unfavorable working conditions may contribute to the prevention of unemployment and the promotion of re-integration.

Link:
[siweh](#)

van de Ven D, Robroek SJ, Oude Hengel KM, van Zon SK, Brouwer S, Ots P, Burdorf A, Schuring M. Associations of within-individual changes in working conditions, health behaviour and BMI with work ability and self-rated health: a fixed effects analysis among Dutch workers. *BMJ Open*. 2022 Apr 29;12(4).

Objectives

This study assessed the associations of (1) within-individual improvements and (2) within-individual deteriorations in working conditions, health behaviour and body mass index (BMI) with changes in work ability and self-rated health among workers.

Design

Prospective cohort study. Setting The Netherlands. Participants Persons in paid employment, aged 45–64 years, who participated in the Dutch Study on Transitions in Employment, Ability and Motivation (STREAM) between 2010 and 2017, and improved or deteriorated at least once with respect to working conditions (psychological and emotional job demands, autonomy, social support, physical workload), health behaviour (moderate and vigorous physical activity, smoking status), or BMI between any of two consecutive measurements during the 7-year follow-up.

Primary and secondary outcome measures

Changes in self-reported work ability on a scale from 0 to 10 (1st item of the work ability index) and self-rated health on a scale from 1 to 5 (SF-12).

Results

Of the 21 856 STREAM participants, ultimately 14 159 workers were included in the fixed effects analyses on improvements (N=14 045) and deteriorations (N=14 066). Workers with deteriorated working conditions decreased in work ability (β 's: -0.21 (95% CI: -0.25 to -0.18) to -0.28 (95% CI: -0.33 to -0.24)) and health (β 's: -0.07 (95% CI: -0.09 to -0.06) to -0.10 (95% CI: -0.12 to -0.08)), whereas improvements were to a lesser extent associated with increased work ability (β 's: 0.06 (95% CI: 0.02 to 0.09) to 0.11 (95% CI: 0.06 to 0.16)) and health (β 's: 0.02 (95% CI: 0.00 to 0.03) to 0.04 (95% CI: 0.02 to 0.06)). Workers with increased BMI or decreased physical activity reduced in work ability and health. Likewise, decreased BMI or increased vigorous physical activity was associated with improved health. An increase in moderate or vigorous physical activity was modestly associated with a reduced work ability. Quitting smoking was associated with reduced work ability and health.

Conclusions

Compared with improvements, preventing deteriorations in working conditions, health behaviour and BMI, might be more beneficial for work ability and workers' health.

Link:
[BMJ Open](#)

Schram JLD, Schuring M, Oude Hengel KM, Burdorf A, Robroek SJW. The influence of chronic diseases and poor working conditions in working life expectancy across educational levels among older employees in the Netherlands. *Scand J Work Environ Health* 2022 Apr 26:4028.

Objectives

This study aims to estimate the influence of chronic diseases and poor working conditions – across educational levels – on working life expectancy (WLE) and working years lost (WYL) in the Dutch workforce after age 50.

Methods

Information on demographics, chronic diseases, and working conditions from 11 800 Dutch workers aged 50–66 years participating in the Study on Transitions in Employment, Ability and Motivation (STREAM) from 2010/2015 was enriched with monthly information on employment status from Statistics Netherlands up to 2018. In a multistate model, transitions were calculated between paid employment and involuntary exit (disability benefits, unemployment) and voluntary exit (economic inactivity, early retirement) to estimate the impact of education, chronic diseases, and working conditions on WLE and WYL between age 50 and 66.

Results

Workers with a chronic disease (up to 1.01 years) or unfavorable working conditions (up to 0.63 years) had more WYL due to involuntary pathways than workers with no chronic disease or favorable working conditions. The differences in WYL between workers with and without a chronic disease were slightly higher among workers with a lower education level (male: 0.85, female: 1.01 years) compared to workers with a high educational level (male: 0.72, female: 0.82 years). Given the higher prevalence of chronic diseases and unfavorable working conditions, WYL among lower educated workers were higher than among higher educated workers.

Conclusions

The presence of a chronic disease or unfavorable working conditions, more prevalent among lower educated workers, contribute substantially to WYL among older workers. This will increase educational inequalities in working careers.

Link:

[siweh](#)

Ots P, Oude Hengel KM, Burdorf A, Robroek SJW, Nieboer D, Schram JLD, Van Zon SKR, Brouwer S. Development and validation of a prediction model for unemployment and work disability among 55 950 Dutch workers. *European Journal of Public Health* 2022;1-8.

Background:

This study developed prediction models for involuntary exit from paid employment through unemployment and disability benefits and examined if predictors and discriminative ability of these models differ between five common chronic diseases.

Methods:

Data from workers in the Lifelines Cohort Study (n=55 950) were enriched with monthly information on employment status from Statistics Netherlands. Potential predictors included sociodemographic factors, chronic diseases, unhealthy behaviours and working conditions. Data were analyzed using cause-specific Cox regression analyses. Models were evaluated with the C-index and the positive and negative predictive values (PPV and NPV, respectively). The developed models were externally validated using data from the Study on Transitions in Employment, Ability and Motivation.

Results:

Being female, low education, depression, smoking, obesity, low development possibilities and low social support were predictors of unemployment and disability. Low meaning of work and low physical activity increased the risk for unemployment, while all chronic diseases increased the risk of disability benefits. The discriminative ability of the models of the development and validation cohort were low for unemployment (c=0.62; c=0.60) and disability benefits (c=0.68; c=0.75). After stratification for specific chronic diseases, the discriminative ability of models predicting disability benefits improved for cardiovascular disease (c=0.81), chronic obstructive pulmonary disease (c=0.74) and diabetes mellitus type 2 (c=0.74). The PPV was low while the NPV was high for all models.

Conclusion:

Taking workers' particular disease into account may contribute to an improved prediction of disability benefits, yet risk factors are better examined at the population level rather than at the individual level.

Link:

[PMID: 35613006](#)

Other reports

Ybema JF, Geuskens G, van den Heuvel S. Sustainable employability of older persons: Results from the first STREAM measurement [Duurzame inzetbaarheid van ouderen: Resultaten van de eerste meting van STREAM]. 2011, TNO. [Dutch]

Abstract

In this report we focus on findings that depict the sustainable employability of employees, self-employed persons, and non-employed persons using the first STREAM measurement. We use three indicators: health, education, and mobility in the labor market. Among employees those persons with a lower education and

those work-disabled score less well on certain aspects of sustainable employability and good health and little skills obsolescence are related to higher work ability, working because it is pleasurable, and with more opportunities to work. Concerning the sustainable employability of self-employed persons it appears that persons became self-employed because they were looking for new challenges and thus they are a positive selection of employed persons. They are, compared to employees and self-employed persons motivated by a different reason, higher educated and have higher vitality scores. Concerning non-employed, their work ability is strongly related to their vitality scores. Alongside unemployed persons, work disabled, retired, and housewives, are focused on trying to find paid employment.

Dutch:

[In deze notitie richten we ons op bevindingen die een beeld schetsen van de duurzame inzetbaarheid van werknemers, zelfstandigen en niet-werkenden, waarbij we gebruik maken van de eerste meting van STREAM. Daarbij richten we ons op drie pijlers: gezondheid, scholing en vorming en mobiliteit op de arbeidsmarkt. Wat betreft werknemers blijkt dat laagopgeleide en arbeidsgehandicapte werknemers minder goed scoren op een aantal aspecten van duurzame inzetbaarheid, en dat een goede gezondheid en weinig kennisveroudering samenhangen met een hoger werkvermogen, met werken omdat dit plezierig is en met meer de gelegenheid krijgen om te werken. Wat betreft de duurzame inzetbaarheid van zelfstandigen blijkt dat personen die als zelfstandige aan de slag gingen omdat zij een nieuwe uitdaging zochten een positieve selectie vormen van werkenden. Zij zijn vergeleken met werknemers en met zelfstandigen die om andere redenen als zelfstandige gingen werken hoger opgeleid en vitaler. Wat betreft de niet-werkenden blijkt hun werkvermogen sterk samen te hangen met hun vitaliteit. Naast werklozen blijkt ook een deel van de arbeidsongeschikten, gepensioneerden en huisvrouwen gericht te zijn op het verkrijgen van betaalde arbeid.]

Data

T1

Publication type

Policy report for the Dutch Ministry of Social Affairs and Employment

Link

[Beleidsnotitie T1](#)

Van den Heuvel S, Ybema JF, Leijten FRM, De Wind A. Sustainable employability of older persons: results from the first two STREAM measurements [Duurzame inzetbaarheid van ouderen: Resultaten van de eerste twee metingen van STREAM]. 2012, TNO. [Dutch]

Abstract

In this report we focus on determinants of sustainable employability, we use results from the first and second STREAM measurements and from interview studies carried out within STREAM. Specifically, we focus on how persons with health problems can remain productive and how sickness absence can be avoided. Furthermore, we explore what determines whether persons will continue participating in the labor market or exit the labor market. The most important findings with regard to maintaining productivity is that favorable work-related factors and personal well-being should be stimulated before health problems occur because these factors are important when adjustments need to be made and when a new balance in demands and ability has to be found in light of health problems. With regard to the influence of work-related factors and health on sickness absence it appears that especially favorable work-related factors (i.e. lower task demands, high autonomy) should be stimulated among persons with health problems. Concerning work-related factors that of influence on continued labor market participation, it appears that especially a good social climate contributes. Poor physical and mental health are important predictors of exit to unemployment and work disability. For exit to early retirement only physical health and financial opportunity play an important role.

In Dutch:

[In deze notitie richten we ons op voorspellers van duurzame inzetbaarheid, waarbij we gebruik maken van de resultaten van de eerste twee metingen van STREAM en van een interviewstudie bij deelnemers aan STREAM. Meer specifiek gaan we na hoe personen met gezondheidsproblemen toch productief kunnen blijven en hoe verzuim voorkomen kan worden. Daarnaast gaan we na wat bepaalt of mensen blijven participeren in arbeid dan wel uitstromen uit arbeid. De belangrijkste bevindingen met betrekking tot het behoud van productiviteit zijn dat positieve werkkenmerken en persoonlijke welzijn gestimuleerd moeten

worden voordat er gezondheidsproblemen optreden omdat deze factoren van belang zijn bij het doen van aanpassingen en het vinden van een balans wanneer er wel gezondheidsproblemen aanwezig zijn. Met betrekking tot de invloed van werkkenmerken en gezondheid op ziekteverzuim blijkt dat vooral bij mensen met gezondheidsproblemen het van belang is om goede werkomstandigheden (niet te hoge taakeisen, veel autonomie) te bevorderen. Met betrekking tot werkkenmerken die van invloed zijn op blijvende participatie in het werk blijkt met name een goed sociaal klimaat een bijdrage te leveren. Slechte fysieke en mentale gezondheid zijn belangrijke voorspellers voor de uitstroom naar werkloosheid en arbeidsongeschiktheid. Voor de uitstroom naar vroegpensioen geldt dit alleen voor fysieke gezondheid en speelt de financiële mogelijkheid om met werken te stoppen ook een hele belangrijke rol.]

Data

T1+T2

Publication type

Policy report for the Dutch Ministry of Social Affairs and Employment

Link

[Beleidsnotitie T2](#)

Ybema JF, Vos, F, Geuskens GA. Sustainable employability: from research to practical approaches [Duurzame inzetbaarheid: van onderzoek tot aanpak in de praktijk]. In: De Lange AH, Van der Heijden BIJM, editors. Sustainable employability of older employees: Best practices and interventions [Een leven lang inzetbaar? Duurzame inzetbaarheid op het werk: Interventies, best practices en integrale benaderingen]. Alphen aan de Rijn: Vakmedianet; 2013. p. 185-217. [Dutch]

Abstract

Description of the design and results of STREAM concerning transitions out of employment to retirement, unemployment, and work disability, and the changes in health alongside these transitions. In addition a description of the National Employability Plan: an approach for sustainable employability within companies. *In Dutch:*

[Beschrijving van de opzet en resultaten van STREAM ten aanzien van de uitstroom uit arbeid naar pensioen, werkloosheid en arbeidsongeschiktheid en de ontwikkelingen in gezondheid bij deze transitie. Daarnaast gekoppeld een beschrijving van het Nationaal Inzetbaarheidsplan: een aanpak van duurzame inzetbaarheid in bedrijven.]

Data

T1+T2

Publication type

Chapter in:

de Lange A, van der Heijden B. Sustainable employability of older employees: Best practices and interventions [Duurzame inzetbaarheid van oudere werknemers: Best practices en interventies]. 2013, Vakmedianet. [Dutch]

Link

[vakmedianetshop](#)

Geuskens G, Van den Heuvel S, De Wind A, Leijten F. Study on Transitions in Employment, Ability and Motivation (STREAM): Overview of results [Study on Transitions in Employment, Ability and Motivation (STREAM): Overzicht van de resultaten]. TNO, 2014. [Dutch]

Abstract

This report contains the results of the first 19 studies, carried out with STREAM data. The focus is on three topics: 'work ability and productivity', 'job mobility' and 'early retirement and working longer'. Conclusions:

- Health, in particular mental health, and work related factors affect work ability and productivity of older workers.
- Multi-jobbing may affect sustainable employability positively as well as negatively; a negative effect of demotion was found.

- A wide range of factors – health, work factors, skills, social and financial factors, work ability, motivation, and opportunity to work – affect early retirement and working longer.

In Dutch:

[Dit rapport bevat de resultaten van de eerste 19 studies die met de STREAM data zijn uitgevoerd. Drie onderwerpen staan centraal: ‘werkvermogen en productiviteit’, ‘baanmobiliteit’ en ‘vroegpensioen en doorwerken’. Conclusies:

- *Gezondheid, met name mentale gezondheid, en werkgerelateerde factoren beïnvloeden het werkvermogen en de productiviteit van oudere werknemers.*
- *Het combineren van meerdere banen kan de duurzame inzetbaarheid zowel positief als negatief beïnvloeden, terwijl voor demotie een negatief effect is gevonden.*
- *Een brede range van factoren, namelijk gezondheid, werkkenmerken, kennis en vaardigheden, sociale en financiële factoren, werkvermogen, werkmotivatie en gelegenheid om te werken, zijn van invloed op vroegpensioen en doorwerken na pensioen.]*

Data

T1+T2+T3+T4

Publication type

Policy report for the Dutch Ministry of Social Affairs and Employment

Link

[Beleidsnotitie 2014](#)

Van den Heuvel S, Leijten F, De Vroome E, Geuskens G. The relative contribution of determinants of sustainable employability among ageing workers: STREAM analysis 2010-2013 [Het relatieve belang van determinanten van duurzame inzetbaarheid bij oudere werknemers: Integrale analyses STREAM 2010-2013]. TNO, 2016 [Dutch]

Abstract

Indicators for sustainable employability are work ability, productivity, sick leave, estimated labor market position, disability, unemployment, early retirement. An unfavourable score on one or more indicators is predicted by a broad range of determinants: health, work factors, knowledge and skills, social factors, financial factors and motivation. Health, and to a lesser extent work engagement, are strong predictors for several indicators of sustainable employability. For example, a poor mental and physical health are strongly related to a low work ability (OR 1.7 and 2.0), sickness absence (OR 1.6 and 2.3) and disability (OR 1.9 and 6.0). Low work engagement is strongly related to low work ability (OR 1.9). These relations between determinants and indicators of sustainable employability are rather similar in subgroups of workers. Also at the population level, health and work engagement have a large effect on sustainable employability. The potential impact of an improvement in work factors, personal and financial factors is somewhat smaller.

In Dutch:

Duurzame inzetbaarheid is geoperationaliseerd met de indicatoren werkvermogen, productiviteit, verzuim, arbeidsmarktpositie, arbeidsongeschiktheid, werkloosheid en vroegpensioen. Een ongunstige score op één of meer van de indicatoren van duurzame inzetbaarheid wordt voorspeld door een brede range determinanten: Gezondheid, werkkenmerken, kennis en vaardigheden, sociale factoren, financiële factoren en werkmotivatie. Met name gezondheid en, in iets mindere mate, bevlogenheid zijn relatief sterke voorspellers voor meerdere indicatoren van duurzame inzetbaarheid. Een slechte mentale en fysieke gezondheid hangen bijvoorbeeld relatief sterk samen met een laag werkvermogen (OR 1,7 en 2,0), verzuim (OR 1,6 en 2,3) en arbeidsongeschiktheid (OR 1,9 en 6,0). Een lage bevlogenheid hangt bijvoorbeeld relatief sterk samen met een laag werkvermogen (OR 1,9). De relaties tussen determinanten en DI-indicatoren lijken niet (sterk) te verschillen tussen verschillende groepen werknemers.

Ook op populatieniveau hebben gezondheid en bevlogenheid relatief veel impact op duurzame inzetbaarheid. De potentiële impact van het verbeteren van specifieke werkkenmerken, leergedrag en de financiële situatie van het huishouden is op populatieniveau in het algemeen (iets) kleiner.

Data

T1+T2+T3+T4

Publication type

Policy report for the Dutch Ministry of Social Affairs and Employment

Link

[TNO repository](#)

Van de Meerakker, S. The Planned Retirement Age of Self-Employed and Employees. Master thesis Leiden University, Faculty Governance and Global Affairs, 2017.

Abstract

Self-employed are becoming an essential part of the Dutch labour market. Nowadays, one out of ten workers is self-employed and the expectation is that this ratio will increase. Many self-employed do not accumulate supplementary pensions, while they prefer to have a happy old age like employees. The share of self-employed in the Dutch labour force has increased faster than the average in the European Union in the last decade. As a result, consequences for the labour market, taxes, and social security systems in the Netherlands may be greater than in other European countries.

This research addresses the question to what extent the planned retirement age of self-employed and employees is affected by working conditions. Data from 2015 of the Study on Transitions in Employment, Ability and Motivation of Dutch Research Institute TNO is used to present an understanding in the relationship between working conditions and the planned retirement age. The research group consists of 562 self-employed without employees and 7,754 employees, from 45 to 70 years old. First, the question that is addressed is whether the planned retirement age of self-employed and employees differ. Second, the question that is addressed is whether these differences are due to the working conditions of self-employed and employees. Three regression analyses are conducted: a multiple regression analysis for employees, a multiple regression analysis for self-employed, and a multiple regression analysis with interaction terms. Furthermore, an Oaxaca decomposition is established to explain whether the differences in the average planned retirement age of self-employed and employees are due to differences in the mean values of the working conditions, or due to differences in the effects of the working conditions.

The main conclusion of this research is that working conditions to a certain extent are associated with the planned retirement age of self-employed and employees. The research shows that there are actual differences in the planned retirement age of self-employed and employees. Also, the working conditions partly differ between self-employed and employees. Especially financial support shows a statistically significant difference in the effect on the planned retirement age of self-employed and employees. The negative effect of a good salary on the planned retirement age of self-employed is greater than the negative effect of a good salary on the planned retirement age of employees. The better their financial support, the earlier self-employed plan to retire. This research is an important addition to previous studies and shows the importance of research on self-employment. The research contributes to the debate of the adequacy of the retirement accumulation of self-employed and a future-proof pension system for self-employed and employees.

Data

T5

Publication type

Master thesis Leiden University

Link

[Netspar](#)

Van den Heuvel S, Van Dam L, Oude Hengel K. Quality of work – effect on early retirement [Kwaliteit van werk – invloed op vervroegde uitstroom]. In: Niks I, Sanders J, Van den Heuvel S, Venema A, editors. Sustainable employability in the Netherlands [Duurzame inzetbaarheid in Nederland]. Leiden: TNO, 2018. [Dutch]

Abstract

Quality of work seems to be decreasing in the past few years. Longitudinal data of the Study on Transitions in Employment, Ability and Motivation (STREAM) were analysed to study the effect of quality of work on exit from work during 2010 and 2016. Results showed that quality indicators physical work environment, social work environment and job control seemed to prevent an early exit from work. The quality of work of lower educated persons was less than of higher educated persons. The effect of quality indicators on exit from work was not dependent on the educational status.

In Dutch:

[De laatste jaren lijkt er een neergaande trend te zijn in de kwaliteit van werk. In dit hoofdstuk gaan we in op wat deze kwaliteit inhoudt en wat de invloed is van de kwaliteit van werk op het langer doorwerken van oudere werknemers (45 jaar en ouder). Met behulp van onderzoek met de longitudinale data van de Study on Transitions in Employment, Ability and Motivation (STREAM) hebben we gekeken naar de invloed van de kwaliteit van werk op de uitstroom uit werk tussen 2010 en 2016 van personen die in 2010 werkzaam waren. Uit de resultaten blijkt dat de kwaliteitsindicatoren goede fysieke werkomgeving, goede sociale werkomgeving en voldoende regelmogelijkheden beschermend lijken te werken tegen vervroegde uitstroom. Verder zien we dat laag opgeleiden een mindere kwaliteit van werk hebben dan midden en hoog opgeleiden en dat er grote verschillen per sector zijn. De invloed van de verschillende kwaliteitsindicatoren op uitstroom lijkt niet of nauwelijks per opleidingsniveau te verschillen.]

Data

T1-T6

Publication type

Chapter in:

Niks I, Sanders J, Van den Heuvel S, Venema A, editors. Sustainable employability in the Netherlands [Duurzame inzetbaarheid in Nederland]. Leiden: TNO, 2018. [Dutch]

Link

[TNO monitorarbeid](#)

Bom J, Bakx P, Schut F, Van Doorslaer E. Health effects of caring for and about parents and spouses. Netspar Academic Series, 2018.

Abstract

Informal caregiving is a potentially attractive alternative to formal care but may entail health costs for the caregiver. We examine the mental and physical health impact of providing informal care and disentangle the caregiving effect – the effect of caring for someone in need – from the family effect – the effect of caring about someone in need. We account for potential endogeneity in the caregiving decision and control for previous health status using Arellano-Bond difference GMM models. We use four waves (2010-2013) of panel data from the Dutch Study on Transitions in Employment, Ability and Motivation (STREAM). We find that caregiving harms the mental health of caregivers; this effect is mainly present for spousal caregivers. A negative health shock of a family member also has a direct negative effect on mental health, providing evidence of a family effect. These findings imply that most studies may have overestimated the negative health effects of caregiving by not accounting adequately for the family effect. As the caregiving effect differs strongly between various types of caregivers, policies to counteract this effect should specifically target subgroups of caregivers that carry the largest burden of informal caregiving.

Publication type

Netspar paper

Link

[Netspar](#)

Damman M, Zwier D, Van den Heuvel SG. Differences in retirement preferences between the self-employed and employees: Do job characteristics play an explanatory role? Netspar Design Paper 154, 2020.

Abstract

Prior research has shown that self-employed workers are on average more likely than employees to expect to retire relatively late and to actually do so, and to report uncertainty about their envisioned retirement timing. Aside from frequently mentioned explanations that focus on financial resources and institutional structures, these differences in retirement processes may relate to the job characteristics of the self-employed and employees. The central question of this study is: To what extent and how can differences in self-reported retirement timing preferences between self-employed workers and employees in the Netherlands be explained by differences in their job characteristics (i.e., flexibility, autonomy, skills-job match, and job security)? This study involved analysis of 8,192 employees and 626 self-employed respondents without personnel (age 45-64) who participated in 2016 in the Study on Transitions in Employment, Ability and Motivation (STREAM). Retirement timing preferences are measured by means of a question that asked respondents until what age they would like to continue working. The self-employed

workers studied prefer on average to retire 2.2 years later than employees. The outcome variable of this study distinguished between early (< age 65), on-time (≥ 65 and ≤ 67), late (> 67), and uncertain (“don’t know”) retirement preferences. Multinomial logistic regression analysis shows that the self-employed are more likely than employees to prefer late retirement (vs. on-time) and to report uncertainty about their preferred retirement age. Mediation analysis based on the Karlson-Holm-Breen (KHB) method shows that the job characteristics studied mediate 16% of the relationship between self-employment and late retirement preferences. When interpreting the study findings, it should be noted that the current study focuses on differences in retirement timing preferences between the self-employed and employees. For future research it would be relevant as well to study how retirement timing preferences differ within the highly diverse group of the self-employed.

Publication type

Netspar paper

Link

[Netspar](#)

Van den Heuvel S, Koopmans L. Duurzame Inzetbaarheid – Wat is de invloed van factoren als werk, gezondheid, kennis en vaardigheden, motivatie en financiën? Leiden, TNO, 2020.

Gezondheid en motivatie zijn de belangrijkste factoren die van invloed zijn op een lager werkvermogen en op uitstroom uit werk. Een groep waar het minder goed mee gaat zijn de laag opgeleiden. Zij schatten hun arbeidsmarktpositie minder goed in dan hoog opgeleiden. Bovendien lopen laag opgeleiden meer risico op uitstroom naar arbeidsongeschiktheid dan voorheen. Ook lopen ze meer risico op uitstroom naar werkloosheid. Omdat laag opgeleiden beduidend minder vaak uitstromen naar vroegpensioen, is de totale uitstroom in deze groep niet groter dan de hoog of midden opgeleiden. Dit duidt er waarschijnlijk op dat laag opgeleiden niet de financiële mogelijkheid hebben om eerder te stoppen met werken. Vrouwen hebben een groter risico op uitstroom dan mannen. Het aantal werknemers dat met vroegpensioen gaat daalt en komt vooral voor bij een hoog opgeleide groep met voldoende financiële middelen.

Publication type

Policy report for the Dutch Ministry of Social Affairs and Employment

Link

[TNO Publications](#)