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Anna Huysse-Gaytandjieva
Wim Groot
Milena Pavlova
Catelijne Joling

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LOW SELF-ESTEEM PREDICTS FUTURE UNEMPLOYMENT

Anna Huysse-Gaytandjieva*
Maastricht University and Passionate Organizations

Wim Groot, Milena Pavlova
Maastricht University

Catelijne Joling
365/ZIN

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The paper analyses whether people with low self-esteem are more likely to become unemployed than those with high self-esteem, and whether gender plays a moderating role in the relationship between self-esteem and becoming unemployed. The outcomes of a piecewise constant exponential model confirms our assumptions. Low self-esteem is highly significant in predicting the probability of becoming unemployed for women but not for men. However, low self-esteem has an effect on the chance of becoming unemployed regardless of gender for people in higher skills occupations.

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I. Introduction

Unemployment is one of the most dramatic events in one's life. Job loss leads to an income reduction (Waters and Moore 2001; Wilhelm and Ridley 1988),

*Anna Huysse-Gaytandjieva (corresponding author): Department of Health Services Research; CAPHRI, Maastricht University Medical Center, Faculty of Health, Medicine and Life Sciences, Maastricht University, The Netherlands and Passionate Organizations, Wijlre, The Netherlands; e-mail anna.huysse@gmail.com. Wim Groot: Department of Health Services Research; CAPHRI, Maastricht University Medical Center, Faculty of Health, Medicine and Life Sciences, Maastricht University, The Netherlands and Topinstitute Evidence-Based Education Research (TIER), Maastricht University, The Netherlands; e-mail wn.groot@maastrichtuniversity.nl. Milena Pavlova: Department of Health Services Research; CAPHRI, Maastricht University Medical Center, Faculty of Health, Medicine and Life Sciences, Maastricht University, The Netherlands; e-mail m.pavlova@maastrichtuniversity.nl. Catelijne Joling: 365, ZIN, The Netherlands; e-mail Catelijne.Joling@arboned.nl.

causes stress and leads to lower well-being (Waters and Moore 2001). It lowers self-esteem (Creed, Bloxsome, and Johnston 2001) and may subsequently cause a deterioration in health (Goldney 1997) or depression (Howe, Levy, and Caplan 2004), admission to psychiatric hospitals (Blakely, Collings, and Atkinson 2003) and, in some cases, even suicide (Blakely et al. 2003).

Social psychologists stress that involuntary joblessness harms people's psychological well-being and may lead to a "decline in cognitive performance, motivation and perception of self-worth" (Goldsmith, Veum, and Darity 1997). The research on this hypothesis looks at self-esteem as a state of mind (external sources of self-esteem). However, an alternative reverse hypothesis in which self-esteem is a determinant of becoming unemployed and a cause of prolonged unemployment, has been formulated as well (Kasl 1982). The investigation of this hypothesis requires looking at self-esteem as a trait (internal source of self-esteem). Although both hypotheses are possible, they are theoretically distinct and deal with two separate aspects of self-esteem: state and trait, which cannot be used interchangeably (Brown and Marshall 2006). Therefore, the hypotheses should be studied separately.

While there are many studies in social psychology on the effect of unemployment on individual self-esteem (state), there is only a small number of publications that have looked at the effect of self-esteem (trait) on becoming unemployed (Viinikainen and Kokko 2012). Further, the few articles in social psychology on self-esteem as a trait have mostly focused on people in childhood and adolescence, i.e., during a period when self-esteem is still changeable and fragile. Moreover, these studies often lack a distinction between moderating, mediating and confounding variables that is essential to identify cause-effect relationships (Greenland 2003).

At the same time, economic research has not considered self-esteem as an essential trait to understand individual economic behaviour (Muller and Plug 2006). As a result, there is only a small literature on the effect of self-esteem on labour market activity (Baker, Glyn, Howell, and Schmitt 2004). Nevertheless, self-esteem is regarded as one of "the most important primary goods" (Rawls 1973). It influences cognition, behaviour and people's affects (Leary and Tangney 2003). Diminished self-esteem lies at the bottom of major social problems (Mecca, Smelser, and Vasconcellos 1989). Particularly, self-esteem seems to be a psychological quality that helps people "in securing and holding employment" (Dooley and Prause 1997). Thus, individual traits such as self-esteem might be rewarded or punished on the labour market (Bowles, Gintis, and Osborne 2001).

The purpose of this study is to examine whether people with low self-worth are more likely to become unemployed than those with high self-worth. More specifically, we aim to assess whether self-esteem in a given year affects the dynamics of unemployment in the subsequent year. We pay specific attention to the role of gender. On the one hand, the social psychology literature suggests that men and women have significantly different levels of self-esteem (Kling, Hyde, Showers, and Buswell 1999): women generally have lower self-esteem than men. On the other hand, studies in labour economics have shown that unemployment is more prevalent among women (Azmat, Güell, and Manning 2006). There are plenty of studies that relate a deterioration in self-esteem to unemployment (McKee-Ryan, Song, Wanberg, and Kinicki 2005). However, the role of gender in the relatiosnhsip between trait self-esteem and becoming unemployed is not clear. Therefore, in this paper, we bring the two perspectives together and study them jointly. Given the separate effect of gender on self-esteem and unemployment, as pointed above, we expect that gender moderates the effect of low self-worth on becoming unemployed. Particularly we address the question: Does low self-esteem increase the probability of becoming unemployed and how does this differ between genders?

To the best of our knowledge, this is the first study studying the effect of trait self-esteem on unemployment. In our study, we look upon self-esteem as an individual's sense of value or worth, or the extent to which a person values, appreciates, honours, or likes himself or herself (Rogers 1951). Thus, we consider self-esteem as a trait and we pay specific attention to gender as a moderating factor. The analysis is based on data from the British Household Panel Survey (BHPS) (Taylor, Brice, Buck, and Prentice-Lane 2010). The paper is organized as follows: Section II explains the relationship between trait self-esteem and the risk of becoming unemployed. Then, Section III gives a description of the data, and the model is presented. The analyses, the findings, and the discussion follow in Section IV. Finally, the conclusions are summarized in Section V.

II. Background

In this section, we deduct our hypotheses from the psychological and social views on self-esteem presented in the literature. The relationships of confounding variables to self-esteem and to unemployment are clarified.

Self-esteem is considered to be a stable characteristic of one's personality (Crocker and Park 2003) and relatively resistant to change. Self-esteem is built in childhood (McGee, Williams, and Nada-Raja 2001) as a result of relational and temperamental factors. Children gradually internalize the beliefs about themselves that are communicated to them by the social environment (Bednar, Wells, and Peterson 1989).

Basically self-esteem is used in the literature in three ways: trait self-esteem (global), state self-esteem and domain specific self-evaluations (the way people evaluate their physical attributes, abilities, and personality characteristics). To answer the question how these constructs are related, two models have been developed: the bottom-up (evaluative feedback influences self-evaluations which define trait and state self-esteem) and the top-down model of self-esteem (once formed trait self-esteem influences self-evaluations and state self-esteem). The top-down model of self-esteem guides us in understanding the origin and function of self-esteem (Brown, Dutton, and Cook 2001). Self-evaluation and self-esteem are shown to be related to different aspects of psychological life (Brown and Marshall 2006).

Research shows that self-esteem varies with age (Worell and Goodheart 2006). Age relates to different development stages (childhood, adolescence, adulthood, old age) during which different facets are used for self-evaluation. In adulthood work, career, partnership, children become important areas for self-evaluation. Age is also related to career stages and accumulation of firm specific human capital. This is one of the explanations why younger people more often become involuntary unemployed. Furthermore, firms lay-of policies, such as in UK, apply the "last in, first out" (LIFO) rules, typically introduced at the will of unions, may more often lead to youth unemployment (Barwell 2000).

A meta analysis (Kling, et al. 1999) shows that women generally have lower self-esteem than men. Rosenberg (1979) points out that "sex does not inform self-concept; being treated as a man or woman does". Boys and girls continuously receive information about how to fit into the societal gender roles (Sanchez and Crocker 2005). Maleness is related to authority, status, competence, social power, and influence. Femaleness is connected to lack of authority, low status, incompetence, and little power and influence (Steward and McDermott 2004). As a consequence, investment in gender ideals affects the self-esteem of women but not that of men ((Sanchez and Crocker 2005). Emergent gender differences in self-esteem are explained by attempts to match with gender role expectations and

gender suitability of the situation, or to diverge from these expectations due to different tools to measure self-esteem (Owens, Stryker, and Goodman 2001).

Self-esteem has a strong relationship to happiness (Baumeister, Campbell, Krueger, and Vohs 2003). Intrinsically happy people may be more likely to get married (Kohler, Behrman, and Skytthe 2005). Furthermore partnership makes people happier due to companionship and providing services for which the markets are missing or imperfect: support and help to deal with stress (Kohler, et al. 2005). Even though women nowadays are not as economically dependent as in the past, family work (housework and childcare) remains mostly a woman's task (Erickson 2005). That is why working women may experience much more often a role conflict compared to men.

People with low self-esteem have low expectations of success, and as a result, they fail to make the best use of the capacities they have. People with low self-esteem are more concerned with self-protection (Josephs, Larrick, Steele, and Nisbett 1992). Subsequently, self-esteem correlates with investments in education (Groot 1992) and achievements at school (Crocker, Karpinski, Quinn, and Chase 2003) for both genders and with investments in vocational training for men (Waddell 2003). These factors influence job opportunities (Dooley and Prause 1997). Correspondingly, vocational training has a direct impact on the level of income and performance (Baumeister et al. 2003).

Therefore, it can be expected that people with low self-esteem make fewer investments in education and consequently have a greater chance of ending up in a low income job in industries that pay less well. For both genders, high self-esteem is related to higher income (Emler 2001). As people with low education in lower paid jobs are more likely to become unemployed, low self-esteem might indirectly affect unemployment chances.

Besides, people with low self-esteem choose passive ways of coping with perceived stressful events (Fineman 1979) such as rejection, unsuccessful job interviews, or approaching unemployment. This can be explained by their attributional style (Hirschy and Morris 2002), and internal locus of control (Kreger 1995). Attributional style is related to achievements and performance (Poropat 2002). However, attribution of failure has a different explanation between genders. Boys tend to explain failure by motivational problems and have an external locus of control. Girls are more inclined to explain failure by lack of ability and hence have an internal locus of control. In particular, women more often use withdrawal and men are more likely to work even harder in order to demonstrate their capabilities (Langford and Clance 1993).

People search for information that is consistent with their own view about themselves (Lecky 1969). Thus, due to their self-protecting orientation (Baumeister 1999), people with lower self-esteem and an internal locus of control are more risk averse (Josephs, et al. 1992). As a consequence, in their attempt to protect a fragile ego, people with low self-esteem might use self-handicapping strategies in their work resulting in poorer performance and higher chances of risk of becoming unemployed.

Low self-esteem might be a risk factor for unemployment because it facilitates a high predisposition to depression (Sorensen 2001) anxiety (Epstein 1985), stress (Caruthers 2003) and unhealthy behaviours as alcohol and drug usage (Baumeister et al. 2003) for both genders (Ng and Jeffery 2003) that might lead to health deterioration and from there to poorer job performance (Baumeister et al. 2003) and involuntary unemployment.

In summary, because of the higher likelihood of holding a bad job, of having a self-protective orientation, and a higher predisposition to depression, anxiety, stress, and unhealthy behaviours, people with low self-worth may be more likely to perform poorly and consequently be more likely to become involuntarily unemployed. The effect of self-esteem on becoming unemployed is affected by gender. More specifically, a negative effect of low self- esteem is expected to be worse for women: that is, we expect that women with low self-worth will be more likely to be laid off than men with low self-worth.

Based on these insights, for the current study we formulate the following hypotheses:

- People with low self-worth are more likely to become unemployed than those with high self-worth.
- Gender exacerbates the effect of low self-worth on becoming unemployed.

III. Data and operationalization of the variables

We use data from the British Household Panel Survey (BHPS) (Taylor et al. 2010). This is an annual longitudinal survey among a nationally representative sample of 10302 individuals in Great Britain. Wave-to-wave response rates are about 90% (Taylor et al. 2010).

In the BHPS, the unemployed are people who satisfy the following criteria (Thirteenth ICLS 1982): having no work; actively seeking for work; and currently

available for work. Seeking (actively) for work when becoming unemployed may be highly correlated with self-esteem. Low self-esteem may actually lead people to stop searching for work. Thus the BHPS unemployment criteria may lead to bias of our results. Therefore, we use data on the employment status to create a *Lay-off* variable (our dependent variable). It was coded as 1 if the respondent was employed at year t and was unemployed at t+1, and 0 if the respondent was employed at both year t and year t+1.

The item that we use to measure *Self-esteem* is: "Have you recently been thinking of yourself as a worthless person?".The fact that this is a self-reported outcome indicates that we measure explicit self-esteem. The scale of answers ranged from 1 (not at all) to 4 (much more). The answers 1 and 2 were coded as 1 (high self-esteem). The answers 3 and 4 were coded as 0 (low self-esteem).

On the basis of the results of previous research and theories presented in the background section, as well as based on the data available in the BHPS dataset, the following explanatory variables were included in the model of unemployment in addition to self-esteem: age, education, being married or in a partnership, having a dependent child, health impairments due to alcohol and drug usage, depression, occupation (SOC), industry (SIC), regional unemployment rate, and union participation.[1] These additional explanatory variables have the function of control variables. As outlined in the background section of this paper, they are found to influence unemployment and to be related to self-esteem. Therefore we account for them in the analysis, as far as the dataset allows, by including them as separate explanatory variables and by including their interactions with self-esteem when shown relevant in the preliminary analysis.[2] Below we explain how the explanatory variables are measured.

Health is a derived variable. Two variables that measure objective heath are included: anxiety, depression, etc. and health problems due to use of alcohol or

[1] The variables of race and foreign birth were considered as possible confounders and were initially included as dummies in the probit analyses. The results showed that race has no relationship to self-esteem or to becoming unemployed. Foreign birth is not related to self-esteem but to becoming unemployed. Thus, both variables proved not to be confounders. Also, the variables were highly correlated to other control variables and therefore, were excluded from the analysis.

[2] The BHPS dataset does not provide information about other relevant control variables, such as performance and attributional style and therefore we are not able to include them in the analysis. Also, we are limited to the use of the indicators of the control variables as provided in the dataset.

drugs. Both health-related variables are incorporated in the analysis as dummies. The rest of the explanatory variables are based on the following questions: *Dependent child*: Is respondent the responsible adult for any child/ children aged 12 or under? *Occupation*: What was the respondent's (main) job last week? We included eight dummy variables for occupation. *Industry*: What does the firm/organization the respondent works for actually make or do? We included ten dummy variables for industry. We included information about the *Regional unemployment rate* in order to control for differences between regional labour markets, i.e., the demand side of the labour market. The information was gathered from published statistics (UK national statistics). We solved the problem of missing information for the values in year 1991 by including the mean score for that year.

The BHPS consists of multiple waves. For the analysis, we use the first eleven waves (1991-2001) with 51 154 observations in total. In this sample, 7158 persons became unemployed during the 11-year period. Table 1 gives an overview of self-esteem rates in relation to employment status characteristics and shows that 2857 people reported low self-esteem, i.e. about 7% of the women and 4% of the men reported low self-esteem.[3] Furthermore, the percentage of low self esteem among laid offs is slightly higher than among not laid-offs (5.77% versus 5.56%). The descriptive statistics can be found in the online Appendix.

Table1. Self-esteem rates by gender and layoff

	Women (% within the gender group)		Men (% within the gender group)
Low self-esteem	7.47		3.95
High self-esteem	92.53		96.05
	Not laid off (number of respondents)	Laid off (number of respondents)	Total (number of respondents)
Low self-esteem	2,444	413	2,857
High self-esteem	41,552	6,745	48,297
Total	43,996	7,158	51,154

[3] In the analysis, cases with missing values have been deleted.

IV. Statistical model

To identify a causal relationship between self-esteem and unemployment, certain conditions must be fulfilled. First, the two variables (self-esteem and unemployment) must be related to each other. Second, the cause (self-esteem) must come before the effect (unemployment) in time (time precedence). Third, there must not be any other factor that is responsible for the correlation between self-esteem and unemployment (no spuriousness). Fourth, the cause (self-esteem) should enhance the probability of the effect (unemployment). Thus, we take the idea of Granger causality (Granger, 1969) and look at the effect of self-esteem in year t on becoming unemployed in the subsequent period, i.e., between t and $t + 1$. Granger causality examines whether the forecasts of the future events of unemployment can be improved if (besides all other available information) the current and the lagged values of self-esteem are also taken into account.

We control for confounding variables to provide support for the notion that the relationship between self-esteem and unemployment is not spurious. If the relationship between the variables does not change after the confounders have been included in the model, one can assume that association is not spurious.

We use discrete-time event history analysis to test the hypotheses. This is an appropriate technique for the investigation of causal relationships (Granger causality) in a time-related empirical representation of the structure of the causal arguments (Blossfeld and Rohwer, 2002). The discrete-time event history analysis has been used in previous research to study unemployment (Ciucă and Matei, 2011) but it has not been applied to the analysis of the impact of self-esteem on unemployment. The advantages of the method for our study are related to the possibility to account for censored observations (incomplete observation of the time to event) as well as time to event (unemployment).

A piecewise constant exponential model is used. This model splits time into periods (years). We assumed that the transition rates are constant within every time interval but can change between intervals (Blossfeld and Rohwer, 2002). The transition rate $r_{jk}(t)$ from employment (state j) to unemployment (state k) is:

$$r_{jk}(t) = \exp\{\alpha_l^{jk} + A^{jk}\alpha\} \text{ if } \tau_l \leq t < \tau_{l+1}\,. \tag{1}$$

For each transition (j, k), α_l^{jk} is a constant coefficient associated with the l time period. A^{jk} is a vector of covariates, including self-esteem. α is an associated vector of coefficients.

To become "at risk" the person should be employed in year t. Information about the covariates was taken from year t as well. The data were split into year-long episodes, or spells, so that covariates can be updated on an annual basis. We used covariates of year [t, t+1] to predict becoming unemployed between year [t, t+1]. STATA software has been used in the analysis with the "stpiece" command.

A. Preliminary analyses

We performed several preliminary analyses. As mentioned above, the role of gender is very important in understanding behaviour (Steward and McDermott, 2004). Therefore, our analysis is stratified by gender groups. First of all, a Kaplan Meier curve is used as a descriptive method for evaluating the self-esteem variable since it is a helpful tool for visualizing the shape of the hazard function. The Kaplan Meier curves are presented separately for women and men in Figure 1, panels A and B. The downward hazard plots indicate that those with higher risk to become unemployed are first out of the data set.

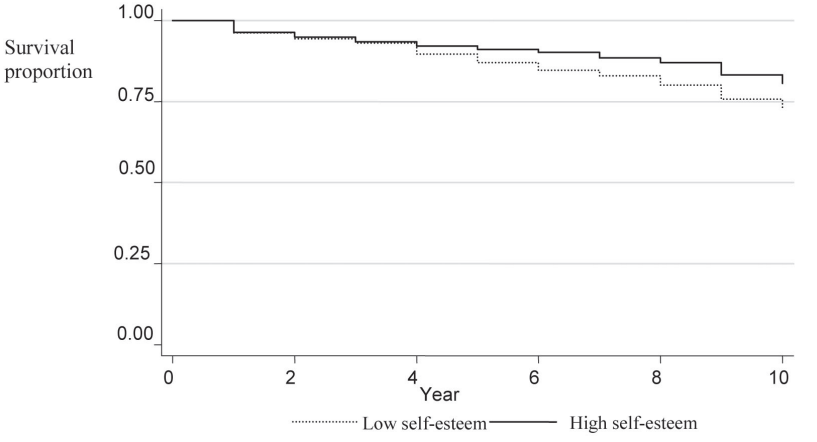
A key part of the model-building process is the selection of the predictor variables. Hence, we used a stepwise procedure to identify confounders. This selection procedure assumes that all variables selected are confounders (Hernan, Hernandez-Diaz, Werler, and Mitchell, 2002). It is standard to use a stepwise procedure guided by a series of significance tests to select a single model, and then to make conditional inferences about the selected model. We observed what happens to the estimate of self-esteem when we controlled for confounders with a stepwise inclusion of the covariates. Table 2 presents the results.

In model A, becoming unemployed is regressed on self-esteem. We added some socio-demographic characteristics in model B: age and education. Model C includes family information (partnership, dependent child). In Model D occupations are added. Model E inserts working sectors. In Model F health impairments information is added (depression, and health problems related to alcohol usage or drugs). Model G includes union membership and the regional unemployment rate. We compare the goodness-of-fit of the six models by means of Wald hypothesis testing. Wald hypothesis testing is used to compare nested discrete-time hazard models (Singer and Willett, 2003). The null hypothesis is rejected, when the Wald

chi-square statistics is large relative to critical values of the χ^2 distribution. On the basis of the results of Wald hypothesis testing presented in Table 2, the full model, Model G appears to prove the best fit for the data.

Figure 1. Probability of not becoming unemployed: Kaplan-Meier curves by gender and self-esteem

A. Women



B. Men

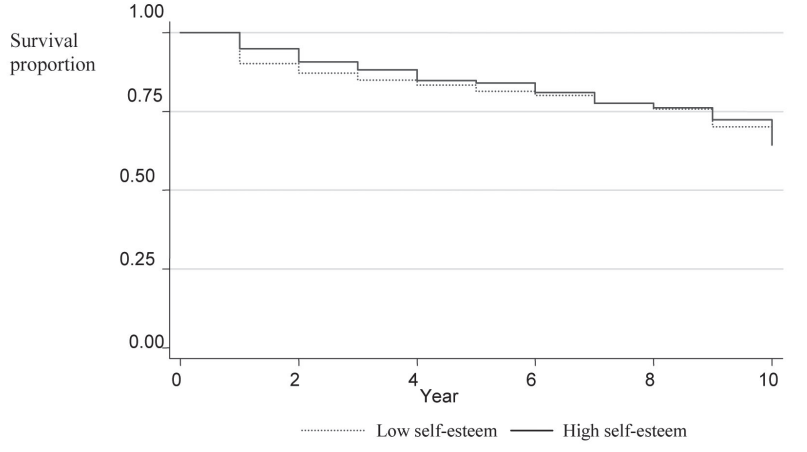


Table 2. Fitting of piecewise constant model

	Model A	Model B	Model C	Model D	Model E	Model F	Model G
A. Women							
Self-esteem parameter (Std. error)	0.688 (0.075) **	0.687 (0.075) **	0.699 (0.077) **	0.696 (0.077) **	0.703 (0.078) **	0.753 (0.086) **	0.629 (0.092) **
Goodness-of-fit							
Log-likelihood	-3012.22	-2978.48	-2948.38	-2917.01	-2874.83	-2867.54	-1587.17
Deviance	6024.44	5956.96	5896.76	5834.02	5749.66	5735.08	3174.34
N parameters	11	13	15	23	33	35	37
Wald hypothesis testing	12715.00 **	12540.83 **	12401.52 **	12241.76 **	12018.50 **	11987.91 **	7529.65 **
B. Men							
Self-esteem parameter (Std. error)	0.987 (0.115)	0.954 (0.111)	0.956 (0.113)	0.964 (0.115)	0.935 (0.111)	0.961 (0.116)	1.009 (0.186)
Goodness-of-fit:							
Log-likelihood	-4853.08	-4763.29	-4719.21	-4644.87	-4519.71	-4504.40	-2123.24
Deviance	9706.16	9526.58	9438.42	9289.74	9039.42	9008.80	4246.48
N parameters	11	13	15	23	33	35	37
Wald hypothesis testing	16172.89 **	15792.08 **	15614.45 **	15300.29 **	14867.12 **	14831.11 **	8963.70 **

Notes: In model A, becoming unemployed is regressed on self-esteem. We added some socio-demographic characteristics in model B: age and education. Model C includes family information (partnership, dependent child). In Model D occupations are added. Model E inserts working sectors. In Model F health impairments information is added (depression, and health problems related to alcohol usage or drugs). Model G includes union membership and the regional unemployment rate. * significant at 5 % level; ** significant at 1 % level.

B. Estimation results and discussion

Table 3 presents the results of the analyses of the effect of self-esteem on the probability of becoming unemployed. In Table 3, α_l^{jk} is a constant coefficient associated with time period *l*. The α values are maximum likelihood estimates of the basic hazard function. The way they vary, determines the shape of this function and provide us with information about the risk (Singer and Willett 2003). In our case, the values of α are almost equal. Thus, the risk of event occurrence (unemployment) is not related to time, and the hazard function is flat. This result supports the assumption about the discrete-time hazard model that the shape of the hazard function is similar across groups but that its relative level differs (Singer and Willett, 2003).

Our study shows that low values of *Self-esteem* are highly significant in predicting future unemployment for women but not for men. This is in line with previous studies which show the effect of low self-esteem on unemployment (Feinstein 2000). Contrary to our results, Feinstein finds an effect of self-esteem on male unemployment duration. This may be explained by the fact that he uses another operationalisation (evaluation of mental and physical characteristics) and questionnaire (LAWSEQ) which is constructed to measure self-esteem in primary school children (Lawrence 1981). Further, previous studies have included children and adolescents in their sample and are concerned with the effect on prolonged unemployment. Furthermore, the difference between genders in the effect of self-esteem on becoming unemployed might be a result of measurement bias. We measure explicit self-esteem in this study. Thus, it might be that men give more socially desirable answers when they self-report self-esteem. Gender may moderate the relationship between explicit self-esteem and implicit self-esteem (Pelham et al. 2005).

Besides self-esteem, other factors are also statistically significant in explaining the risk of becoming unemployed. *Higher education* is statistically significant for both men and women. Men with a higher education are about 25 % less likely to become unemployed compared to men with a low education (100*(0.751-1)). Women with a higher education are 33 % less likely to become unemployed compared to women with a lower education. In accordance with previous findings, a major benefit of education is the lower risk of unemployment at higher educational levels (Mincer 1991). Further, education may be seen as a confounder that influences both self-esteem and the likelihood of becoming unemployed (Waddell 2006). Better education leads to better jobs, broad access to jobs, and higher earnings (Groot 1992).

Table 3. Parameter estimates of piecewise constant model: full model

Parameters	Male	Female
	Hazard ratio (st. error)	Hazard ratio (st. error)
α_1	0.007 (0.002) **	0.004 (0.002) **
α_2	0.003 (0.001) **	0.001 (0.001) **
α_3	0.002 (0.001) **	0.002 (0.001) **
α_4	0.002 (0.001) **	0.001 (0.001) **
α_5	0.003 (0.001) **	0.002 (0.001) **
α_6	0.003 (0.001) **	0.002 (0.001) **
α_7	0.004 (0.001) **	0.002 (0.001) **
α_8	0.005 (0.002) **	0.003 (0.002) **
α_9	0.007 (0.002) **	0.006 (0.003) **
α_{10}	0.008 (0.003) **	0.005 (0.002) **
Age	1.005 (0.004)	0.998 (0.005)
High education	0.751 (0.063) **	0.665 (0.069) **
In a partnership	0.792 (0.072) **	0.857 (0.093)
Dependent child	2.108 (0.870)	1.094 (0.115)
Self-esteem	1.009 (0.186)	0.628 (0.092) **
Heath problems: due to alcohol or drugs	3.189 (1.347) **	1.742 (1.228)
Health problems: depression	1.366 (0.291)	1.346 (0.223)
Occupation: manager	1.047 (0.130)	1.522 (0.275) *
Occupation: professional	0.850 (0.150)	1.697 (0.381) *
Occupation: technicians and associate professionals	0.711 (0.127)	1.161 (0.247)
Occupation: clerks	0.471 (0.090) **	1.066 (0.158)
Occupation: person	0.625 (0.134) *	1.380 (0.231) *
Occupation: sales	1.088 (0.192)	0.902 (0.179)
Occupation: operative	0.894 (0.114)	0.827 (0.228)
Occupation: other	0.896 (0.149)	1.034 (0.224)
Sector: agriculture	1.832 (0.572) *	4.800 (3.118) *
Sector: energy	1.397 (0.438)	3.389 (2.212)
Sector: mineral	1.248 (0.331)	3.106 (1.811) *
Sector: engineer	1.448 (0.309)	4.790 (2.208) **
Sector: manufacture	1.730 (0.362) **	5.263 (2.296) **
Sector: construction	1.982 (0.460) **	4.206 (2.570) *
Sector: distribution	1.594 (0.329) *	3.346 (1.414) **
Sector: transport	1.122 (0.270)	5.018 (2.288) **
Sector: banking	1.590 (0.342) *	3.261 (1.414) **
Sector: services	0.883 (0.197)	2.285 (0.965) *
Regional unemployment rate	1.250 (0.027) **	1.192 (0.032) **
Union participation	0.663 (0.058) **	0.615 (0.066) **

Note: * significant at 5 % level; ** significant at 1 % level.

In addition, a higher regional unemployment rate increases the probability that workers of either gender will become unemployed. It increases the probability of job loss for men by 25% compared to those working in regions with a low unemployment rate. Higher regional unemployment rates might be seen as a stressful factor that demands adjustment. People with low self-esteem may be more risk averse and deal with stress in more passive ways. Women living in regions with a higher unemployment rate have a 19 % greater chance of becoming unemployed than women from areas with low unemployment.

Men who are union member have a 34 % lower chance to become unemployed than men who are not union members. Female union members are 39 % less likely to lose their job than women who are not union members. The fact that union members have more employment protection might explain this.

Men in a partnership have 21 % less chance of a job loss than single men. This could be explained by the idea that sharing one's life with someone brings support and helps people to manage life demands better (Kohler et al. 2005). Health problems related to alcohol and drug use increase the chance of becoming unemployed by 44 % in comparison with those who do not have such problems. People with low self-esteem more often use alcohol as a means to deal with pressure than others (Walitzer and Sher 1996). Alcohol use decreases the productivity of the labour market and increases the risk of becoming unemployed (Mullahy and Sindelar 1996).

Men working in clerical and secretarial occupations have about 53 % greater probability of losing their job than those who are not in these occupations. Women in managerial and professional occupations have a 52 % higher probability of losing their job than women in other business groups. Women in professional occupations are 70 % more likely to become unemployed than others. Working in personal occupations results in a 38 % higher probability of becoming unemployed. An explanation for that might be that some occupations and industries are more vulnerable to cyclical unemployment. Low-skill occupations are generally more vulnerable to economic slowdowns as they tend to be more concentrated in cyclical industries.

Table 4 shows additional information for the interactions included in the analysis. The inclusion of interactions did not essentially change the other estimates. Due to the expected relationship between self-esteem and being married/in a partnership and the difference between genders, we include in the model the interaction terms between these two variables (Table 4). The hazard rate

shows that low self-esteem has an effect on the chance of becoming unemployed for married women and those in a partnership but not for men. Bearing in mind the role of women as homemakers, employed women might experience more role conflict. Low self-esteem is related to more gender-role conflict (Chusmir and Koberg 2001). In addition to the stress of low self-esteem, unique female stressors such as motherhood, combining roles, working in non-traditional occupations, etc. (Iwasaki, MacKay, and Mactavish 2005) and the coping style of women make women with low self-esteem more vulnerable to becoming unemployed. Supportive to our results are those of the study of Hofstede (2001) where UK ranked high on masculinity, i.e., men are considered aggressive and competitive, while women are expected to be gentler and taking care of home and family.

Table 4. Parameter estimates of piecewise constant model adding interaction terms of self-esteem with occupation and marital status

Interaction terms	Male	Female
	Hazard ratio (St. error)	Hazard ratio (St. error)
*Self-esteem*manager*	0.858 (0.550)	0.279 (0.292)
*Self-esteem*professional*	1.398 (0.994)	4.711 (2.848) **
Self-esteem technicians and associate professionals*	3.692 (2.161) **	2.877 (1.540) *
*Self-esteem*clerical*	2.147 (0.984)	1.620 (1.281)
*Self-esteem*person*	1.670 (0.862)	0.000 (0.004)
*Self-esteem*sales*	0.789 (0.557)	0.796 (0.841)
*Self-esteem*operative*	1.469 (1.235)	1.406 (0.833)
*Self-esteem*other*	1.474 (0.872)	0.651 (0.501)
*Self-esteem*living together*	0.541 (0.233)	0.443 (0.144) **

Note: * significant at 5 % level; ** significant at 1 % level.

Table 4 also gives the hazard rate when the interaction terms between self-esteem and occupation are included in the model. As we can see, low self-esteem has an effect on the chance of becoming unemployed regardless of gender when people are technicians and associate professionals (physical and engineering science associate professionals; life science and health associate professionals, etc.) and professionals in physics, mathematics and engineering, life science and health , etc.

In particular, people in associate and professional occupations with low self-esteem have a higher chance to become unemployed. Higher-level occupations impose more expectations and demands on the employee that might increase the fear of failure. Alternatively, low self-esteem might be a handicap and may be an impediment to productivity in associate and professional occupations. Consequently, these workers may be more prone to lay-off and redundancy.

In summary, the relationship between self-esteem on becoming unemployed depends on gender. Though, in higher-level occupations, low self-esteem has an effect on job loss that is independent of gender.

V. Conclusion

This paper shows that low self-esteem (considered here as a trait) has an effect on becoming unemployed. Furthermore it shows that low self-esteem is more detrimental for women than for men when it concerns their labour market position.

The results might be helpful to professionals who guide, teach, and coach people as teachers, human resource managers, and health professionals in helping working people avoid becoming unemployed by providing them with knowledge on the nature of self-esteem and directing them to learn practical skills to work with self-esteem (Dweck 2000). Teaching employees with low self-esteem to control their low self-esteem instead of letting it to be in control (Sorensen 1998) might be a strategy to reduce the chance of job loss. Further, teaching employees with low self-esteem new skills (how to respond to criticism, learn how to ask for what they want, coping with unhealthy values), helping them to change thinking patterns (becoming aware of the shoulds, disarm their own critics), and providing them with assertiveness training may benefit both individuals and organizations. Further, other approaches as Acceptance and Commitment therapy (Hayes and Strosahl 2010) and Compassion Focused therapy (Gilbert 2010) concentrate on understanding and acceptance, rather than trying to change, may be of value.

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