A workplace intervention for sick-listed employees with distress: results of a randomised controlled trial

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ABSTRACT

Objectives To evaluate the effectiveness of a participatory workplace intervention compared with usual care for sick-listed employees with distress, with regard to return to work (RTW) within the 12-month follow-up.

Methods Employees with distress and sick-listed for 2–8 weeks were randomised to a workplace intervention (n=73) or to usual care (n=72). The participatory workplace intervention is a stepwise process involving the sick-listed employee and their supervisor, aimed at reducing obstacles for RTW by reaching consensus about an action plan for RTW. Outcome variables were lasting RTW, cumulative sickness absence and stress-related symptoms.

Results Overall, an HR of 0.99 (95% CI 0.70 to 1.39) indicated no effect of the workplace intervention on lasting RTW. However, the workplace intervention significantly reduced the time until lasting RTW for employees who at baseline intended to return to work despite symptoms with an HR of 2.05 (95% CI 1.22 to 3.45). Employees who intended to return to work despite symptoms returned to work after 55 days in the workplace intervention group and 120 days in the usual care group. No such effect of the intervention was found for employees without baseline intentions to return to work despite symptoms (HR=0.78, 95% CI 0.47 to 1.28).

Conclusions No overall effect of the participatory workplace intervention on lasting RTW was found. The workplace intervention appeared effective on lasting RTW for employees who at baseline intended to return to work despite symptoms. For employees who showed no baseline intention to return to work, the intervention did not have any effect. Other approaches are needed for this subgroup.

This trial has been registered at the Dutch National Trial Register ISRCTN92307123.

What this paper adds

- There is a lack of intervention research with a focus on return to work for those with mental health problems.
- No effect on lasting return to work was found for the workplace intervention compared with usual care for employees with distress and 2–8 weeks' sick leave.
- Future studies should confirm the findings that the workplace intervention appeared to be effective for lasting return to work for a subgroup of employees who at baseline intended to return to work despite the presence of symptoms.

INTRODUCTION

Work absenteeism due to mental health problems results in high costs and a high risk for long-term work disability.[1–4] Mental health problems account for one third of all disability benefits in the Netherlands[5] and so early intervention is of crucial importance. Return to work (RTW) interventions aim to reduce the burden of work disability for employees, companies and society. However, there is a lack of intervention research focusing on RTW for common mental health problems.[6] Several authors suggested that interventions should be carried out in collaboration with the workplace and should be directed towards work adaptations.[7–11] Therefore, we developed a participatory workplace intervention for sick-listed employees with distress, based on a successful intervention for sick-listed employees with low back pain (LBP).[12 13] The participatory workplace intervention is unique in the field of mental health problems. It requires a high degree of involvement by both the sick-listed employee and their supervisor and is a stepwise communication process aimed at reducing obstacles to RTW by reaching consensus about an action plan for RTW.[14]

Our hypothesis is that active participation and improvement of problem solving skills of both the employee and the supervisor guided by a RTW coordinator increases the likelihood of early RTW. This expectation is based on positive views from employees, supervisors and occupational health professionals expressed in focus groups,[12] and the previous findings from LBP studies.[13 15] RTW may be hampered in several ways. First, an employees' attitude or self-efficacy for RTW may result in a lack of intention to return to work.[12] The focus group interviews identified the presence of mental health problems as a potential barrier to RTW. On the other hand, barriers for RTW in the workplace itself may impede a successful RTW, even if an employee intends to return to work. The participatory workplace intervention aims to remove barriers for RTW in the workplace and could increase an employee's self-efficacy to return to work. Employees, supervisors and occupational health professionals viewed the participatory workplace intervention as a promising intervention strategy for RTW of employees with stress-related symptoms.[12]

In a recent publication, workplace intervention for employees with distress was evaluated as being feasible.[16] Employees and supervisors were able to identify obstacles related to mental workload, stress and communication, to discuss them and to

find solutions for these obstacles. Although all stakeholders indicated they were satisfied with the intervention process and the resulting work adaptations, effectiveness still has to be established. The aim of the current study was to assess the effectiveness of the participatory workplace intervention compared with usual care for sick-listed employees with distress, with regard to RTW at the 12-month follow-up. In addition, effects of the workplace intervention on stress-related symptoms were investigated.

METHODS

Study design and setting

The study is a randomised controlled trial carried out in three Dutch organisations: the VU University, the VU University Medical Center, and Corus (a steel company). Fourteen occupational physicians were involved in the study: seven occupational physicians from the Corus occupational health services and seven from the VU and VU Medical Center occupational health services. The Medical Ethics Committee of VU University Medical Center approved the study design and all participants signed informed consent.

Study population and recruitment procedures

Between April 2006 and May 2008, all employees sick-listed for more than 1 week received a letter from their occupational physician together with a screening questionnaire. The screening questionnaire was based on the distress scale of the Four-Dimensional Symptom Questionnaire (4DSQ).[17–19] All employees who returned the screening questionnaire and who met the distress and sick leave criteria were contacted by the researchers to check the inclusion and exclusion criteria, regardless of the primary reason for their sickness absence. Employees on sick leave from regular work for 2–8 weeks were included. Exclusion criteria were: (1) a conflict between the employee and the employer with legal involvement; (2) working less than 12 h a week; (3) pregnancy; (4) any other episode of sick leave within 1 month before the current episode; and (5) inability to complete questionnaires written in the Dutch language. The occupational physician was responsible for preventing employees with severe psychiatric disorders (mania, psychosis or severe risk of suicide) and employees with a terminal illness from starting the workplace intervention.

Randomisation and blinding

An independent statistician prepared the randomisation scheme by using computer-generated randomisation. To prevent unequal randomisation, employees were pre-stratified by organisation (VU, VU Medical Center or Corus) and whether they were on full or part time sick leave, resulting in six strata. Block randomisation (with blocks of four) was applied to ensure equal group sizes within each stratum. Based on the randomisation scheme, sealed envelopes were prepared before the start of the study containing a referral either to the workplace intervention group or to the usual care group. After completing the baseline questionnaire each employee opened a sealed envelope provided by the research assistant.

The participants and occupational health professionals were not blinded for group assignment. Sick leave data were extracted from the computerised registrations of the occupational health services and self-reported data were entered into the computer by a research assistant, which ensured blinded analysis of the data by the researcher. Recruitment procedures, randomisation procedures and sample size calculations have been described in detail elsewhere.[14]

Interventions

Usual care

The employees allocated to the usual care group received usual care from their occupational physicians according to the evidence-based guideline of the Dutch Association of Occupational Physicians (NVAB) published in 2000 and updated in 2007.[20] This guideline aims to facilitate optimal functioning of employees with mental health problems and to prevent long-term sick leave and frequent recurrences.

Participatory workplace intervention

Employees allocated to the workplace intervention received usual care from their occupational physicians and were referred to a RTW coordinator (company social worker or a labour expert) for the workplace intervention. Prior to the study, RTW coordinators had been trained in the guidance of employees and supervisors according to the workplace intervention.

The participatory workplace intervention consisted of a stepwise communication process to identify and solve obstacles for RTW. The participatory workplace intervention is based on consensus between the sick-listed employee and their supervisor. About 3 weeks after baseline, three meetings took place with the employee and/or the supervisor and the RTW coordinator. In the first meeting, the employee performed a task analysis and identified obstacles for RTW in a structured conversation with the RTW coordinator. These obstacles were ranked according to priority, based on their frequency and perceived severity. At the second meeting, the supervisor and the RTW coordinator were present and identified obstacles for RTW from the perspective of the supervisor. In the third meeting, the employee, the supervisor and the RTW coordinator discussed solutions. The solutions were ranked according to priority, based on the feasibility, solving capability and short-term applicability of the suggested solution. After this, a plan for implementation of the suggested solutions was formulated, in terms of the person responsible for implementation, how the solution was planned, and when it should be implemented. This plan was based on consensus. The solutions were to be implemented in the weeks following the meetings. If required, the RTW coordinator planned a visit to the workplace to instruct and advise the employee. Actual implementation of the solutions and contributions to RTW were evaluated 1 month after the meetings by the RTW coordinator with the employee and the supervisor. Information about the duration and content of the workplace intervention is given elsewhere.[16]

Outcome measures and data collection

Baseline measurement took place before randomisation and follow-up measurements were performed 3, 6 and 12 months after baseline. Sick leave data were gathered from the continuous registration systems of the occupational health services after the 12-month follow-up.

Primary outcome measure: return to work

The primary outcome measure in this study is lasting RTW, defined as the duration of sick leave with distress in calendar days from the day of randomisation until full RTW to the employee's previous or another position with equal earnings, for at least 4 weeks without (partial or full) recurrence. Recurrences of sick leave within 4 weeks of full RTW are considered as belonging to the initial period of sick leave, in accordance with the requirements of the Dutch Sickness Benefits legislation. As several medical diagnoses may be distress related, we summed sick leave periods with a diagnosis equivalent to the baseline diagnosis or diagnoses belonging to the same cluster of

psychological diagnoses.[21] In addition, the total number of days of sick leave in 12 months was calculated.

Secondary outcome measure

Stress-related symptoms were assessed by 4DSQ at baseline, 3, 6 and 12-month follow-up. This questionnaire consists of 50 items related to the dimensions distress, depression, anxiety and somatisation. The items were scored for occurrence during the past week on a 5-point Likert scale ranging from 'no complaints' to 'very often/continuously'. The 4DSQ is a reliable and valid instrument to measure stress-related symptoms in a working population.[17 18] Cronbach's α for the four subscales ranged from 0.84 to 0.90.

Covariates

All covariates were assessed at baseline. Behavioural determinants for RTW concerned the employee's attitude, social influence, self-efficacy and intention to return to work despite the existence of symptoms. The questions were measured on 5-point Likert scales.[22] Four attitude questions were assessed with response categories varying from 'very important' to 'very unimportant'. Social influence comprised three questions about the normative beliefs of the supervisor, colleagues and acquaintances regarding a RTW despite symptoms, and three questions about the motivation to comply with these beliefs.[22] Response categories ranged from 'totally agree' to 'totally disagree', and 'very much' to 'very little'. The questions about normative beliefs and motivation to comply were multiplied to calculate a scale score for social influence.[22] There were two self-efficacy questions and one question about intention to return to work. The response categories of the self-efficacy and intention questions varied from 'certainly' to 'certainly not'. For example, the intention question was formulated thus: 'Do you intend to return to work when still experiencing symptoms?'.

Decision latitude, psychological (job) demands and social support were assessed by the Job Content Questionnaire (JCQ).[23] Emotional exhaustion, depersonalisation and personal accomplishments were measured by the Utrecht Burnout Scale-General Survey (UBOS).[24] In addition, sick leave in the past year and the expectations of the employee concerning the duration of absence were measured since they are considered to be potentially prognostic variables for RTW.

Statistical analyses

All statistical analyses were performed at employee level, according to the intention-to-treat principle. The baseline characteristics of employees in the two groups were compared using descriptive statistics.

Primary outcome measure

The cumulative incidence function was used to describe sick leave duration until lasting RTW in both groups. The Cox proportional hazard model was applied to estimate HRs and corresponding 95% CIs. The shared-frailty procedure was used to account for clustering of employees within occupational physicians.[25]

First, unadjusted Cox regression analysis was performed. Second, in an adjusted Cox regression analysis confounding and effect modification were assessed. The potential confounders or effect modifiers were predefined and were all measured at baseline: personal characteristics (age and gender); job characteristics (company, decision latitude, job demands and social support), sick leave-related characteristics (sick leave in the past year, expectations of the employee about the duration of absence, emotional exhaustion, depersonalisation and personal accomplishments) and determinants of RTW (attitude to RTW, social influence on RTW, self-efficacy of RTW and intention to return to work).[12 14] Continuous variables were checked on linearity and categorical variables were dichotomised based on content. The JCQ scales were dichotomised based on agreement/non-agreement, UBOS scales on frequency of occurrence never/sometimes and often/always, and ASE (attitude, social influence and self-efficacy) variables on positive and negative categories. Company and sick leave in the past year were analysed as dummy variables.

First, univariate tests for confounding and effect modification were performed. Covariates were considered as confounders if the β of the intervention changed more than 10% by adding the covariate to the Cox regression model. Effect modification was assessed by including the potential modifier and an interaction term between the potential modifier and the intervention to the Cox regression model. Effect modification was considered to be present when the β coefficient of the interactions term had a $p<0.05$. A forward selection procedure was followed to include interaction effects and covariates. In case of effect modification, separate HRs per subgroup are reported. A test of the proportional hazard assumption was conducted.[26]

Differences in total days of sick leave during the year of follow-up were analysed by using Mann–Whitney U tests.

Secondary outcome measure

Linear mixed models were used to assess differences in stress-related symptoms. Linear mixed models can be applied with longitudinal data taking into account clustering at the level of the occupational physician. We applied unstructured covariance matrices to adjust for correlation of the data on the different measurement times. The effect of interest is the interaction between treatment group and measurement time, that is the differences between treatment groups at 3, 6 and 12 months adjusted for baseline differences on the outcome variable.

Values of $p<0.05$ were considered statistically significant for all analyses. Stata v 10.0 was used to test clustering within occupational physicians in the Cox regression analyses. All other analyses were performed with SPSS v 14.0.

RESULTS

Employee flow

Figure 1 shows the flow of participants in this trial. Based on the response to the screening questionnaire, 686 employees were initially eligible for participation. After telephone contact, 541 employees were not enrolled for different reasons (figure 1). Finally, 145 employees fulfilled all inclusion criteria and were randomised to the workplace intervention (n=73) or usual care (n=72). The mean number of days between completing the screening questionnaire and randomisation was 12 days.

Loss to follow-up

Administrative sick leave data were available for all employees for the entire 12-month follow-up period. However, three employees left their company during the follow-up period but registered their sick leave manually on a monthly calendar and returned the calendar to the researcher. Two employees in the usual care group withdrew from the study and so no follow-up data regarding self-reported outcomes could be collected for them.

Baseline characteristics

Table 1 shows the baseline characteristics of the participants in the workplace intervention and usual care groups. There were only slight differences between demographic characteristics, sick leave, work characteristics and stress-related symptoms.

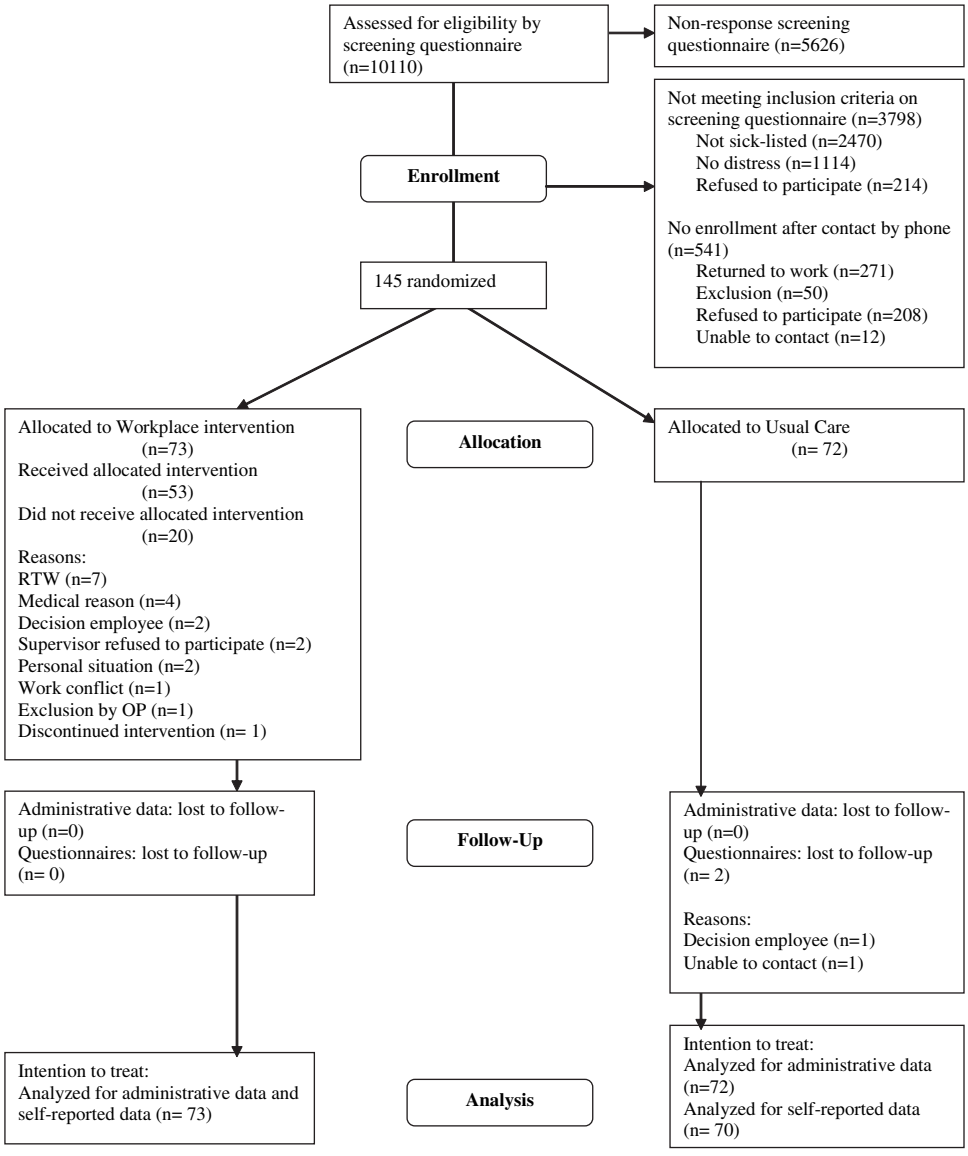

Figure 1 Flow of employees in the study.

Workplace intervention

In total, 20 employees allocated to the workplace intervention did not receive the allocated intervention. Seven employees returned to work before the planned appointment for the workplace intervention. Twelve employees did not participate in the workplace intervention due to various reasons (figure 1). One employee started participating in the intervention, but when neither the employee nor the supervisor could identify obstacles for RTW they decided to discontinue the workplace intervention. Adverse events or side effects were not reported.

All employees in the workplace intervention group consulted their occupational physician in the first 3 months after randomisation, 21 employees (29%) consulted a company social worker (apart from the consultations with a company social worker in the workplace intervention), 36 (49%) were treated by a specialised mental health professional (psychologist, psychiatrist, psychotherapist), 63 (86%) consulted their general practitioner (GP), 23 (32%) consulted a physiotherapist, and 24 (33%) consulted a medical specialist.

Usual care

In the usual care group, 70 employees (97%) consulted their occupational physician in the first 3 months after randomisation, 24 (33%) consulted a company social worker, 25 (35%) were treated by a specialised mental health professional, 67 (93%) consulted their GP, 28 (39%) consulted a physiotherapist, and 30 (42%) consulted a medical specialist.

Return to work

After the 12-month follow-up, seven employees in the workplace intervention group and six employees in the usual care group did not achieve a lasting RTW. The median time until full and lasting RTW was 96 days (interquartile range (IQR) 52–193 days) in the workplace intervention group and 104 days (IQR 52–195 days) in the usual care group. The crude Cox regression analysis showed no overall effect of the workplace intervention compared with usual care. The unadjusted HR was 0.99 (95% CI 0.70 to 1.39).

In the univariate analyses, the following variables appeared to be significant effect modifiers: baseline intention to return to work despite symptoms, baseline attitude to return to work despite symptoms and baseline self-efficacy to return to work despite symptoms. All variables were classified as a confounder in the univariate Cox regression, except gender, social influence on RTW and decision latitude. In the final multivariate model, intention to return to work despite

Table 1 Baseline characteristics, prognostic variables and baseline values of outcome measures

	WI (n=73)	UC (n=72)
Baseline characteristics		
Age in years	48.6 (7.7)	49.2 (8.6)
Gender (% male)	76.7	80.6
Education		
High, n (%)	21 (28.8)	20 (28.6)
Average, n (%)	29 (39.7)	29 (41.4)
Low, n (%)	23 (31.5)	21 (30.0)
Sick leave characteristics		
Sick leave in the past year		
<10 days, n (%)	31 (42.5)	37 (51.4)
11–30 days, n (%)	23 (31.5)	21 (29.2)
> 31 days, n (%)	19 (26.0)	14 (19.4)
RTW expectations		
Within a month, n (%)	18 (25.4)	20 (27.8)
More than a month, n (%)	53 (74.6)	52 (72.2)
Burnout		
Emotional exhaustion (0–6)*	2.9 (1.7)	2.8 (1.6)
Depersonalisation (0–6)*	2.0 (1.3)	2.0 (1.2)
Personal accomplishment (0–6)*	3.7 (1.0)	3.8 (1.0)
Stress-related symptoms		
Distress (0–32)*	20.7 (7.7)	19.8 (7.7)
Depression (0–12)*	3.3 (3.7)	3.5 (3.6)
Anxiety (0–24)*	6.5 (6.0)	5.2 (5.1)
Somatisation (0–32)*	12.8 (6.8)	12.9 (6.4)
Work characteristics		
Job demands (12–60)	32.7 (5.37)	32.0 (4.76)
Decision latitude (24–120)	71.0 (10.7)	69.3 (10.9)

Unless indicated otherwise, the mean and SD are presented. UC, usual care; WI, workplace intervention.
*A higher score means a higher level of emotional exhaustion, depersonalisation, personal accomplishment, distress, depression, anxiety and somatisation.

symptoms remained the only effect modifier, and sick leave in the past year and expectations about the duration of absence remained as confounders (table 2).

For the employees who at baseline intended to return to work despite symptoms, the workplace intervention was associated

Table 2 Cox proportional hazard models with the results of the crude and adjusted Cox regression analyses

	β Coefficient	SE	p Value	HR	95% CI Lower	95% CI Upper
Crude model*						
Intervention	−0.01	0.17	0.95	0.99	0.70	1.39
Adjusted model—certain intention to return to work despite symptoms†						
Intervention	0.72	0.27	0.01	2.05	1.22	3.45
Intention to return to work despite symptoms	0.10	0.27	0.96	0.99	0.58	1.68
Sick leave in the past year (11 days–1 month vs 0–10 days)	−0.26	0.22	0.24	0.77	0.50	1.19
Sick leave in the past year (>1 month vs 0–10 days)	−0.61	0.24	0.01	0.55	0.34	0.88
Expected duration of absence (<1 month vs >1 month)	−0.41	0.21	0.05	0.66	0.44	0.99
Interaction intervention× intention to return to work despite symptoms	−0.97	0.37	0.01	0.38	0.18	0.79

Differences in RTW between the workplace intervention and usual care group RTW, return to work.
*The median time until full and lasting RTW was 96 days (IQR 52–193 days) in the workplace intervention group and 104 days (IQR 52–195 days) in the usual care group.
†The median time until full and lasting RTW for employees who at baseline intended to return to work despite symptoms was 55 days (IQR 27–89 days) in the workplace intervention group and 120 days (IQR 47–198 days) in the usual care group.

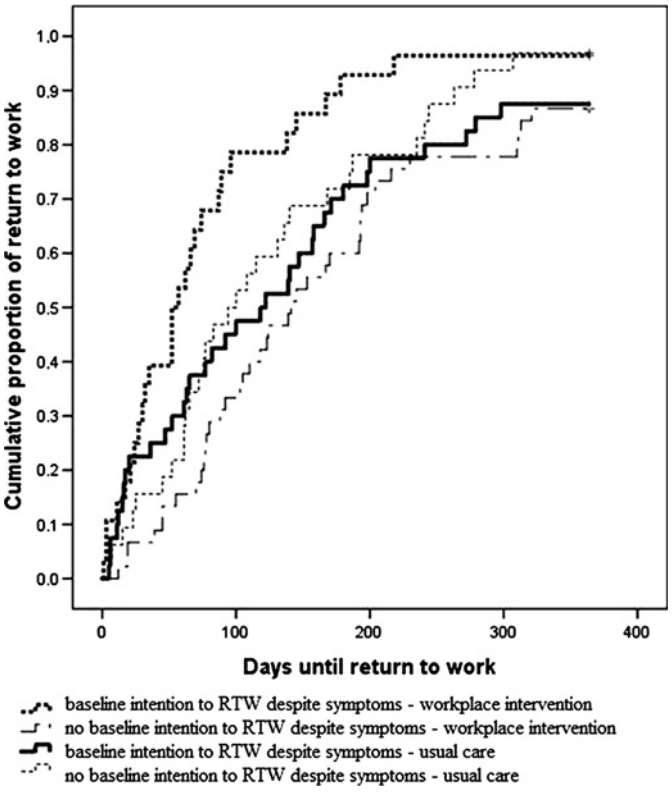

Figure 2 Cumulative incidence functions for return to work during the 12-month follow-up, by intervention condition and baseline intention to return to work despite symptoms.

with a shorter median duration of sick leave until a lasting RTW, compared with usual care. The cumulative incidence functions stratified for treatment group and intention to return to work are presented in figure 2. The median time until full and lasting RTW for employees who at baseline intended to return to work despite symptoms was 55 days (IQR 27–89 days) in the workplace intervention group and 120 days (IQR 47–198 days) in the usual care group. For employees who at baseline intended to return to work despite symptoms, the HR was 2.05 (95% CI 1.22 to 3.45) (table 2).

An HR of 0.78 (95% CI 0.47 to 1.28) was found for employees who had at baseline uncertain intentions to return to work despite symptoms, with a median of 141 days (IQR 78–216 days) in the workplace intervention group and a median of 97 days (IQR 61–185 days) in the usual care group. The proportional hazard assumption was not violated in any of these analyses.

The total number of days of sick leave in the 12-month follow-up was 141 days in both groups and did not differ significantly (p=0.88). Five employees in the workplace intervention group experienced a recurrence of sick leave within 12 months and one employee experienced two recurrences. Six employees in the usual care group experienced a recurrence. Clustering at the level of the occupational physician was not found in these analyses.

Secondary outcome measure

The results of the effectiveness of the workplace intervention on secondary outcomes are presented in table 3. In both groups the severity of all stress-related symptoms improved significantly over 12 months (p<0.001). However, no differences were found between the improvements in the workplace intervention group and the usual care group. In total, 46 employees (32%) still reported elevated levels of distress after the 12-month follow-up.

Table 3 Differences in stress-related symptoms

	Group	Baseline	3 months	6 months	12 months	p Value
Distress (0–32)	WI	20.7 (7.73)	11.9 (8.85)	10.7 (8.68)	9.00 (8.26)	0.77
	UC	19.8 (7.69)	12.3 (8.47)	10.4 (8.05)	8.37 (8.07)	
Depression (0–12)	WI	3.32 (3.72)	1.81 (3.36)	1.69 (3.01)	1.30 (2.40)	0.54
	UC	3.50 (3.56)	2.06 (2.96)	1.43 (2.60)	1.04 (1.97)	
Anxiety (0–24)	WI	6.49 (6.02)	3.67 (5.60)	2.93 (5.27)	2.55 (4.44)	0.73
	UC	5.19 (5.08)	2.76 (3.81)	1.61 (3.15)	1.50 (3.05)	
Somatisation (0–32)	WI	12.8 (6.76)	8.68 (6.78)	7.08 (6.05)	6.81 (6.21)	0.85
	UC	12.9 (6.40)	9.20 (6.15)	7.81 (5.65)	7.10 (6.14)	

Results of the mixed models analyses. Means and standard deviations of both groups at baseline, 3, 6 and 12 months are presented, and the p value of the difference between the groups. UC, usual care; WI, workplace intervention.
WI baseline: n=73; 3-month follow-up: n=72; 6-month follow-up: n=72; 12-month follow-up: n=73. UC baseline: n=72; 3-month follow-up: n=68; 6-month follow-up: n=70; 12-month follow-up: n=70.

DISCUSSION

Main findings

The present study showed no superior effect on lasting RTW of the participatory workplace intervention compared with usual care for sick-listed employees with distress. However, the intervention reduced the time until a lasting RTW for employees who at baseline reported the intention to return to work despite symptoms.

Comparison with other studies

Our study results are not in line with a study on self-employed workers with adjustment disorders, which found a superior effect on RTW of a combined intervention consisting of a brief cognitive behavioural therapy program and advice by a labour expert on work adaptation, compared with usual care and cognitive behavioural therapy.[27] Although not measured, it can be assumed that, owing to the immediate (financial) consequences of their absence from work, self-employed people will likely intend to return to work despite symptoms. The positive findings of this study are therefore in line with the findings for the subgroup intending to return to work despite symptoms in our study. Very recently, a study by Brouwer *et al* emphasised the importance of behavioural determinants in the field of RTW.[28] That study indicated that work attitude, social support and a subscale of self-efficacy were predictive for RTW in a cohort of employees with a maximum of 12 weeks of sick leave. Intention to return to work was not measured in that study.

Strengths and limitations

A strength of this study is the primary outcome lasting RTW. Data on RTW were available for all employees and unbiased. Lasting RTW, which considered the sustainability of RTW by allowing for recurrences within 4 weeks, is a robust outcome measure. Many studies report the first RTW even though it is generally known that a first RTW is not as relevant as lasting RTW because it ignores recurrences.[29] Furthermore, the generalisability of the results is high due to the pragmatic randomised controlled trial (RCT) design and the broad inclusion criteria for the study population. The study had no loss to follow-up for the sick leave data and minimal loss to follow-up for the self-reported outcomes.

Obviously, this study has some limitations. First, although the interaction between the workplace intervention and the baseline intention to return to work despite symptoms was highly significant, the results retrieved from the adjusted analysis need to be interpreted carefully.[30] The results of the adjusted analysis have an exploratory nature and should be confirmed in future RCTs with larger sample sizes. Second, the behavioural determinants were measured by questions whose structure was deduced from studies in health promotion and which were applied to RTW. The validity of these questions applied to RTW is unknown. A limitation of the questions is that they did not incorporate a time frame for RTW. There is thus a need for validated questionnaires with regard to these variables. Third, the guideline for occupational physicians for treatment of workers with mental health problems, which was applied in both groups, recommends workplace accommodations. Also, employees and supervisors are legally obligated to make a RTW plan under the Improved Gatekeeper Act. These elements of usual care may have reduced the contrast between the groups in our study. However, we believe that the contacts between the employee and supervisor in the workplace intervention were certainly more intensive and more structured than in usual care. This assumption is confirmed by the effects of the intervention for employees with a baseline intention to return to work despite symptoms.

Interpretation of results

For employees with LBP, the participatory workplace intervention was effective overall in Canada and the Netherlands.[13 15] This discrepancy with the results of our study can be explained by the fact that among employees and employers it is more acceptable to work with LBP than to work with mental health problems. This also explains the difference in median duration until lasting RTW between those with LBP and those with mental health problems. Most employees with LBP returned to work in the short term, while about 34% of the employees with distress did not achieve lasting RTW at 6 months. Stigma is involved with regard to stress-related sick leave; employees, supervisors and even occupational health professionals indicated that it is difficult to discuss RTW.[12] Focus groups prior to our study indicated that fear of an increase in stress-related symptoms resulting from early RTW is still common.[12] Oomens *et al* recently found that the traditional view that employees should take the necessary time to recover completely before they return to work still exists and may impede RTW.[31] It is likely that cautiousness connected to stress-related sick leave explains a longer duration until full and lasting RTW.

This is the first study to assess behavioural determinants regarding the RTW of employees with distress. The role of self-efficacy in the RTW processes is frequently assessed but not yet clear.[28 32–36] To our knowledge, intention to return to work has not been previously measured. Our results indicate the importance of the baseline intention to return to work despite symptoms. At first sight, intention and self-efficacy seem to measure closely related constructs, but no effects of self-efficacy were found, so apparently these questions tap different constructs. No significant effect was found for the subgroup employees without baseline intentions to return to work despite symptoms. The median number of days

until lasting RTW indicated a tendency towards a delayed effect on RTW of the workplace intervention in this group. This is a worrying finding because this is a most problematic group for occupational physicians. This finding suggests that employees without baseline intention to return to work despite symptoms require a different treatment approach than the employees who intend to return to work despite symptoms. A focus on RTW without adjusting their motivation for working despite symptoms may be insufficient for this group. Prochaska's stages of change model conceptualised the development of motivation for behaviour change,[37] which is theoretically applied to RTW by Franche and Krause.[32] According to this model, employees without intentions to return to work may be in the precontemplation or contemplation phases of readiness for RTW. Based on this assumption, we hypothesise that employees without intentions to return to work despite symptoms need an (additional) intervention that aims at changing cognition or motivation regarding RTW with sustained symptoms. Cognitive behavioural interventions could be applied to change the motivation for RTW despite symptoms, as these interventions were found to be effective for RTW for employees with adjustment disorders.[27 38] However, future research is needed to confirm this hypothesis.

Implications for practice

With great caution we conclude that the practical implication for occupational physicians is to verify whether an employee intends to return to work despite the existence of symptoms. If that is the case, a workplace intervention is recommended. For employees who have no intentions to return to work despite symptoms, a workplace intervention should not be recommended.

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Patient consent Obtained.

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A workplace intervention for sick-listed employees with distress: results of a randomised controlled trial

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Notes