Back in balance. The development and evaluation of an occupational health intervention for work-related adjustment disorders

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CHAPTER 4

Prognostic factors for prolonged sickness leave in adjustment disorders

submitted

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Abstract

Objectives
To determine prognostic factors for prolonged disability among employees who reported themselves sick and who were diagnosed with an adjustment disorder. To identify factors that determine the response to an activating intervention.

Methods
A 12-month study involving 192 patients newly diagnosed with an adjustment disorder was carried out. Univariate analyses were performed to select relevant factors (p≤0.20) for Cox regression analyses and logistic regression analysis. The focus was on identifying prognostic factors for 1) time to return to work (first step in rehabilitation, partial or full); 2) time to full return to work, and 3) partial or full return to work after 3 months.
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Results:
In the total group, the activating intervention proved to be a strong predictor of successful return to work. Younger age, low education level and low level of somatisation were significant predictors of time to full return to work. In the intervention group, a low level of education and a low level of obsessive-compulsive behaviour were predictive of a faster full return to work. Predictors of time to (partial) return to work in the intervention group were young age, male sex, low level of education, low positive social contacts, and a high level of social functioning in private life.

Conclusions:
The activating intervention itself was the most powerful predictor of a favourable rehabilitation and return to work. The predictive factors for the intervention group were specific, especially for time to (partial) return to work. Unexpectedly, a low level of education and low positive social contacts were predictors of a faster return to employment, in contrast with findings in the literature.
Prognostic factors for prolonged disability

Introduction

Productivity loss and costs of absenteeism due to work stress are major concerns in Western countries. In Britain, it is estimated that 40 million workdays are lost annually due to mental and emotional problems. In the USA, the United Nations International Labour Organisation estimated the cost of work absence and loss of productivity at 200 billion dollars a year.

From a diagnostic point of view, employees on sick leave due to work stress may be considered as suffering from an adjustment disorder, defined as an inappropriate reaction to an identifiable stressor within 3 months of experiencing the stressor. These reactions are characterised by depressive symptoms, anxiety, and/or inappropriate behaviour. Stressors may be related to work or family life. Although generally considered as minor psychiatry, adjustment disorders may have extensive disabling consequences. A study among Dutch workers showed that more than 20 per cent of employees who were on sickness leave for 4 weeks for an adjustment disorder developed chronic occupational disability: more than 52 weeks sickness leave with a poor prognosis for return to work.

Despite the high prevalence and high societal costs of adjustment disorders, there has been little research of treatment outcomes among patients on sick leave. Recently, a first study in this specific field showed that an activating, structured occupational health care intervention was effective in reducing sickness leave in patients with an adjustment disorder. Besides treatment outcome research, it is also important to identify prognostic factors for prolonged disability. This type of research may make it possible to match patients and the type of treatment provided. Because an activating intervention may take longer than care as usual, research of prognostic factors may contribute to a more efficient and effective deployment of health care personnel and means. For instance, such interventions may be allocated to those patients with an increased risk of prolonged disability in whom the intervention has a fair chance of success.

To our knowledge, no studies of prognostic factors for recovery and work resumption among patients with adjustment disorders have been performed. Therefore, we could not rely on the literature for
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indications about which factors should be included in our study. To gain some idea of which prognostic factors may be of importance, we broadened our search for predictive factors to include the following related concepts:

1. psychopathological symptomatology, especially depressive symptoms and anxiety which, among others, are part of the symptomatology of adjustment disorders;
2. disability in general; and
3. work disability.

With regard to psychopathological symptomatology, controllability appeared to be a predictive factor for depression and anxiety. Negative events attributed to uncontrollable causes were positively related to increased depression, whereas negative events attributed to controllable causes were inversely related to increased depression.\footnote{Further, severe life events (experienced as severely threatening for 7 to 10 days) or major difficulties (that had gone on at least 2 years), as measured by the Life Events and Difficulties Scale, were important for the subsequent development of depression.}

With regard to social, emotional, and physical disability, depressive illness was found to be associated with the onset of physical disability and to be sturdily associated with the onset of social disability among non-elderly primary care patients.\footnote{In a large longitudinal prospective cohort study, Bijl and Ravelli found disability levels to vary by psychiatric diagnosis, with mood disorders showing the poorest levels of functioning, especially for vitality and social functioning.}

Most studies of work disability focused on the onset of sickness leave or disability pension. Two categories of predictive factors were found: person-related variables and work-related variables. In the first category, psychopathology and differences in social class were significant predictors of sickness leave.\footnote{Neuroticism predicted work disability among men.}\footnote{Old age, ill health, and prior absenteeism were found to be positive predictors of later sickness leave.}\footnote{In a retrospective case-control study, Van Deursen found that female, elderly, and poorly educated workers were at risk of disability because of mental disorders.}\footnote{Several work-related variables predicted frequency and duration of absence: mental and physical work-}
Prognostic factors for prolonged disability

load; interpersonal conflict at work, monotonous work, and experienced stress of daily activities; low levels of job control and of social support. Perhaps unexpectedly, high job demands were predictive of low absenteeism. Although the reviewed studies had a somewhat different focus than that of the present study, namely, onset of work disability versus work resumption, factors were identified that lead to prolonged work disability. For example, socio-demographic aspects, life events, ill health and previous absenteeism, personality-related factors (locus of control and symptom levels), and aspects of work (work load, decision latitude, and social work relations). These factors were taken into account in the present study of prognostic factors for work resumption after sickness leave due to adjustment disorders. Another focus of this study was on prognostic factors for the effectiveness of an activating intervention on work resumption. Our study was conducted with a sample of employees on sickness leave due to an adjustment disorder. About half of this sample received an activating intervention, and the other half received care as usual.

Methods

Study population: setting, subjects and intervention

The study was conducted at the in-company Occupational Health Service of Royal KPN. At the time of the study, the company comprised both postal and telecom Services and had approximately 100,000 employees. To be included patients had to be on first sickness leave due to an adjustment disorder conform the Diagnostic Statistical Manual (DSM) IV criteria. Patients were excluded if they met one of the DSM IV exclusion criteria for an adjustment disorder (i.e. depression, anxiety disorder), if they had consulted their occupational physician for an adjustment disorder in the preceding year, or if physical co-morbidity influenced absenteeism. Other exclusion criteria were inability to communicate in Dutch, pregnancy, recent delivery (< 6 months), and termination of employment at KPN within 6 months. Over a period of 14 months, 238 patients who met the inclusion criteria were considered as potential candidates for this study. Six refused to participate and 39 patients were excluded conform the
criteri a  o f  exclusion. In the end, 192 patients were included, 109 of whom were assigned to the intervention group. The study was a randomised controlled trial, with randomisation at the level of the occupational physician (OP). Thus OPs were assigned the innovative intervention or care as usual. The core of the intervention was to stimulate patients to develop and implement problem-solving strategies for problems of daily (working) life. The intervention was structured according to a 3-stage model\textsuperscript{18} resembling stress inoculation training,\textsuperscript{19,20} a highly effective form of cognitive-behavioural treatment\textsuperscript{21} and by a graded activity approach. The first phase is an educational phase, which aims to help the patient better understand the nature and effects of stress. The second phase focuses on skill acquisition, to help the patient develop and practise a repertoire of coping skills. The third phase involves the application of coping skills to increasingly challenging situations. The patient’s own responsibility and active role in the recovery process is emphasised. OPs in the intervention group received an intervention protocol and a 3-day training to structure their guidance and to enhance therapeutic skills. OPs in the ‘control’ group provided care as usual, generally based on empathic counselling, instruction about stress, life style advice, and discussion of work problems with the patient and with company management.

Data collection
Independent measures
Patients entered the study between May 1995 and July 1996; data were collected until 1 year after full return to work, with a maximum of 2 years after trial entry. Potential prognostic factors were assessed by means of a questionnaire distributed at first consultation and completed at home after informed consent for participation. The factors included were: sociodemographic and general factors, quality of work life, positive and negative contacts, coping style, mastery and incidence of sickness leave in the year before the onset of sickness absence, symptoms and social functioning.

Sociodemographic and general factors included age, gender, type of household, level of education and salary level, years working at KPN,
hours worked per week, self-reported health status, life events and treatment, or not, by GP or counselling by a social worker or psychologist. *Quality of work life* was measured with the Dutch Work and Health Questionnaire (DWHQ) developed by Gründemann et al. The DWHQ assesses the appreciation of employees of the quality of their work and health. We used the eight scales on work appreciation: job control/skill discretion, job demands, work organisation, working conditions and safety, leadership and colleagues, payment and prospects, work-home interference, and overall evaluation of the job. All items are dichotomous, except the 1-item general qualification scale for which there is a 4-point Likert scale. The internal consistency of the scales varies between 0.58 and 0.76.

*Positive contacts* and *negative contacts* are subscales of the ‘Contacts at work’ scale of the Human Resources Checklist Work stress (HRCL-W). The scale is based on the social support list of Tempelaar et al., with some emphasis on emotional support. The subscales consists of 8 items scored on a 4-point Likert scale. Cronbach’s alpha is 0.83 for the positive and 0.78 for the negative subscale.

*Coping* was assessed with the Utrecht Coping List (UCL). Schreurs et al. constructed this 47-item inventory for measuring coping from a dispositional point of view in which coping is conceptualised as a personality characteristic. A 4-point Likert scale is given for each item. Seven scales are distinguished: (1) active problem solving, (2) palliative responses, (3) avoidance and passive expectancy, (4) seeking social support, (5) depressive reaction pattern, (6) expressing emotions, and (7) comforting cognitions.

The mean internal consistency over 10 studies with a total of more than 3300 subjects ranged from 0.63 to 0.79.

The *Mastery Scale* was used to assess experienced control over life situations. The scale consists of seven items scored on a 7-point Likert scale. A higher score reflects more experienced control.

*Incidence of sickness leave* in the previous year was derived from the company’s computerised record system.

*Symptoms* were measured with two questionnaires, the Symptom Checklist-90 (SCL-90) and the Four Dimensional Symptom Questionnaire (4DSQ). The SCL-90 is a validated measure for psychopathological screening and evaluation of treatment effects. The
Dutch version has a factorial structure closely related to the original instrument by Derogatis. Seven scales directly equivalent to scales in the original version were used: anxiety (ANX), phobic anxiety (PHOB), depression (DEP), somatisation (SOM), obsessive-compulsive behaviour (O-C), interpersonal sensitivity and paranoid ideation (IS-PI) and hostility (HOS). Cronbach’s alpha for the internal consistency of these scales ranges from 0.73 to 0.92. The 4DSQ comprises 50 items with a 5-point Likert scale for each item, on four subscales that measure distress, depression, anxiety, and physical symptoms. Internal consistency coefficients for these scales range from 0.84 to 0.94. The 4DSQ was developed and validated for primary care patients with adjustment disorders. Only the distress scale was used to avoid redundancy with the SCL 90 scales.

The Social Functioning questionnaire assesses the level of constraint people can experience in four different aspects of their private life. All self-report measures used had reported values of Cronbach’s alpha higher than 0.70. Missing items were treated conform the instructions of the instruments used. If this was not specified, scale scores were computed on the basis of the available items. If more than 20% of the items of a scale were missing, the total scale was considered as missing.

Dependent measures / outcomes

Absenteeism data were derived from the company’s computerised record system. Time to partial and time to full return to work as well as status of partial or full return to work at 3 months after onset of sickness absence were used as outcome parameters. Time to return to work was defined as the period between onset of sickness leave and first return to work, which was mostly partial. Time to full return to work was defined as the period between onset of sickness leave and full return to work.

Statistical analysis

All analyses were performed for the total group (n=192) and for the intervention group (n=109) separately. Cox’s proportional hazards regression analyses were used as survival method to analyse the time
variables, time to partial return and time to full return to work.
Logistic regression analyses were used for the variables status of par-
tial return to work and status of full return to work at 3 months.
To select variables for the multivariate regression analyses (Cox or
logistic), univariate analyses (Cox or logistic) were performed, with
each independent variable being used as a factor in separate analyses.
Independent variables with p≤0.20 in the univariate analyses were
selected for the multivariate analyses. From a forward conditional
model, all selected variables were allowed to compete for entry (the p
for entry was 0.05 and for removal was 0.10) in five steps (four for
the intervention group). In the first step socio-demographic variables
were introduced, and in the second step whether or not the patient
received the intervention (this applied only to the total group).
Selected variables of quality of work life and social contacts were
introduced in the third step, coping and mastery were introduced in
the fourth step, and symptoms (SCL 90 scales) and social functioning
in private life in the fifth step. The five stages reflect a model pro-
gressing from more or less fixed, causal factors to more variable,
consequential factors. These procedures were performed for each
dependent variable. All analyses were done with SPSS for Windows
9.0 (SPSS Inc., Illinois, USA).

Results

Results for time to return to work and for time to full return to work
are given in Tables 4.1 and 4.2. Results of the univariate Cox regres-
sion analyses are shown for the total group and for the intervention
group. Only independent variables with a univariate association with
a p value ≤0.20 for either the total group or the intervention group
are presented. Per group and per dependent variable, all independent
variables with an association with a p value ≤0.20 in the univariate
analyses were introduced in the multivariate Cox regression analyses.
For time to return to work (first step, partial, or full), the overall
Chi-Square score was 8.35 (df=1, p=0.00) for the total group and
29.85 (df=5, p=0.00) for the intervention group. In Table 4.1 signifi-

tant outcomes are shown for the multivariate regression analyses for
the total group and the intervention group. For the total group, only
Table 4.1. Association of independent variables with time to return to work: $p$-value for univariate association, Exp (B) (the percent change in risk with each unit change in the covariate) and $p$-value in the multivariate analysis for the total study group (n=192) and for the intervention group (n=109). Only independent variables with a univariate association with a $p$-value $\leq 0.20$ for either the total study group or the experimental group are shown. Only significant ($p \leq 0.05$) multivariate outcomes are shown.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Total group (n=192)</th>
<th>Intervention group (n=109)</th>
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<tr>
<td></td>
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<td>Multivariate</td>
</tr>
<tr>
<td></td>
<td>$p$-value</td>
<td>Exp (B)</td>
</tr>
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<tr>
<td>Sex</td>
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<tr>
<td>Household</td>
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<td></td>
</tr>
<tr>
<td>Salary level</td>
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<tr>
<td>Highest level of education</td>
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<td></td>
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<tr>
<td>Self-reported health status</td>
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<tr>
<td>Receives counselling</td>
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<tr>
<td>Intervention or not</td>
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<td></td>
</tr>
<tr>
<td>Group</td>
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<tr>
<td>Work related characteristics</td>
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<tr>
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<tr>
<td>Negative contacts</td>
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<tr>
<td>Coping / control</td>
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<td></td>
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<td>Mastery</td>
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<td></td>
</tr>
<tr>
<td>Health Symptoms</td>
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<td></td>
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<tr>
<td>Phobic anxiety</td>
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<tr>
<td>Social Functioning</td>
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**Table 4.2.** Association of independent variables with time to full return to work: *p*-value for univariate association, Exp (B) (the percent change in risk with each unit change in the covariate) and *p*-value in the multivariate analysis for the total study group (n=192) and for the intervention group (n=109). Only independent variables with a univariate association with a *p*-value ≤ 0.20 for either the total study group or the experimental group are shown. Only significant (*p* ≤ 0.05) multivariate outcomes are shown.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Total group (n=192)</th>
<th>Intervention group (n=109)</th>
</tr>
</thead>
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<tr>
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<td>univariate</td>
<td>Multivariate</td>
</tr>
<tr>
<td></td>
<td><em>p</em>-value</td>
<td>Exp (B)</td>
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<td><strong>Socio-demographic characteristics</strong></td>
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<tr>
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<tr>
<td>Household</td>
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<td>Salary level</td>
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<tr>
<td>Highest level of education</td>
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<tr>
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<td></td>
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<tr>
<td><strong>Intervention or not</strong></td>
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<td>1.49</td>
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<tr>
<td><strong>Work related characteristics</strong></td>
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<td></td>
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<tr>
<td>Leadership and colleagues</td>
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<td>Over-all evaluation of the job</td>
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<td>Positive contacts</td>
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<td></td>
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<tr>
<td><strong>Coping / control</strong></td>
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<td>Depressive reaction pattern</td>
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<td><strong>Health Symptoms</strong></td>
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<td>Phobic anxiety</td>
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<tr>
<td>Depression</td>
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<td>Somatisation</td>
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<td>Obsessive-compulsive behaviour</td>
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<td></td>
</tr>
<tr>
<td>Social Functioning</td>
<td>0.05</td>
<td></td>
</tr>
</tbody>
</table>
the intervention appeared to be a significant predictive factor. For the intervention group, older age, female sex, high education level, high level of positive contacts, and low social functioning in private life were associated with a slower return to work.

For time to full return to work, the overall Chi-Square score was 27.42 \((df=4, p=0.00)\) for the total group and 12.94 \((df=2, p=0.00)\) for the intervention group. In Table 4.2 significant outcomes are shown for the multivariate regression analyses for the total group and the intervention group. For the total group, the intervention was again a predictor of a faster return to work. Older age, high education level, and a high level of somatisation were associated with a slower return to work. There were two predictors of a slower return to work in the intervention group, namely, a high level of education and a high level of obsessive-compulsive behaviour.

The outcomes of the analyses on partial or full return to work 3 months after reporting sick were consistent with those for the time variables presented above, but there were some minor differences. For status of return to work (first step, partial or full) at 3 months, the overall Chi-Square score was 9.00 \((df=2, p=0.01)\) for the total group and 14.96 \((df=2, p=0.00)\) for the intervention group. In the total group was the activating intervention the only predictor that was significant at the \(p<0.05\) level; receiving counselling by psychologist or social worker was associated \((p=0.08)\) with a slower return to work in this group. Although the model was highly significant for the intervention group, there were no variables reaching a level of significance of \(p<0.05\); a high education level was associated with a slow return to work \((p=0.08)\). The overall Chi-square score for full return to work at 3 months was 10.08 \((df=2, p=0.01)\) for the total group and 15.83 \((df=3, p=0.00)\) for the intervention group. Here too, the intervention predicted a faster return to work in the total group. A high level of education predicted a slower return to work in both groups, as did positive social contacts and a high level of somatisation in the intervention group.

**Discussion**

The aims of this study were to identify factors predictive of work resumption among employees with an adjustment disorder and occu-
pational disability, and to identify those factors that predicted work resumption after an activating intervention. Dependent variables were ‘time to (partial) return to work’ and ‘time to full return to work’. These variables were distinguished because it is plausible that the step to return to work from a not-working position is predicted by other factors than the decision to extend working hours when one is (partially) involved in the work situation.

With regard to the first research question, only the intervention itself appeared to be a significant and potent predictor of a partial return to work for the total group. For full return to work, age, educational level and somatisation were additional predictors for the total group. The second research question on predictors of work resumption after an activating intervention, was possible because the study was conducted in a controlled study design. In the intervention group several factors, such as age, sex, level of education, positive contacts, and social functioning at home, were predictive of a partial return to work. Level of education and obsessive-compulsive behaviour were significant predictors of a full return to work.

Predictors of a partial return to work were different for the two groups. For the total group only the intervention was a predictive factor. It is possible that in this group the noise of all kinds of factors that could influence resumption of work prevented specific predictive factors from becoming manifest. The focus on activation could have reduced noise in the intervention group giving rise to specific predictive factors to become manifest.

The outcome that the intervention appeared to be a significant and relevant predictor of return to work in the total group on all outcomes is in accordance with the outcome of earlier analyses, and is consistent with the outcomes of graded activity programmes that report effects on work ability and sickness leave. For full return to work, there were, besides the intervention itself, three significant predictors in the total group (age, education level and somatisation) and two in the intervention group (level of education and obsessive-compulsive behaviour). As the correlation between somatisation and obsessive-compulsive behaviour was high (0.53 for the total group and 0.59 for the intervention group), it can be questioned whether this reflects the same factor (a factor ‘physical
or psychological distress’). The SCL-90 scale obsessive-compulsive behaviour encompasses items that reflect psychological distress, which is known to be highly correlated with physical distress. If so, it seems that for the time variables there are only specific predictive factors for the intervention group with regard to the outcome ‘partial return to work’.

Level of education was a predictor in several analyses in the intervention group and in the total group. Unexpectedly, the relation was the opposite to that anticipated - high education was predictive of a slower return to work. In most research a high level of education is associated with a favourable rehabilitation and return to work. Usually, interventions and therapy are especially successful for the most educated, who already have the best chances of recovery and reintegration. An explanation is that the intervention offers very practical support in terms of problem solving tools. For higher educated individuals, work-related problems might be determined less by a deficit in actual active coping skills than by a more motivational dimension: does the work offer sufficient opportunities and perspective for developing oneself. This reflection may take more time than acquiring practical problem solving skills. Another possibility is that higher educated individuals are less responsive to a prescriptive approach. Although our intervention was effective for this group, it might be worthwhile to develop and evaluate interventions specifically focused on this group.

Another notable finding is the predictive power of sex. In the intervention group, men were much faster than women in taking the first steps to return to work, but this was not so for the ultimate moment of full return to work. Apparently, the later start of work rehabilitation was compensated for by a faster build-up from partial to full participation by women in the intervention group. This faster build-up to full participation may be explained by the fact that women worked fewer hours per week than men (28.9 hours, SD 12.2 versus 38.0 hours SD 8.0). Another explanation is that the double load of work and family responsibilities postpones the start of work rehabilitation for women, but once this step has been taken, the more rewarding aspects of work (social contact outside the circle of family responsibilities and obligations) might be more appealing for women than
for men. However, this reasoning would also be valid for the total group whereas this finding was specific for the intervention group. In the intervention group, a high level of positive contacts was a significant negative factor for time to partial return to work. As social support is generally considered as a positive moderating factor, this is remarkable. The positive contact list used measured predominantly emotional support and empathy. However, emotional support and empathy, in the sense of unconditional understanding and sympathy, could confirm patients in their experienced need for rest, which would be counterproductive in the end. An environment experienced as understanding and sympathising could interfere with the graded activity approach, the core of which is to encourage patients to gradually expand their problem-solving activities despite potentially enduring or even temporary worsening of symptoms. Two other factors, age and social functioning at home, were predictors of time to (partial) return to work in the intervention group. An older age and low social functioning predicted a longer time to the first phase of work rehabilitation.

A high level of somatisation delayed a full return to work in the total group. This is comprehensible because a strong propensity to attribute symptoms to somatic causes inhibits insight and hence the motivation for developing a problem-solving attitude. In the intervention group, a high level of obsessive-compulsive behaviour was also a predictor of a delayed return to work. This scale of the SCL-90 encompasses inadequate cognitions, and these would also impede the development of a problem-solving attitude. As mentioned above, the factors somatisation and obsessive-compulsive behaviour were correlated - they could be the physical and psychological exponents of an inadequacy in identifying problems and hence an inadequacy in problem solving.

Surprisingly, psychopathological symptoms, as measured by the SCL-90 dimensions, work-related factors (workload or decision latitude) and aspects of coping were not of predictive significance. With regard to symptoms, this is consistent with earlier intervention analyses showing a divergence between effectiveness in terms of symptoms and in absenteeism-related outcomes. Ormel et al. found synchrony of change in primary care patients between severity of psychiatric ill-
ness and social disability. Thus, the more severe a psychiatric disorder, the greater the improvement of psychiatric symptoms needs to be before there is improvement at a disability level. Our results indicate that this may not be true for adjustment disorders, which are defined more in terms of social disfunctioning than in terms of symptoms, more in terms of illness than disease. The studies discussed in the introduction, where psychopathology was predictive of disability, indeed concerned more severe forms of psychopathology. The failure to find that work-related aspects, such as interpersonal conflict at work and job control, were predictors of delayed return to work might be because the present study did not investigate the onset of sickness leave, as did Appelberg et al., Niedhammer et al. and Smulders and Nijhuis, but rather recovery from sickness leave. It is conceivable that work conditions influence the decision to go on sickness leave, but when the employee is at home and not exposed to unfavourable work conditions, these may not influence the recovery process and the decision to return to work. Surprisingly, coping and control variables were also not predictive factors. Given that the intervention, which predominantly focuses on the reinforcement of active coping skills, was highly effective, it would be expected that basal coping ability would be predictive of return to work. It may be that in adjustment disorders, the existing repertoire of coping skills fails in an actual situation, regardless of the quality of these skills. Another explanation is that the UCL measures a general pattern of styles which may differ from the cognitions and the practical coping skills that give the sense of control needed to resume work. To our knowledge, this is the first study of factors prognostic of the duration of occupational disability due to adjustment disorders. A major advantage of this study is its controlled design with an intervention group and a control group. This offered the opportunity to investigate whether specific factors applied to the intervention group. A limitation of this study is that all patients, irrespective of their treatment group, had fully returned to work by 12 months, which is in sharp contrast with the outcome of studies by Schröer. The company where the study was conducted already had favourable return-to-work rates for many reasons, one of which is the professionalism of the internal occupational health service. Thus in this
specific situation, 'care as usual' was already rather effective, so that there was little contrast between treatment and control group. We can conclude from our study that the activating intervention itself was the most powerful predictor of a favourable rehabilitation and return to work. Younger age, low education level, and low level of somatisation were also predictive of a favourable full return to work. Only for time to (partial) return to work there were specific predictive factors for the intervention group. For this outcome older age, female sex, high level of education, positive contacts and low social functioning in private life were significant predictors of a delayed first step of return to work. Level of education and positive contacts were predictive of a delayed return to work, in contrast to findings in the literature. We recommend research on separate aspects of the intervention to gain insight into which elements are especially effective and which elements could be adjusted to improve their effectiveness in those groups that seem to profit less from the intervention, in particular female employees and higher educated employees.

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Endnote 4.1.

Differences between the Dutch analyses and the original instrument were that in the Dutch material 'psychoticism' did not occur as a factor, that there arose a small factor 'sleeping problems', consisting of three items, and that 'interpersonal sensitivity' and paranoid ideation formed one factor.
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CHAPTER 4


