Return-to-work in sick-listed employees with major depressive disorder

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The present thesis aims to improve our knowledge regarding how to improve return-to-work in sick-listed employees with major depressive disorder (MDD).

In **CHAPTER 1**, the background of this thesis is discussed. Major depressive disorder (MDD) is a highly prevalent condition estimated to affect 11–21% of individuals at some time in their life. MDD adversely affects a wide range of work outcomes. Patients with MDD have more sickness absence than others, including those with debilitating medical conditions such as heart disease and rheumatoid arthritis. Even when patients with MDD are present at work, they often are less productive and experience substantial limitations in their at-work functioning. Eighty to 85% of the total costs for MDD are related to these adverse work outcomes. Although there are several evidence-based treatments for MDD, these are primarily aimed at symptom reduction, and rarely consider the workplace as a target of intervention. Moreover, previous research shows that these clinical treatments alone seem not sufficient for full recovery of adverse work outcomes. Therefore, based on both scientific literature and clinical expertise, our research group developed an occupational therapy (OT) module that specifically aimed to promote work outcomes in sick-listed employees with MDD. After encouraging results in an earlier randomized controlled trial (RCT), we developed a shorter and improved version of this OT intervention.

**CHAPTER 2** describes the content of this improved OT intervention and the design of a randomized controlled trial that aims to evaluate its effectiveness. The new OT consists of 18 sessions (9 individual sessions, 8 group sessions and a meeting with the employer) and focuses on a fast return to work and improving work-related coping and self-efficacy.

The results of the randomized controlled trial are presented in **CHAPTER 3**. A total of 117 employees sick-listed for a median duration of 4.8 months (IQR = 2.6 - 10.1 months) because of MDD were randomised to treatment-as-usual (TAU; n = 39) or TAU plus adjuvant occupational therapy (TAU + OT; n = 78). Work participation (primary outcome, defined as hours of absenteeism and time until partial/full return-to-work), depressive symptoms, at-work functioning, health-related quality of life, and intermediate outcomes (work-related coping and self-efficacy) were evaluated during baseline, and a 6-, 12-, and 18-month follow-up. Analyses revealed no significant benefit of adjuvant OT for improving overall work participation when compared to TAU only (Adjusted group difference = -1.9, 95% confidence interval = -19.9 to +16.2). However, adjuvant OT did increase long-term depression recovery (MDD remission: +18%, 95% CI = +7% to +30%) and long-term return-to-work in good health (i.e., full return to work while being remitted from MDD and with better work- and role functioning; +24%, 95% CI = +12% to +36%). No significant group differences regarding the remaining secondary/intermediate outcomes were found. It was concluded that although adjuvant OT was not significantly more effective than TAU for improving overall work participation, adjuvant OT did increase depression recovery and the probability of returning to work in good health in a highly impaired population.

**CHAPTER 4** examines factors that predict a long-term return-to-work in sick-listed employees with MDD, and compares these with factors that predict long-term symptom remission. Potential predictors were identified from the previous mental health literature and categorized into four domains: clinical characteristics, socio-demographic characteristics, personality characteristics, and work-related characteristics. Long-term full return-to-work (i.e., working the full number of contract hours in own or other work for at least four weeks) and long-term symptom remission (≤ 7 on the Hamilton Rating Scale for Depression) were examined during the 18-month follow-up. Stepwise logistic regression analyses with backward elimination (p ≤ 0.05) resulted in a final prediction model, showing that a lower level of depression severity (OR = 0.92), absence of a co-morbid anxiety disorder (OR = 0.21), higher conscientiousness (OR = 1.10), and higher work motivation (OR = 1.87) at baseline predicted long-term RTW. Long-term symptom remission was only predicted by a lower level of baseline depression severity (OR = 0.93). These results suggest that sick-listed MDD patients with a more favourable RTW-prognosis are those with low depression severity, absence of a co-morbid anxiety disorder, high work motivation, and high conscientiousness.

**CHAPTER 5** focuses on the longitudinal relationship between depressive symptoms and various work outcomes (absenteeism, work productivity, and at-work limitations) in employees with long-term sickness absence related to MDD. We found that within-subject changes in depressive symptoms were significantly related to within-subject changes
in all work outcomes (all scales: \( p < 0.001 \)). In addition, results showed that an earlier reduction in depressive symptoms predicted later improvements in all work outcomes (all scales: \( p < 0.05 \)). Third, we found that earlier improvement in Time Management (\( p = 0.007 \)) and Mental/Interpersonal (\( p < 0.001 \)) work limitations predicted a subsequent reduction in depressive symptoms. These results suggest that symptom reduction remains crucial in order to improve adverse work outcomes in patients with long-term sickness absence related to MDD. Nevertheless, a treatment focus on qualitative functioning in the workplace (acquisition of time management strategies, enhancement of cognitive and social functioning at the workplace) may accelerate depression recovery in these patients.

CHAPTER 6 examines the perspectives of various key stakeholders (employees, supervisors, occupational physicians) regarding their definition of a successful return-to-work (RTW) after sickness absence related to MDD and other common mental disorders (CMD’s). A mixed-methods study was conducted: First, qualitative methods (focus groups, interviews) were used in order to identify a broad range of criteria important for defining successful RTW (\( n = 57 \)). These criteria were grouped into content-related clusters. Second, a quantitative approach (online questionnaire) was used in order to identify, among a larger stakeholder sample (\( n = 178 \)), the clusters and criteria most important for successful RTW. A total of 11 clusters, consisting of 52 unique criteria, were identified. In defining successful RTW, supervisors and occupational physicians regarded ‘Sustainability’ and ‘At-work functioning’ most important, while employees regarded ‘Sustainability’, ‘Job satisfaction’, ‘Work-home balance’, and ‘Mental Functioning’ most important. Despite agreement on the importance of specific criteria within each cluster, considerable differences among stakeholders were also observed. From these findings, it was concluded that key stakeholders vary in the aspects they regard as important when defining successful RTW after CMD-related sickness absence. These findings suggest that current definitions of RTW outcomes in scientific research do not accurately reflect the perspectives of key stakeholders involved in the RTW process.

In the general discussion in CHAPTER 7, the main findings of this thesis are discussed and methodological considerations and recommendations for future research and clinical practice are presented. It is concluded that adjuvant OT is a promising intervention for improving sustainable depression recovery and return-to-work in good health in a highly impaired population of sick-listed employees with MDD. The inability to find a differential effect of adjuvant OT for overall work participation may be related to 1) a reduced contrast between the two treatment groups when compared to our previous study, because of several recent societal changes, that have increasingly focused on an early return to work, and/or 2) the wide variation in baseline duration of MDD and sickness absence, which may have diluted a potential effect of adjuvant OT in those with a shorter duration of impairments. Furthermore, findings suggest that the optimal timing for adjuvant OT may depend on the motivational state and disability phase (i.e., duration of sickness absence) of the individual. Although preliminary, these results emphasize the importance of early referral to adjuvant OT and optimizing treatment outcome by improving the match between characteristics of the individual and his/her treatment received. Finally, when evaluating the effectiveness of interventions that aim to promote return-to-work (RTW) in sick-listed employees with MDD and other common mental disorders, one should take into account the perspective from which this effectiveness is evaluated. If researchers aim to reflect varying stakeholder perspectives, it is recommended that they include a broader definition of RTW success, which captures several aspects important to the different stakeholders involved in the RTW process (e.g., sustainability, at-work functioning, job satisfaction).