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Predictors for re-employment success in newly unemployed: A prospective cohort study

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ABSTRACT

The aim of the present study was to examine which personal and situational factors affect reemployment success in persons in their first year of unemployment. In a prospective cohort study with a one-year follow-up, we investigated a sample of 3618 subjects who became unemployed. A survey was sent to all participants, including personal and situational factors, based on Wanberg's model, the Theory of Planned Behavior model and the Valence–Instrumentality–Expectancy model. Our results showed that ten key-factors predicted re-employment success in the first year after becoming unemployed. Knowing these factors, and in particular those which are amenable to change through any intervention program, may help to develop effective intervention strategies for those who facilitate reemployment in order to shorten the duration of unemployment.

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1. Introduction

A myriad of factors have been found to be related to re-employment success after becoming unemployed. In 2002 Wanberg et al. (Wanberg, Hough, & Song, 2002) proposed a comprehensive model of the variable groups associated with re-employment success in unemployed individuals. According to this model, a job seeker's re-employment success depends not only on the labor market's need for employees but also on job seekers' individual characteristics such as their job-related knowledge, skills, abilities, motivation, social capital, health status and financial need. A recent literature review (Wanberg, 2012) gives an extensive description of the available literature on the studies of the factors associated with successful re-employment. It concludes that most studies have focused on specific topics relevant to re-employment success. A meta-analysis of Kanfer et al. (Kanfer, Wanberg, & Kantrowitz, 2001) showed that several personality traits (e.g. extroversion, openness to experience, conscientiousness) and other individual variables (self-esteem and job-search self-efficacy) were related to unemployment duration. A few studies examined the relationship between (mental) health and re-employment success and tend to find that lower mental health slightly decelerates re-employment speed (Paul & Moser, 2009; Vinokur & Schul, 2002) or has no effect at all on re-employment success (Ginexi, Howe, & Caplan, 2000; Wanberg, Zhu, & Van Hooft, 2010). Lötters et al. (Lötters et al., 2013) examined the relation between perceived health and unemployment status in a sample of long-term unemployed and found that ill health was a strong predictor for unemployment after 12 months, which confirmed the findings of previous studies by Garcia-Gomez et al. (Garcia-Gomez, Jones, & Rice, 2010; Stewart, 2001).

Only a few researches has broadly focused on delineating the myriad of factors related to re-employment success. The authors of the Wanberg model operationalized most of the variable groups and found that the variables explained only a small percentage of the variance in an array of re-employment success outcomes (Kanfer et al., 2001; Wanberg et al., 2002). They suggested that knowledge of additional variables and interactions of variables, and more adequate ways to measure relevant variables are needed to better explain

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re-employment outcomes. In a study by Van Hooft et al. (Van Hooft, Born, Taris, Van der Flier, & Blonk, 2004) the application of Ajzen's (Ajzen, 1985, 1991) Theory of Planned Behavior (TPB) to predict job search intention and behavior was confirmed in a group of unemployed individuals. The job search attitude–intention–behavior relationship was stronger in the unemployed group than in the employed group. They also found that work valence was a significant predictor of job search behavior in the unemployed group, which is consistent with the expectancy-value theory of Vroom (Vroom, 1964) and in accordance with previous research (Feather & O'Brien, 1987; Vinokur, Schul, & Caplan, 1987). This relationship was partially mediated by job search attitude and completely mediated by job search intention. The results of the large number of studies focusing on predictors for re-employment success have added to a better understanding of the job search and re-employment process.

Although several studies have been conducted aiming to find out the predictive validity of several factors on re-employment, implementation of this knowledge into an instrument for daily practice is still a necessary step to be taken. The Dutch Social Security Agency (SSA), who is responsible for social security regulations and provides unemployment benefit and unemployment counseling, asked the authors to develop such an instrument for the assessment and diagnosis of the unemployed individuals who apply for unemployment benefits at the SSA. Such an instrument may help to choose services related to the clients personal characteristics, as not all job seekers will likely benefit to the same extent from the same type of assistance. As offering employment counseling to all individuals who become unemployed is too expensive nowadays, and the government imposed a cost reduction of 50% in 2015, the instrument may also help to select those individuals who need employment counseling because of their low re-employment chances.

In developing such an instrument for the Dutch SSA, the first step was to examine which factors predict re-employment. Against this background, the aim of the present study was to examine which personal and situational factors affect re-employment success in persons in their first year of unemployment.

2. Method

2.1. Participants and procedures

The study is a prospective cohort study with one-year follow-up among persons claiming unemployment benefit. To be eligible for unemployment benefits in the Netherlands one has to be on the payroll for at least 26 weeks in the 36 weeks before dismissal. Moreover, the dismissal should not be imputed by one's own fault, and the person on unemployment benefit must be available for the labor force. Within the time-period of this study, people could receive unemployment benefits for a minimum term of 3 months and a maximum term of 38 months depending on the number of years worked in paid labor. Individuals that obtain an unemployment benefit are obliged to seek a job or to follow a vocational rehabilitation trajectory.

Participants eligible for the present study were recruited using registry data from the SSA in the North-Holland province of the Netherlands, including cities as Amsterdam, Haarlem, Alkmaar and Den Helder. All subjects who applied for unemployment benefit and were registered by the SSA as unemployed, received an information letter and a survey by postal mail. The questionnaire took 20–30 min to complete and had to be returned in a prepaid envelop within ten days. Participation was voluntary and support by telephone was continuously available during the inclusion period.

Each questionnaire had a serial number that was anonymously linked with the SSA registers (POLIS data) at baseline and during follow-up. Subjects were asked to return the completed survey to the researchers at the university. Completed questionnaires of subjects who were not in the SSA registers during the total follow-up period because of maximum duration of the benefit was less than 12 months, and subjects who were not applicable to return-to-work because of pregnancy, sickness or death, and reaching retirement age during follow-up were excluded. Also subjects charged for fraud and those who did not follow the regulation's procedural rules for pension claims were excluded. Finally, completed surveys were only included if they were returned within one month after the application for unemployment benefits.

3. Measures

3.1. Independent variables

First, we operationalized the variable groups of the Wanberg model (Kanfer et al., 2001; Wanberg et al., 2002) by using constructs of the Theory of Planned Behavior (TPB: Ajzen, 1985, 1991) and the Valence–Instrumentality–Expectancy Model (VIE: Vroom, 1964) (see Table 1). Next, a questionnaire was developed and tested in a cross-sectional pilot study (published in Dutch report). Factors with 2 or 3 items and with minimal validity (Cronbach's alpha > 0.50) were included in the final questionnaire for the present study (see Table 1). To measure perceived health status and psychosomatic complaints we included the Dutch perceived health questionnaire (in Dutch: Vragenlijst Onderzoek Ervaren Gezondheid) (Dirken, 1969, Kompier & Marcelissen, 1990); which consists of 13 items. Work-ability was measured with the single-item of the Work Ability Index (Tuomi, Ilmarinen, Jahkola, Katajarinne, & Tulkki, 1998), which compares current work ability to life time best on a 1 to 10 scale. This single-item question on work ability has shown to have a strong association with the complete Work Ability Index in employees on sickness absence (Ahlstrom, Grimby-Ekman, Hagberg, & Dellve, 2010; Kujala et al., 2006), and is nowadays often used in research (De Vries, Reneman, Groothoff, Geertzen, & Brouwer, 2013; Koolhaas, Van der Klink, De Boer, Groothoff, & Brouwer, 2014; Van den Berg, Elders, De Zwart, & Burdorf, 2009). We measured general work ability, physical and mental work ability separately. We used four or five answer options:

Table 1Description of the content of the questionnaire: (sub)factors, theoretical models, number of items (#items), Chronbach's alpha (α).

Factors	Model	# of items	α
<i>General characteristics</i>			
Benefits next to Unemployment benefit		1	
Employment history			
Overall number of years worked		1	
Number of years worked in last job		1	
Terms of employment in last job		1	
Number of employers in 5 years before unemployment		1	
Overall number of self quits		1	
Hours/week work next to unemployment hrs: paid work		1	
Hours/week work next to unemployment hrs: unpaid/volunteer		1	
Characteristics of the family (e.g. income, ages)		1	
Wage earner/breadwinner		1	
Number of family members in household		1	
Number of family members in household with regular income		1	
Ethnicity		1	
Understanding of Dutch language		1	
Received help/support with completing questionnaire		1	
<i>Job search behavior</i>	Wanberg, TPB		
Application preparations		3	0.57
Approaching possible employers		3	0.79
Sending application letters in response to vacancy		1	x
Approaching acquaintances and putting in unsolicited applications		3	0.55
<i>Self-efficacy in job search behavior</i>	TPB		
Application preparation		3	0.69
Approaching possible employers		2	0.72
Being able to impress during application interview		3	0.73
<i>Job search attitude</i>	TPB		
Perceived benefits and satisfaction of searching for work (valence)		2	0.77
Usefulness/necessity of searching for work		2	0.81
<i>Subjective norm</i>	Wanberg TPB		
Perceived pressure from acquaintances and significant others		1	x
Social support		3	0.74
<i>Job search intention</i>	TPB		
Job search intention: where, how, frequency		3	0.83
Job search hours per day (average number)		1	x
<i>Experienced job search barriers due to</i>	Wanberg	12	
Physical health problems			x
Mental health problems			x
Financial problems			x
Lack of (affordable) child care			x
Care taking of the family			x
Inadequate education			x
Not enough or inadequate work experience			x
Problems with Dutch language			x
Age (feeling too young/too old)			x
(Foreign) origin			x
Deviating working hours: shifts, irregular hours			x
# of hours/week able to work			x
Job search quality	Wanberg	3	0.70
<i>Work motivation</i>	VIE	3	0.81
<i>Disadvantages of not working</i>	VIE		
Health or malaise problems due to not working		3	0.78
Psychosocial problems due to not working		3	0.90
(Financial) uncertainty due to not working		2	0.52
Pros and cons of not working: (dis)advantageous		1	x
<i>Self-esteem</i>	VIE		
Negative self-esteem		3	0.70
Positive self-esteem		3	0.72
<i>Attribution of unemployment to internal or external factors</i>	VIE		
Internal unstable attribution		3	0.63
External unstable attribution		3	0.55
Internal stable attribution		3	0.60
External stable attribution		3	0.43
<i>Willingness to accept (at onset job)</i>	Wanberg		
Deviating working hours: shifts, irregular hours		3	0.93
Physically heavy and dirty work		1	x
Traveling time to work (compensated)		2	0.53
Work that requires extra training and/or education		3	0.64
Full-time job (35–40 h/week)		1	x
Work beneath own level or Low-paid work		3	0.63

Table 1 (continued)

Factors	Model	# of items	α
<i>Wishes regarding job</i>	Wanberg		
Varied and challenging work, work with social contacts		3	0.69
Good terms of employment: salary, vacation, job security		3	0.51
<i>Experienced health problems (VOEG)</i>	Wanberg		0.85
<i>Work ability</i>	Wanberg		
General work ability		1	x
Physical work ability		1	x
Mental work ability		1	x
<i>Economic need</i>	Wanberg		
Financial necessity to find work within 2 months		1	x
<i>Self-reported labor market demand</i>	Wanberg		
Positive expectation on return to work		3	0.80
Feeling too ill to work		1	x

1 (never) to 4 (very often) and 1 (totally disagree) to 5 (totally agree). Data about age, gender, and educational level were derived from SSA registers.

3.2. Dependent variable

To monitor re-employment success we obtained data from the POLIS registry on employment status of all respondents after one-year follow-up. All gainful employment in the Netherlands (work status) is registered in the POLIS registry. Using the respondent's unique social security number, we obtained from the SSA registry the POLIS data on work status of respondents at baseline and at one-year follow-up. Only paid work – for any number of hours – was included. Work status was operationalized as re-employment (yes/no) at one-year follow-up based on the SSA-registry.

3.3. Statistical analysis

We used binomial logistic regression to analyze associations between predictors and re-employment success at one-year follow-up. We first calculated mean scores for those independent (sub)factors and transformed all (sub)factor scores into a 0–100 range. Then we performed univariate logistic regression analyses with all independent variables to describe participants characteristics and to select variables for multivariate models using an OR <0.99 or >1.01. We decided not to use p-value to select items, because of the large sample size ($n = 3618$). All independent variables included in the analyses were checked for multi-collinearity, because a high level of collinearity will lead to unstable and unreliable estimations (Öztürk & Akdeniz, 2000). This was done with the VIF (Variance Inflation Factor), which had to be <10 (Field, 2005). The univariate regression analyses resulted in a selection of 24 potential predictors. The final model was tested with a forward stepdown logistic regression analysis. All analyses were carried out using SPSS 16 for Windows.

4. Results

4.1. Sample description

In total, 24,289 subjects were eligible, of which 6576 (27%) voluntary completed the survey and returned it to the researchers of the university. Non-response analyses showed that the group of responders consisted of significant more female (52 vs 49%), and more high-educated persons compared to the non-responders (35 vs 30%). Furthermore, more non-responders worked in temporary employment before becoming unemployed compared to responders (15 vs 11%).

Table 2

Baseline sociodemographic characteristics for the total study sample and by re-employment status at one-year follow-up.

Independent variables	Total (N = 3618)	Re-employed (N = 2082)	Unemployed (N = 1536)
Age, mean (sd)	43.8 (9.7)	40.9 (9.5)	47.8 (8.5)
Gender (male, %)	50	47	53
Educational level (%)			
Low	21	17	25
Medium	39	39	40
High	40	44	35
Marital status (married/living together, %)	63	63	62
Overall number of years worked, mean (sd)	21.0 (10.6)	18.6 (9.8)	24.4 (10.7)
Number of years in last job, mean (sd)	6.8 (8.7)	5.0 (7.1)	8.5 (10.1)
Problems with Dutch language (yes, %)	5	4	8
Immigrant (%)	23	21	25

Of the 6576 responders, 1281 subjects were excluded because the maximum duration of the benefit was less than 12 months, pregnancy, sickness or death. Another 1727 subjects were excluded because of incomplete cases. Of the total sample used for the analyses ($n = 3618$), 2082 subjects (57.5%) were re-employed, while 1536 subjects (42.5%) were still unemployed at one-year follow-up. Table 2 shows the socio-demographic factors for the total sample at baseline, and by re-employment status at one-year follow-up. The total sample comprised 50% males. The mean age was 43.8 year (SD 9.7 year). Most respondents lived with a partner (63%), and were medium to high educated (39% and 40%).

Of those who were re-employed after one-year follow-up, 47% was male, the mean age was 40.9 years (sd 9.5) and 44% had a high educational level. Moreover, 63% was married or living together, 21% was immigrant (i.e. at least one of the parents was born abroad). Of those who were still unemployed, 53% was male, the mean age was 47.8 years (sd 8.5) and 35% had a high educational level, 62% was married or living together.

4.2. Predictors for re-employment status

Twenty-four variables were significantly associated with re-employment and met the inclusion criterion for the multivariate analysis ($OR < 0.99$ or > 1.01). In the forward stepdown multivariate logistic regression analysis, ten factors were found as predictors for re-employment success. The right column in Table 3 shows that the likelihood of re-entering the labor force gradually declined with increasing age, and with higher number of years worked in previous job. People who have problems with Dutch language were less likely to re-enter paid employment after becoming unemployed. Poorer perceived health, feeling too ill to work and more external attributions negatively influenced re-employment after unemployment. People who have positive re-employment expectations, higher job search intention and reported more active job search behavior (approaching possible employers) were more likely to re-enter paid employment. Higher general work ability positively influenced re-employment in the first-year of unemployment. The Nagelkerke R^2 was 0.27, the Cox & Snell's R^2 was 0.20. The model re-classified 69.2% of the cases correctly, which was about 12% higher than the model without these factors (57.5%).

5. Discussion

The present study results showed ten factors predicting re-employment success within 12 months in a sample of newly unemployed. Six of these predictors concern characteristics which negatively influence the re-employment chance within 12 months after becoming unemployed: higher age, not or insufficient understanding of the Dutch language, higher number of years worked in last occupation, feeling too ill to work, experiencing health problems and higher external unstable attribution (when the job-seeker attributes the unemployment situation mostly to external variable factors). The other four predictors influence

Table 3

Uni- and multivariate logistic regression analyses for independent variables at baseline and future re-employment status after one-year follow-up ($n = 3618$).

Independent variables ^a (0–100)	Univariate				Multivariate (forward stepdown)			
	Exp (B)	95% CI		P-value (Wald)	Exp (B)	95% CI		P-value (Wald)
		Lower	Upper			Lower	Upper	
Age	0.962	0.959	0.966	<0.001	0.971	0.964	0.978	<0.001
Educational level	1.011	1.008	1.014	<0.001				
Overall number of years worked	0.974	0.971	0.977	<0.001				
Number of years in last job	0.989	0.987	0.991	<0.001	0.995	0.993	0.998	<0.001
Problems with Dutch language	0.984	0.977	0.990	<0.001	0.988	0.980	0.996	0.004
Re-employment expectations	1.025	1.022	1.028	<0.001	1.009	1.006	1.013	<0.001
Feeling too ill to work	0.980	0.976	0.983	<0.001	0.995	0.991	1.000	0.051
Job search behavior (approaching possible employers)	1.019	1.016	1.023	<0.001	1.011	1.007	1.014	<0.001
Self-efficacy in job search behavior	1.013	0.010	1.017	<0.001				
Work attitude	1.014	1.011	1.017	<0.001				
Social support	1.016	1.012	1.019	<0.001				
Job search intention	1.023	1.020	1.027	<0.001	1.007	1.002	1.012	0.004
Physical health problems	0.986	0.983	0.988	<0.001				
Mental health problems	0.989	0.986	0.992	<0.001				
Age (feeling too young/too old)	0.984	0.982	0.986	<0.001				
Job search quality	1.012	1.009	1.015	<0.001				
Work Motivation	1.018	1.014	1.022	<0.001				
Internal attribution	1.013	1.010	1.017	<0.001				
External attribution	0.985	0.982	0.988	<0.001	0.995	0.991	0.999	0.014
Wishes regarding work: work with social contact	1.014	1.011	1.018	<0.001				
Experienced health problems	0.988	0.985	0.990	<0.001	0.996	0.992	1.000	0.032
General work ability	1.030	1.025	1.034	<0.001	1.007	1.001	1.014	0.029
Physical work ability	1.022	1.019	1.025	<0.001				
Mental work ability	1.020	1.016	1.023	<0.001				

^a Factors included in the multivariate regression analysis after conducted univariate regression analyses.

the chances of re-employment success positively: positive re-employment expectations, high score on job-search behavior (i.e. actively approaching possible employers), a high job-search intention, and higher general work ability.

The explained variance of the model with ten factors in terms of Nagelkerke's pseudo R^2 and the Cox & Snell's R^2 is encouraging, certainly when compared with other studies. Wanberg et al. (Wanberg et al., 2002) found in their study of 1765 jobseekers a Cox & Snell $R^2 = 0.07$ between the chances of work and various personal characteristics. Van Hooft et al. (Van Hooft et al., 2004) found a correlation of $r = 0.34$ ($R^2 = 0.12$) between these factors and Kanfer et al. (Kanfer et al., 2001) a correlation of $r = 0.21$ ($R^2 = 0.04$); although a common R^2 and a pseudo R^2 are not simply comparable (Nagelkerke, 1991). However, there is still a large unexplained variance, which indicates that further looking for predictors of re-employment may be profitable.

The finding that re-employment success is influenced by both amendable and non-amendable factors is in agreement with the findings of various other studies (Kanfer et al., 2001; Saks, 2005; Thomsen, 2009; Wanberg et al., 2002). When conducting the final multivariate logistic regression-analysis without the non-amendable factors (age, number of working years in last occupation) a Nagelkerke $R^2 = 0.194$ would be found, whereas such an analysis with only the two non-amendable factors would have a declared variance according to the Nagelkerke criterion of $R^2 = 0.171$.

Further research is needed to establish, maintain and improve the quality of the prediction model. The question is whether the predictive validity of the present model for the distinction between short-term and long-term unemployment changes significantly when the model is applied to other unemployed samples in the Netherlands (generalizability), taking into account a continuous changing labor market and various sub-categories of unemployed people (e.g. based on age, gender, education and health, ethnicity or other factors). Post-hoc analyses (not shown) with regard to the possible effects of the economic crisis so far are very promising as for the solidity of the prediction model found.

5.1. Strengths and limitations

A strength of this study are the large sample size, the longitudinal design, and the use of register data for work outcome, allowing accurate assessment of work outcome during the follow-up for the complete sample. Furthermore, our study assessed multiple predictors of re-employment in a cohort of unemployment claimants in the first month after becoming unemployed. A limitation is the low response rate of 27%, which may have led to selection bias, since the non-response analysis showed that the study sample was not fully representative for the target population as to gender, educational level, and employment contract. However, this response rate is not exceptionally low when compared with similar studies (Van Hooft et al., 2004; Wanberg et al., 2002). Furthermore, this study included claimants in the Western region of the Netherlands, including the more urban areas of the Netherlands. Whether our findings are generalizable to the other (more rural) areas of the Netherlands is disputable, as the employment market (number of available jobs) differs across these regions and may affect the re-employment chances. It is difficult to predict whether and how our selected final sample for the analyses might have influenced the results we found. Further research is needed to study the predictive validity of the present model on national level.

5.2. Practical and scientific implications

Identifying factors that are amendable to change through any intervention program may help to develop effective intervention strategies to shorten the duration of unemployment and to facilitate those job-seekers who need some extra help during the re-employment process. For professionals assisting unemployed job seekers these ten key-predictors can be helpful to identify those most at risk of becoming long-term unemployed and to offer the unemployed adequate assistance. Moreover, it can be used to select those clients who, based on their profile, have low chances of re-employment and need extra support and coaching. In several other countries, e.g. Australia (Department of Education, Employment and Workplace Relations, 2009), Ireland (O'Connell, McGuinness, & Kelly, 2012) and Denmark (Rosholm, Staghøj, Svarer, & Hammer, 2006), national research teams have assessed the potential for the development of a profiling model for the unemployed. Moreover, they all argued that the adoption of an unemployment profiling system will result in both equity and efficiency gains to Public Employment Services. It provides early identification of those most at risk of becoming long term unemployed and employment assistance is better targeted to the individual needs of job seeker and those who will benefit most. However, further scientific evidence about the psychometric properties of these instruments has not been published. The next step should be to examine the predictive validity of such profile models instruments. Moreover, the relevance of these predictors in specific risk-groups (older, low-educated and/or ill-health unemployed) needs to be assessed.

6. Conclusion

Ten key-factors of re-employment success were found in the first year after becoming unemployed in the Netherlands. Knowing these factors, and in particular those which are amendable to change through any intervention program, may help to develop effective intervention strategies to shorten the duration of unemployment by offering support to those who facilitate re-employment.

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References

- Ahlstrom, L., Grimby-Ekman, A., Hagberg, M., & Dellve, L. (2010). The work ability index and single-item question: Associations with sick leave, symptoms, and health. A prospective study of women on long term sick leave. *Scandinavian Journal of Work, Environment and Health*, 36, 404–412.
- Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In J. Kuhl, & J. Beckmann (Eds.), *Action control: From cognition to behavior* (pp. 11–39). Berlin, Germany: Springer-Verlag.
- Ajzen, I. (1991). The theory of planned behaviour. *Organisational behaviour and human decision processes*, 50, 179–211.
- De Vries, H. J., Reneman, M. F., Groothoff, J. W., Geertzen, J. H. B., & Brouwer, S. (2013). Self-reported work ability and work performance in workers with chronic non-specific musculoskeletal pain. *Journal of Occupational Rehabilitation*, 23, 1–10.
- Department of Education, Employment and Workplace Relations (2009). *Review of the Jobseeker Classification Instrument*. Canberra: Commonwealth Department of Education, Employment and Workplace Relations.
- Dirken, J. M. (1969). *Arbeid en stress. Het vaststellen van aanpassingsproblemen in werksituaties [Work and stress. The assessment of behavioral problems in work situations]*. Groningen: JB Wolters.
- Feather, N. T., & O'Brien, G. E. (1987). Looking for employment: An expectancy-valence analysis of job-seeking behaviour among young people. *British Journal of Psychology*, 78, 251–272.
- Field, A. (2005). *Discovering 1* (2nd ed.). London: Sage.
- Garcia-Gomez, P., Jones, A. M., & Rice, N. (2010). Health effects on labour market exits and entries. *Labour Economics*, 17, 62–76.
- Ginexi, E. M., Howe, G. W., & Caplan, R. D. (2000). Depression and control beliefs in relation to re-employment: What are the directions of the effect? *Journal of Occupational Health Psychology*, 5, 323–336.
- Kanfer, R., Wanberg, C. R., & Kantrowitz, T. M. (2001). Job search and employment: a personality-motivational analysis and meta-analytic review. *Journal of Applied Psychology*, 86, 837–855.
- Kompier, M. A. J., & Marcelissen, F. H. G. (1990). *Handboek werkstress [Handbook work stress]*. Amsterdam, The Netherlands: NIA.
- Koolhaas, W., Van der Klink, J. J. L., De Boer, M. R., Groothoff, J. W., & Brouwer, S. (2014). Chronic health conditions and work ability in the ageing workforce: The impact of work conditions, psychosocial factors and perceived health. *International Archives of Environmental Health*, 87, 433–443.
- Kujala, V. I., Tammelin, T., Remes, J., Vammavaara, E., Ek, E., & Laitinen, J. (2006). Work ability index of young employees and their sickness absence during the following year. *Scandinavian Journal of Work, Environment and Health*, 32, 75–84.
- Lötters, F., Carlier, B. E., Bakker, B., Borgers, N., Schuring, M., & Burdorf, A. (2013). The influence of perceived health on labour participation among long term unemployed. *Journal of Occupational Rehabilitation*, 23, 300–308.
- Nagelkerke, N. (1991). A note on a general definition of the coefficient of determination. *Biometrika*, 78, 691–692.
- O'Connell, P. J., McGuinness, S., & Kelly, E. (2012). The transition from short- to long-term unemployment: A statistical profiling model for Ireland. *The Economic and Social Review*, 43(1), 135–164.
- Öztürk, F., & Akdeniz, F. (2000). Ill-conditioning and multi-collinearity. *Linear Algebra and its Applications*, 321, 295–306.
- Paul, K. I., & Moser, K. (2009). Unemployment impairs mental health: Meta-analyses. *Journal of Vocational Behavior*, 74, 477–491.
- Rosholm, M., Staghøj, J., Svarer, M., & Hammer, B. (2006). A Danish profile system. *Danish Economic Journal*, 144, 209–229.
- Saks, A. M. (2005). Job search success: A review and integration of the predictors, behaviors, and outcomes. In S. D. Brown, & R. W. Lent (Eds.), *Career development and counseling: Putting theory and research to work* (pp. 155–179). New York: Wiley & Sons, Inc.
- Stewart, J. M. (2001). The impact of health status on the duration of unemployment spells and the implications for studies of the impact of unemployment on health status. *Journal of Health Economics*, 20, 781–796.
- Thomsen, S. L. (2009). Explaining the employability gap of short-term and long-term unemployed persons. *Kyklos*, 62, 448–478.
- Tuomi, K., Ilmarinen, J., Jahkola, A., Katajarinne, L., & Tulkki, A. (1998). *Work ability index* (2nd revised ed.). Helsinki: Finnish Institute of Occupational Health.
- Van den Berg, T. I., Elders, L. A., De Zwart, B. C., & Burdorf, A. (2009). The effects of work-related and individual factors on the Work Ability Index: A systematic review. *Occupational and Environmental Medicine*, 66, 211–220.
- Van Hooft, E. A. J., Born, M., Taris, T. W., Van der Flier, H., & Blonk, R. W. B. (2004). Predictors of job search behavior among employed and unemployed people. *Personnel Psychology*, 57, 25–59.
- Vinokur, A. D., & Schul, Y. (2002). The web of coping resources and pathways to re-employment following a job loss. *Journal of Occupational Health Psychology*, 7, 68–83.
- Vinokur, A. D., Schul, Y., & Caplan, R. D. (1987). Determinants of perceived social support: Interpersonal transactions, personal outlook, and transient affective states. *Journal of Personality and Social Psychology*, 53, 1137–1145.
- Vroom, V. H. (1964). *Work and motivation*. New York: Wiley (331 p).
- Wanberg, C. R. (2012). The individual experience of unemployment. *Annual Review of Psychology*, 63, 369–396.
- Wanberg, C. R., Hough, L. M., & Song, Z. (2002). Predictive validity of a multidisciplinary model of re-employment success. *Journal of Applied Psychology*, 85, 1100–1120.
- Wanberg, C. R., Zhu, J., & Van Hooft, E. A. J. (2010). The job search grind: Perceived progress, self-reactions, and self-regulation of search effort. *Academy of Management Journal*, 53, 788–807.