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Return to work trajectories among employees with mental health problems

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Return to Work Trajectories among Employees with Mental Health Problems:
Insights from Longitudinal Sickness Absence Data and a Multi-Stakeholder Expert Meeting

Report submitted to IOSH Research Committee (June 2020)

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ABSTRACT

The majority of the societal costs associated with mental health problems (MHPs) can be attributed to increased absenteeism, presenteeism, and unemployment. Therefore, more insight is needed into return to work (RTW) among employees with MHPs. While previous research largely focused on RTW as a status, we aimed to gain more insight into the RTW *process*.

First, we investigated which RTW trajectories can be identified among employees on sick leave with MHPs, using longitudinal sickness absence data from the largest Dutch occupational health service (OHS), with 9,517 employees and 62,938 repeated measures. Using latent class transition analysis, we found five RTW trajectories: (1) Fast RTW without relapse, (2) Slow RTW without relapse, (3) Fast RTW with relapse, (4) Slow RTW with relapse, and (5) Very fast RTW without relapse. Slower trajectories contained more employees with depression and burnout; faster trajectories more employees with stress complaints and adjustment disorders. Furthermore, slower trajectories included more females, older employees and non-profit sector employees. Part-time work was not associated with faster work resumption. Finally, the trajectories did not differ on recurrent sickness absence in the two years following a full RTW.

Second, we provided more context to our findings and assessed the implications for practice using a multi-stakeholder expert meeting (occupational health professionals, employees with lived experience of MHPs and employers). Importantly, stakeholders recognised the trajectories. According to stakeholders, slower trajectories were characterised by more severe MHPs and co-morbidity, and relapse trajectories by pressure to resume work. Sub-optimal communication and (self-) stigma were said to cause both slow trajectories and relapse. Problematic trajectories may be prevented by providing hope and perspective, supportive communication between stakeholders and with the employee, social support, autonomy, de-stigmatisation and system changes.

In conclusion, RTW trajectories showed large heterogeneity and differed on various characteristics. A better understanding of heterogeneity in the RTW process can aid the development of tailored RTW interventions.

EXECUTIVE SUMMARY

In the average member country of the Organisation for Economic Co-operation and Development (OECD), more than 20 per cent of the working-age population suffers from mental health problems (MHPs) such as depression, anxiety, adjustment disorders and stress-related complaints. Mental ill-health is not only burdensome for the individuals themselves but is also associated with major societal costs. The majority of these costs (60 to 80 per cent) are not due to healthcare expenses, but due to increased absenteeism, presenteeism and unemployment.

It is important to gain insight into return to work (RTW) among employees on sick leave due to MHPs, in view of the associated costs. In this study, we were particularly interested in gradual RTW arrangements. Gradual RTW means that employees resume their work step-by-step after a period of sickness absence, until they have fully returned to work. While returning to work gradually after a period of sickness absence is becoming increasingly common in several European countries, little is known about *individual variation in the gradual RTW process* and its relationship with sustainable work resumption.

In this study, we aimed to gain a better understanding of individual variability in the RTW process among employees on sick leave with MHPs. The researchers had four main objectives:

1. to investigate which trajectories of RTW occur in practice among employees with MHPs
2. to provide a description of the different trajectories (that is, the characteristics of the employees and the work environment)
3. to investigate how different trajectories are related to sustainable work resumption
4. to assess the implications of our findings for practice.

We realised these objectives in two phases, using a mixed-methods approach. In the first phase of the project, we analysed longitudinal absence registry data from the largest Dutch occupational health service (OHS), with 9,517 employees and 62,938 repeated measures. In the second phase, we organised a multi-stakeholder expert meeting with two occupational health physicians, a case manager, an occupational social worker, an employer, an HR manager, two psychologists and two employees with lived experience of MHPs.

Using latent class transition analysis, we identified five distinct RTW trajectories, namely (1) Fast RTW without relapse during the RTW process, (2) Slow RTW without relapse during the RTW process, (3) Fast RTW with relapse during the RTW process, (4) Slow RTW with relapse during the RTW process and (5) Very fast RTW without relapse during the RTW process. The identified trajectories significantly differed on various personal and work characteristics. Most notably, the proportion of employees with stress complaints and adjustment disorders was higher in the faster trajectories, while the proportion of employees with burnout and depression was higher in the slower trajectories. Furthermore, older employees, women, and non-profit sector employees were more prevalent in the slower trajectories. Employees with part-time contracts did not show faster RTW trajectories compared to employees with full-time contracts. No differences between the trajectories were found on recurrent sickness absence in the two years after a full RTW.

We discussed our findings in a multi-stakeholder expert meeting in order to give more context to our data and assess implications for practice. Stakeholders indicated that they recognised all identified trajectories. Furthermore, stakeholders agreed that the trajectories were characterised by a combination of diverse MHPs, work-related factors, and non-work related factors. In line with our earlier findings, faster trajectories were said to be characterised by less severe MHPs, and slower trajectories by more severe MHPs. Moreover, co-morbidity was mentioned as a characteristic of slower trajectories. According to our stakeholders, relapse during the RTW process often seems to be caused by pressure to resume work, either from employees themselves or from the work environment. Furthermore, they mentioned that sub-optimal communication and stigma (self-stigma and stigma from others in the work environment) can lead to slower trajectories as well as relapse. Stakeholders indicated that problematic trajectories may be

prevented by providing hope and perspective, supportive communication between stakeholders and with the employee, social support, autonomy for employees, de-stigmatisation and system changes.

Heterogeneity in the RTW process among employees with MHPs has received limited attention in previous research. Our findings have several implications for stakeholders. Presenting the different identified RTW trajectories to occupational health physicians, employees with MHPs, employers, and other stakeholders can increase awareness regarding the diversity of trajectories employees with MHPs pass through before reaching a full RTW. Moreover, this awareness can stimulate reflection and discussion regarding risk factors for more problematic trajectories as well as tailored interventions. It is important, however, when creating such awareness, to avoid further stigmatisation of the subgroups with slower trajectories, and to emphasise that sickness absence duration can also decrease in these trajectories with more tailored treatments. The finding that faster trajectories contain more employees with stress complaints and adjustment disorders, while slower trajectories contain more employees with burnout suggests that timely interventions may prevent more severe MHPs and long RTW trajectories. Furthermore, both our sickness absence data and the multi-stakeholder expert meeting suggest that trajectories with and without relapse did not vary with type of MHP, objective work characteristics (eg size of organisation), or demographic factors. Based on the findings from the expert meeting, it appears that relapse is likely to depend on potentially modifiable circumstantial and psychological factors. This means that it may be possible to prevent relapse trajectories. Finally, the expert meeting pointed towards several needs of employees with MHPs. In particular, the importance of providing hope and perspective has received limited attention in previous literature on RTW among employees with MHPs. The needs identified in this study should be taken into account when designing RTW interventions.

In conclusion, this research enhances our knowledge of different RTW trajectories and their characteristics among employees with MHPs. Knowledge on heterogeneity in the RTW process and characteristics of more problematic trajectories can aid in identifying risk groups as well as developing personalised RTW interventions.

INTRODUCTION

In the average member country of the Organisation for Economic Co-operation and Development (OECD), more than 20 per cent of the working-age population suffers from mental health problems (MHPs) such as depression, anxiety, adjustment disorders and stress-related complaints[1–3]. Mental ill-health is not only burdensome for individuals; it is also associated with major societal costs. A conservative estimate of the International Labour Organization suggests that the costs of MHPs amount to 3 to 4 per cent of the GDP of the European Union. Most of these costs (60 to 80 per cent) are not due to healthcare expenses, but due to increased absenteeism, presenteeism and unemployment[1]. It has been estimated that the business-related costs of MHPs add up to €20 billion per year in the Netherlands[4] and £23.5 billion per year in the United Kingdom[5].

While MHPs have severe negative consequences for employees, employers and society as a whole, work seems to be beneficial for people's mental health. Besides providing an income and financial independence, work gives people an opportunity for structure, meaningful activity, self-development and social relations[6]. A comprehensive review of the health effects of employment suggests that work particularly improves mental health and diminishes the risk of depression[7]. Another review showed that becoming employed is related to improvements in mental health, provided that a job comes with good psychosocial work conditions eg high level of control, fair pay[8].

In view of the costs associated with MHPs and the benefits of work to mental health, it is important to gain insight into return to work (RTW) among employees on sick leave due to MHPs. In this study , we were particularly interested in gradual RTW arrangements. Gradual RTW means that employees resume their work hours/days step-by-step after a period of sickness absence, until they have fully returned to work. While returning to work gradually after a period of sickness absence is becoming increasingly common in several European countries, little is known about *individual variation in the gradual RTW process* and its relationship with sustainable work resumption.

We briefly summarise below previous literature on RTW among employees with MHPs and identify knowledge gaps in existing literature. Following this, we elaborate on the main objectives of the studies presented in this report.

MHPs and RTW

In order to obtain more insight into RTW among people suffering from MHPs, previous research has looked into predictors of work resumption in this population as well as interventions that may enhance RTW. Results of both types of research tend to vary across studies. One systematic review focused on depression and concluded that there is strong evidence for there being an association between depressive episode duration and work disability (including time needed to return to work [RTW]). Furthermore, moderate evidence was found showing relations between depressive episode severity, co-morbidity, previous sick leave, older age and work disability[9]. Another systematic review focused on MHPs in general and showed strong evidence for a positive relation between age and work disability[10]. However, evidence was limited or inconclusive for most factors (eg gender, education, job type, supervisor behaviour) in both these reviews. Interestingly, several studies indicated that reductions in symptoms do not necessarily lead to RTW, suggesting that RTW is a complex and multifactored process[11,12].

With regard to RTW interventions, systematic reviews showed that medication for symptoms and improving primary care do not enhance RTW among employees on sick leave due to MHPs. Importantly, psychotherapeutic interventions that are aimed at symptom reduction (such as cognitive behavioural therapy or problem-solving therapy) do not enhance RTW in this population either[13,14]. Psychotherapeutic interventions with work-focused elements did show promising results in some studies[15–17]. Although the exact content of work-focused interventions varied per study, successful interventions appear to be characterised by an early, gradual RTW in combination with work-focused cognitive behavioural and/or

problem-solving therapy[18–21]. In line with the correlational studies discussed earlier, interventions that improved RTW did not lead to greater symptom reductions compared to control groups. While psychotherapeutic interventions with work-focused elements showed some promising findings, these interventions did not always show positive results regarding RTW[19,20,22,24]. In view of these mixed findings, more knowledge is needed to improve RTW among people with MHPs.

Studying the RTW process

As the above summary of the literature suggests, previous studies on RTW among people with MHPs have mostly examined RTW as a 'status' at one point in time (ie RTW: yes or no; days until full RTW). However, resuming work after a period of sickness absence due to MHPs may be difficult and relapse is common among employees who have partially returned to work[20,25,26]. Furthermore, employees with MHPs are often viewed as one homogeneous group. Two earlier studies showed large variability regarding trajectories of work disability among employees with MHPs ie trajectories of work status[27,28]. However, knowledge about individual variation in the *process* of RTW is scarce.

As mentioned earlier, returning to work gradually seems to be an important component of successful RTW interventions. A gradual exposure to the work environment, along with carrying out manageable work tasks, may lead to a sense of self-efficacy and control and, consequently, experiences of success. This may in turn reduce dysfunctional thoughts about one's coping abilities. Additionally, partially resuming one's work may contribute to a daily rhythm, social relations, meaningful activity and distraction[15]. Although returning to work gradually seems to be an important component of effective RTW interventions, gradual RTW may occur in various ways. For instance, the RTW process may be slower or faster, and employees may relapse during their RTW. A better understanding of individual variation in trajectories of RTW is needed. Furthermore, it seems quite likely that some RTW trajectories are associated with a higher rate of recurrent sickness absence in the long-term than others. Hence, more knowledge is needed on the relationship between different trajectories of RTW and the occurrence of recurrent sickness absence after a full RTW.

Research aim and objectives

In this study, we aimed to obtain a better understanding of individual variability in the RTW process among employees on sick leave due to MHPs. We had four main objectives:

1. to investigate which trajectories of RTW occur in practice among employees with MHPs
2. to provide a description of the different trajectories (that is, the characteristics of the employees and the work environment)
3. to investigate how different trajectories are related to sustainable work resumption
4. to assess the implications of our findings for practice.

We realised these objectives in two phases, using a mixed-methods approach. In the first phase of the project, we analysed longitudinal absence registry data from the largest Dutch occupational health service (OHS), HumanTotalCare). In the second phase, we organised a multi-stakeholder expert meeting with two occupational health physicians, a case manager, an occupational social worker, an employer, an HR manager, two psychologists and two employees with lived experience of MHPs. A better understanding of heterogeneity in the RTW process can contribute to the development of tailored RTW interventions.

Study context

The studies presented in this report were conducted in the Netherlands. We used a large and unique dataset from the largest Dutch OHS, including sickness absence data from employees with various MHPs and demographic backgrounds. These employees worked for both profit and non-profit organisations that varied in size. In most European countries, information on sickness absence needs to be deduced from national registry data on disability benefits usage and self-report measures from employees. In the

Netherlands, gradual RTW is both common and well-registered, making it a suitable setting for conducting our research. Since substantial differences exist between countries regarding the management of sick leave, we provide a brief explanation, below, of the Dutch occupational healthcare system:

Dutch occupational healthcare system

In the Netherlands, occupational healthcare is separate from general healthcare. In most cases, the GP is the first point of contact for health problems. In case of a mental health problem, the GP is most likely to refer to mental healthcare, such as psychological care, for counselling or psychotherapy. This health professional will treat the mental health problem but is not allowed to write a sick note. Alongside general healthcare, it is compulsory for employers to arrange occupational healthcare for sick-listed employees within six weeks of an employee calling in sick. Most Dutch employers contract an OHS, an independently operating organisation that employs occupational physicians (qualified medical doctors who specialise in occupational health). Some employers have in-house occupational healthcare or contract self-employed occupational physicians.

Occupational physicians assess the health status and work ability of the employee to certify sickness absence. Subsequently, occupational physicians support the employee during the RTW process, provide advice to the employer (eg necessary work adaptations) and monitor the RTW process. The employee and employer are required to make a joint RTW plan within eight weeks of the start of sick leave. This RTW plan can include a gradual RTW; for instance, an employee may first start working 20 per cent of the contract hours for some weeks, followed by 40 per cent, 60 per cent, 80 per cent, then 100 per cent (full RTW). The OHS registers this process.

During the first two years of sickness absence, employers are required to pay at least 70 per cent of an employee's pre-absence income (irrespective of whether the cause of sickness absence is work-related). During these two years, the employer cannot fire the employee on sick leave (see Dutch Gatekeeper Improvement Act). After two years of sickness absence, the employee will start receiving unemployment benefits from the Dutch government. The RTW activities undertaken by the employer and employee are evaluated by the National Social Security Institute (UWV). Both parties risk high financial fines if they do not cooperate sufficiently.

Structure of the report

This report consists of two parts. In PART A, we analyse longitudinal sickness absence data from the largest Dutch OHS. This allowed us to identify different RTW trajectories, provide a first description of these trajectories and examine their relation to recurrent sickness absence. In PART B, we describe the results of a multi-stakeholder expert meeting, which enabled us to give a further description of the different trajectories identified in PART A and discuss the implications of our findings for practice.

PART A. LONGITUDINAL SICKNESS ABSENCE DATA

METHODS

Study design

Longitudinal, retrospective sickness absence data were acquired from HumanTotalCare, the largest Dutch OHS. Over 80,000 companies across the Netherlands contract this OHS. Their registry has RTW data on 1.5 million employees, working in various sectors.

Ethics

Ethical approval was obtained from the Ethics Review Board (ERB) of the School of Social and Behavioral Sciences of Tilburg University (reference: EC-2017.EX132).

Sample population

Anonymised sickness absence files of employees who were on sick leave due to an MHP in the year 2014 were used in this study (15,580 employees). A broad variety of sectors and organisation sizes were represented in this dataset. In order to classify MHPs, Dutch OPs use the so-called "CAS-code system", a coding system based on the International Classification of Diseases, version 10. Employees with stress complaints (R45), emotional sleeping disorders (F51.9), somatoform disorders (F45.0, F45.4, F45.9), adjustment disorders (F43.2, Z73.0), reactions to severe stress (F43.1, F43.9), anxiety disorders (F41.0, F41.1, F40.0, F40.1, F41.9), personality disorders (F60.0, F60.1, F60.2, F60.3, F60.4, F60.6, F60.7, F60.8, F60.9), mood disorders (F30.9, F31.9, F32.9, F34.1, F39), addictions due to psychoactive substances (F10.9, F11.9, F15.9, F19.9), organic psychoses (F09), non-organic psychoses (F20.9, F25.9, F29) and other mental disorders (F48.0, F48.8, F42.9, F44.9, F50.9, F53.9, F63.0, F79, F99) were included in the present study. Burnout (Z73.0) is categorised under adjustment disorders in this system.

Data collection

The sickness absence file of each employee included the start and end date of the sickness absence, the date on which the sickness absence was reported, the medical code (ie the type of MHP) and whether this employee had a recurrent sickness absence due to MHPs within two years of fully resuming work. Furthermore, all changes in the RTW percentage up until the employee had reached a full RTW (ie working 100 per cent of contract hours) were reported. Absence files generally contained information on an employee's RTW for up to two years (employers are no longer responsible for employees after two years of sickness absence).In addition, data were extracted on personal factors (age, gender) and organisational factors (contract hours, sector and organisation size).

Inclusion criteria

Initially, 13,473 employees with a sickness absence period ranging from 29 to 730 days (ie two years) were selected. Absence durations exceeding 730 days were not included as these are almost always registration mistakes. If an employee had several sickness absences in 2014 (214 employees), only the first sickness absence was included in the trajectory analyses. In order to avoid interpretation problems, employees who had several employers or contracts (1,061 employees) were excluded. Furthermore, we excluded employees whose contract ended within seven days of a full RTW (1,062 employees); rather than having resumed work, it may be the case that their contract had ended or that the employer had cancelled the contract with the OHS. In total, 11,350 employees were left in the dataset after applying these inclusion criteria.

Data cleaning and preparation

In total, 1,833 sickness absence records contained mistakes and were removed: For example, sickness absence days were reported before the first day of sick leave; data were missing for one or more time periods; there were double registrations of different time periods; and/or time periods were reported to end before the start date of this time period (often, excluded records contained multiple mistakes). The recorded age of one employee (13) appeared to be a typo and was deleted. The final dataset included 9,517 employees (62,938 RTW percentages across the sample).

Next, we made a dataset in which the RTW percentage per month was indicated for each employee, until a full RTW could be achieved. If an employee's RTW percentage changed more than once during a month, the last RTW percentage of the month was used in the analyses (namely, this RTW percentage was continued in subsequent months, until the next RTW percentage change). Seven RTW percentage categories were created: 0 per cent, 1-19 per cent, 20-39 per cent, 40-59 per cent, 60-79 per cent, 80-99 per cent, and 100 per cent. Furthermore, MHPs were categorised into four main groups: stress complaints, adjustment disorders, mood disorders and other mental disorders. In addition, separate dummy variables were created for burnout and depression, since these were the most common adjustment and mood disorder in our dataset. Regarding sector, two categories were identified: profit and non-profit organisations. Separate dummy variables were created for the sectors' industry, wholesale and retail, finance, consultancy, public administration/services and healthcare. These sectors were reported more than 500 times and occurred most in our dataset. Two categories were made regarding organisation size: below 51 employees and above 50 employees.

Finally, a variable was created that reflected whether an employee had a recurrent sickness absence due to MHPs within two years of fully resuming work (yes or no). Employees who did not have another sickness absence file, but whose contract ended within two years of a full RTW, were excluded from this variable (2,463 employees).

Data analysis

A latent class transition analysis (LCTA) was used to identify distinct RTW patterns in our data. This novel and complex analysis technique allowed us to identify groups of employees, or latent classes, that showed different trajectories of RTW. A LCTA was performed, as opposed to the more commonly used latent class growth analysis, because employees returned to work in stepwise transitions (eg from 25 per cent to 50 per cent) rather than smooth rises (eg from 25 per cent, to 26 per cent, to 27 per cent etc.). As described below, the LCTA was carried out in three steps and analyses were performed using the statistical programme Latent GOLD 5.1. In order to avoid local maxima, analyses were run with 160 sets of random start values and 250 final iterations[29,30].

The first step was to build a latent class transition model using the Choice module of Latent GOLD. In this model, RTW percentage category at time t was entered as the so-called 'Choice set' (independent variable), and RTW percentage category at time t + 1 as the 'Choice' (dependent variable). Separate up and down parameters were modelled that represented the log odds for making an upward or a downward step in each RTW percentage category. If an up/down parameter has a positive sign, this indicates that bigger RTW percentage changes (eg from 20 per cent to 80 per cent, or from 80 per cent to 20 [per cent) are more likely than smaller RTW percentage changes (eg from 20 per cent to 40 per cent, or from 40 per cent to 20 per cent). If an up/down parameter has a negative sign, this indicates that bigger RTW percentage changes are less likely than smaller RTW percentage changes. Our model included transitions from RTW percentage categories 1, 2, 3, 4, 5 and 6 (ie 0 to 99 per cent) to categories 1, 2, 3, 4, 5, 6, and 7 (ie 0 to 100 per cent). Backward transitions from category 7 (100 per cent) were not modelled, as employees had completed the RTW process when category 7 had been reached. The Bayesian Information Criterion (BIC) was used to determine the optimal number of latent classes (distinct

RTW trajectories). A lower BIC indicates a better model in terms of model fit and parsimony. In order to avoid very small classes, a minimum requirement of 5 per cent of the total sample size for the smallest class was applied[31]. Additionally, an entropy measure reflecting the quality of classification was reported.

In the second step, employees were assigned to each latent class with a weight that reflected how well each latent class fitted them on the basis of their posterior class membership probabilities[32]. For instance, in the hypothetical case of three latent classes, an employee may be assigned to class 1 with a weight of .10, to class 2 with a weight of .60 and to class 3 with a weight of .30.

In the third step, the latent classes were compared on their composition in terms of personal and work characteristics, as well as recurrent sickness absence after achieving a full RTW[33]. For continuous variables (age, hours per week), we used a bias-adjusted three-step approach[33,34]. For categorical variables (gender, type of MHP, sector, organisation size, recurrent sickness absence), we used the maximum likelihood procedure of Vermunt[35]. Wald tests were used to determine whether the latent classes significantly differed regarding their composition on these characteristics ($p < .05$). As these were exploratory analyses aimed at uncovering potentially interesting differences in composition, no adjustments were made for the large sample size or multiple testing.

RESULTS

Personal and work characteristics

As shown by the descriptive statistics in Table 1, our dataset contained more women than men. Regarding type of MHP, adjustment disorder was the most common diagnosis. Furthermore, there were more employees working in the profit sector and more employees working for smaller organisations.

Table 1. Descriptive statistics for personal and work characteristics

	M (SD)	Range
Age[I]	41.8 (10.8)	16-66
Contract hours[II]	33.8 (8.1)	1-100
Number of gradual RTW steps[III]	2.4 (1.7)	1-18
	N	%
Gender		
Male	4,496	47.3
Female	5,019	52.7
Type of MHP (four categories)		
Stress complaints	1,530	16.1
Adjustment disorder	5,470	57.6
Mood disorder	1,157	12.2
Other	1,333	14.1
Type of MHP (specific)		
Burnout	889	9.4
Depressive episode	1,055	11.1
Sector (two categories)		
Profit	6,936	75.9
Non-profit	2,197	24.1
Sector (specific)		
Industry	1,063	11.6
Wholesale and retail	1,861	20.4

Finance	560	6.1
Consultancy	1,167	12.8
Public administration/services	518	5.7
Healthcare	991	10.9
Organisation size		
< 51 employees	5,022	52.8
> 50 employees	4,495	47.2

Note I. Age: n = 9516; Hours per week: n = 7534; Gender: n = 9515; Type of MHP: n = 9490; Sector: n = 9133. For other characteristics, there are no missing data.

Note II. The contract hours are based on the registry data of the occupational health service. Please note that the majority (99.7 per cent) of contract hours was 40 hours or less.

Note III. Gradual RTW steps = employee's total number of data points (ie employee's total number of RTW percentages) - 1.

Identifying RTW trajectories

LCTAs with one to seven latent classes were carried out (for fit statistics, see Table 2). Based on the BIC, the six-class model performed slightly better than the five-class model. However, the sixth class of the six-class model contained only 0.77 per cent of the total sample size and thus violated the minimum requirement of 5 per cent of the total sample size. Therefore, the five-class model was chosen. It may be noted that the five-class model and the six-class model showed a similar pattern of findings. In the six-class model, a small group of employees from the fourth class of the five-class model was assigned to a sixth class. Importantly, this sixth class only differed in terms of the extent of relapse during the RTW process compared to the fourth class of the five-class model. No difference was observed regarding the general pattern of RTW.

The five-class model showed five clearly different, meaningful RTW trajectories. Up and down parameters of the five-class model can be found in Table 3. In the first class, employees returned to work relatively quickly and showed little chance of relapse during their RTW process (fast RTW without relapse; full RTW took on average 136 days with 1.96 transitions). In the second class, employees returned to work relatively slowly and showed little chance of relapse (slow RTW without relapse; on average 402 days, 2.47 transitions). In the third class, employees returned relatively quickly and there was a considerable chance of relapse (fast RTW with relapse; on average 194 days, 3.07 transitions). In the fourth class, employees returned to work relatively slowly and there was a considerable chance of relapse (slow RTW with relapse; on average 419 days, 3.54 transitions). In the fifth class, employees returned to work very quickly and showed a very small chance of relapse (very fast RTW without relapse; on average 49 days, 1.00 transitions). Figure 1 shows examples of trajectories for each of the five latent classes (for transition odds, see Appendix).
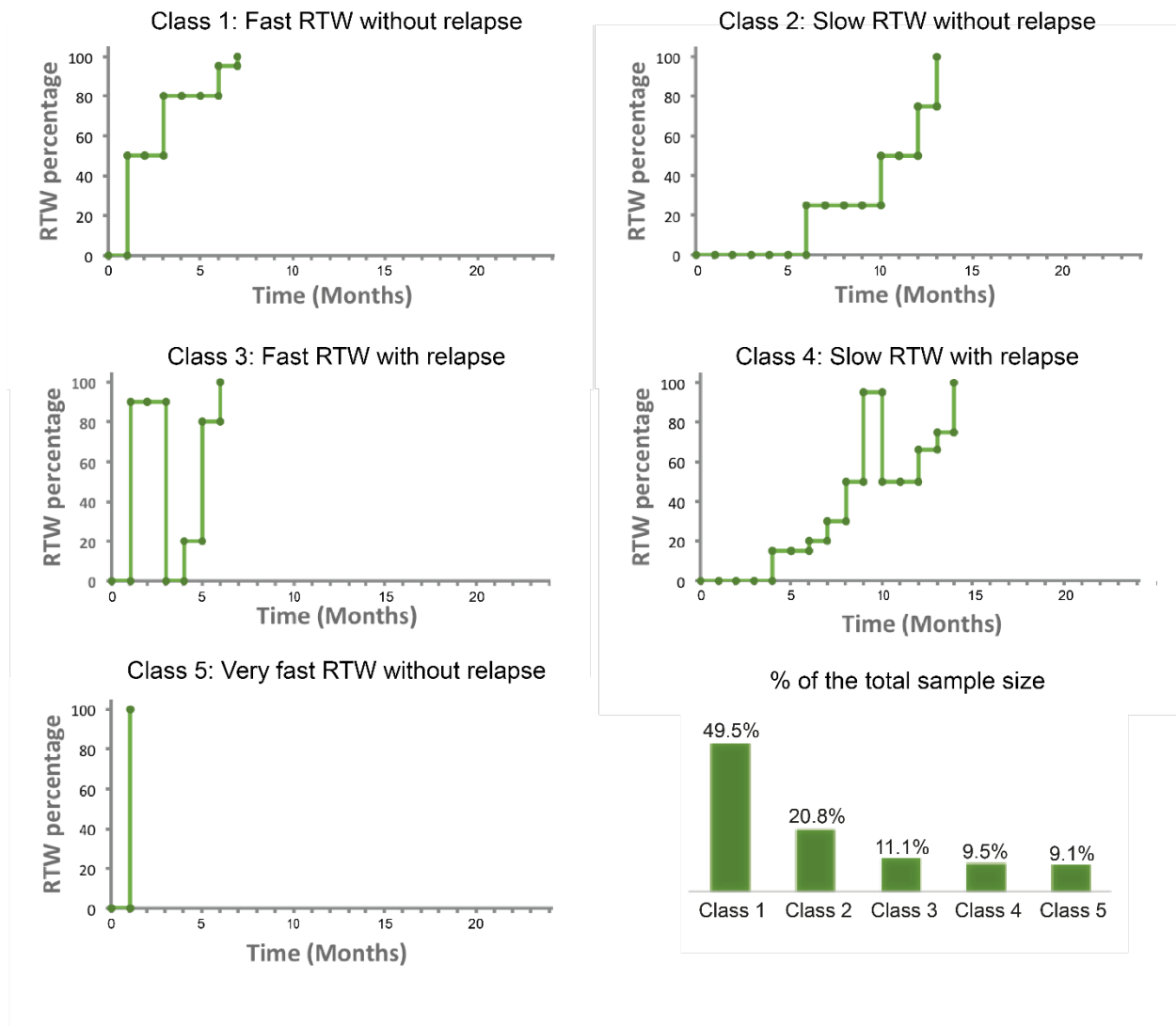
Figure 1. One example of a typical RTW trajectory per latent class of the five-class model (x-axis shows 24 months).

Characteristics of RTW trajectories

Table 4 shows the means/proportions per class and significance tests for all personal and work characteristics, as well as for recurrent sickness absence. Regarding the characteristics, there were significant differences between the five RTW trajectories on age, gender, type of MHP, sector and organisation size. The different trajectories did not differ in terms of contract hours. We summarised the main findings on personal and work characteristics below.

Personal characteristics
Regarding personal characteristics, the proportion of males was higher in the fastest trajectory (Class 5) compared to one of the fast (Class 1) and both of the slow trajectories (Classes 2 and 4). Furthermore, employees in the slow trajectories (especially Class 2) were on average older than employees in the fast trajectories (Classes 1, 3 and 5).

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Mental health problems
Regarding type of MHP, the proportion of employees with stress complaints was higher in the fast trajectories (Classes 1, 3 and 5) than the slow trajectories (Classes 2 and 4). Adjustment disorders occurred more in the fast trajectories (particularly Class 1) compared to both the slow trajectories (Classes 2 and 4) and the fastest trajectory (Class 5). However, employees with a burnout diagnosis specifically (classified as a type of adjustment disorder) were more prevalent in the slow trajectories (Classes 2 and 4) than the fast trajectories (Classes 1, 3 and 5). Finally, the slow trajectories (Classes 2 and 4) were characterised by a higher proportion of employees with mood disorders than the fast trajectories (Classes 1, 3 and 5). This pattern was also found for depressive episode, a specific mood disorder.

Work characteristics
Regarding work characteristics, the proportion of profit sector employees was higher in the fast trajectories (Classes 1, 3 and 5) compared to the slow trajectories (Classes 2 and 4). With regard to the sectors that occurred most in our dataset (reported more than 500 times), significant differences between the trajectories were found for industry, public administration/services, and healthcare. There were no significant differences for wholesale and retail, finance, and consultancy. More specifically, the fast trajectory without relapse (Class 1) contained more employees from industry than the slow trajectory without relapse (Class 2). Furthermore, employees working in public administration/services were less common in the fastest trajectory (Class 5) compared to most other trajectories (Classes 1, 2 and 3). There were more healthcare sector employees in the slow trajectory with relapse (Class 4) than the fast trajectories without relapse (Classes 1 and 5). Finally, the fast RTW without relapse trajectory (Class 1) was characterised by fewer employees working for small organisations compared to the slow trajectories (Classes 2 and 4) and the fastest trajectory (Class 5).

Relation with recurrent sickness absence

The proportion of recurrent sickness absences within two years of fully resuming work did not differ between the five identified trajectories. Hence, we report descriptive statistics across all trajectories. Among the 7,054 employees who remained with their employer in the two years following a full RTW, 808 employees (11.5 per cent) had a recurrent sickness absence due to MHPs within two years. For 6,246 employees (88.5 per cent), no recurrent sickness absence was reported.

Table 2. Fit statistics for one to seven class latent transition models

Model	LL	BIC	No. of Parameters	Entropy R^2	Sample size per class (n)	Sample size per class (proportion of total sample size)
1-class	-77,669.36	155,357.04	2	1.00	9,517	1
2-class	-75,409.70	150,865.20	5	0.47	5,364/4,153	.56/..44
3-class	-74,689.30	149,451.89	8	0.44	4,247/3,388/1,882	.45/.36/.20
4-class	-74,258.80	148,618.37	11	0.48	4,574/2,319/1,739/885	.48/.24/.18/.09
5-class	**-74,084.10**	**148,296.45**	**14**	**0.45**	**4,709/1,981/1,058/908/861**	**.49/.21/.11/.10/.09**
6-class	-74,064.55	148,284.84	17	0.45	4,635/1,999/981/970/859/73	.49/.21/.10/.10/.09/.01
7-class	-74,051.48	148,286.18	20	0.38	3,057/2,429/1,189/974/959/835/74	.32/.26/.12/.10/.10/.09/.01

Note. LL = Log Likelihood; BIC = Bayesian Information Criterion; Sample size per class: Based on most likely class membership

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Table 3. Up and down parameter estimates per latent class of the 5-class model

Parameter	Class 1	Class 2	Class 3	Class 4	Class 5	Wald	p-value
	49.5%	20.8%	11.1%	9.5%	9.1%	statistic	
	fast RTW without relapse	*slow RTW without relapse*	*fast RTW with relapse*	*slow RTW with relapse*	*very fast RTW without relapse*		
Up	-0.37	-1.01	-0.16	-0.75	7.33	5,490.74	< .001
Down	-7.73	-4.17	-0.41	-0.89	0.91	1,045.59	< .001

Note. Values up parameter coded from 0 to 6. Values down parameter coded from 0 to 5.

Table 4. Differences between the five identified RTW trajectories on personal and work characteristics

	Class 1	Class 2	Class 3	Class 4	Class 5			
	fast RTW without relapse	*slow RTW without relapse*	*fast RTW with relapse*	*slow RTW with relapse*	*very fast RTW without relapse*			
	Mean (model-based)	Mean (model-based)	Mean (model-based)	Mean (model-based)	Mean (model-based)	Wald statistic	*p*-value	Post-hoc test (*p* < .05)
Age	41.86	43.37	39.75	42.02	40.65	44.62	< .001	1 < 2; 1 > 3, 5 2 > 3, 5 3 < 4
Hours per week	33.82	33.83	34.81	32.61	33.75	8.53	0.07	-
	Proportion (model-based)	Proportion (model-based)	Proportion (model-based)	Proportion (model-based)	Proportion (model-based)	Wald statistic	*p*-value	Post-hoc test (*p* < .05)
Gender (male)	0.48	0.45	0.48	0.40	0.54	22.74	< .001	1 > 4; 1 < 5 2 < 5 4 < 5
Type of MHP (4 categories)						397.10	< .001	

Stress complaints	0.18	0.05	0.19	0.08	0.37	250.64	< .001	1 > 2, 4; 1 < 5
								2 < 3, 5
								3 > 4; 3 < 5
								4 < 5
Adjustment disorder	0.62	0.53	0.59	0.54	0.48	42.22	< .001	1 > 2, 4, 5
								2 < 3
								3 > 5
Mood disorder	0.08	0.23	0.08	0.21	0.06	169.85	< .001	1 < 2, 4
								2 > 3, 5
								3 < 4
								4 > 5
Other	0.12	0.19	0.14	0.17	0.09	40.56	< .001	1 < 2, 4; 1 > 5
								2 > 3; 2 < 5
								4 > 5
Type of MHP (specific)						1,131.05	< .001	
Burnout	0.08	0.17	0.06	0.12	0.01	81.89	< .001	1 < 2, 4; 1 > 5
								2 > 3, 5
								3 < 4; 3 > 5
								4 > 5
Depression	0.07	0.21	0.07	0.19	0.06	156.98	< .001	1 < 2, 4

								2 > 3, 5
								3 < 4
								4 > 5
Sector (profit)	0.77	0.72	0.78	0.68	0.82	34.51	< .001	1 > 2, 4; 1 < 5
								2 < 3, 5
								3 > 4
								4 < 5
Sector (specific)						108.08	.001	
Industry	0.13	0.09	0.12	0.09	0.12	10.65	.03	1 > 2
Wholesale and retail	0.21	0.18	0.19	0.21	0.22	1.45	.83	
Finance	0.06	0.06	0.07	0.07	0.05	1.83	.77	
Consultancy	0.12	0.15	0.15	0.09	0.12	5.56	.23	
Public administration/services	0.06	0.08	0.05	0.04	0.01	17.66	.001	1 > 5
								2 > 5
								3 > 5
Healthcare	0.10	0.12	0.10	0.15	0.09	10.60	.03	1 < 4
								4 > 5
Organisation size (≤ 50 employees)	0.49	0.57	0.53	0.57	0.59	29.02	< .001	1 < 2, 4, 5
Relapse (yes)	0.01	-0.15	0.05	0.05	0.05	6.10	.19	-

Note I. Age: n = 9,516; Hours per week: n = 7,534; Gender: n = 9,515; Type of MHP: n = 9,490; Sector: n = 9,133. For other characteristics, there are no missing data.

INTERIM CONCLUSION

Latent class transition analyses showed five distinct trajectories of RTW, namely (1) Fast RTW without relapse during the RTW process, (2) Slow RTW without relapse during the RTW process, (3) Fast RTW with relapse during the RTW process, (4) Slow RTW with relapse during the RTW process and (5) Very fast RTW without relapse during the RTW process. Employees in the faster trajectories were more likely to suffer from stress complaints and adjustment disorders; and employees in the slower trajectories more frequently had depression and burnout. Regarding personal characteristics, older employees and females showed longer RTW trajectories. With regard to work characteristics, employees working in the profit sector showed faster trajectories. Interestingly, part-time employees were not more prevalent in faster trajectories than full-time employees. Finally, no differences between the trajectories were found on recurrent sickness absence in the two years following a full RTW.

PART B. MULTI-STAKEHOLDER EXPERT MEETING

METHODS

Study design

A qualitative approach was used to describe the RTW trajectories identified in PART A of this project and assess implications for practice. More specifically, we conducted a multi-stakeholder expert meeting. This allowed us to simultaneously collect the opinions and experiences of various stakeholders involved in the RTW process. It was important to enrich the conversation and so the method involved interactions between different stakeholders.

Ethics

Ethical approval for this study was secured from the Ethics Review Board (ERB) of the School of Social and Behavioral Sciences of Tilburg University (EC-2018.68). Verbal and written information about the study was given to all participants before they signed an informed consent form. Participants were told that their participation was voluntary and could be terminated at any time, that their information was confidential and that their data would only be used for research purposes.

Participants and recruitment

In order to recruit stakeholders involved in the RTW process, we employed purposive sampling. Recruitment took place through the researchers' networks, through two occupational physicians from different OHSs and through the Dutch Anti-Stigma Association. In total, the multi-stakeholder expert meeting consisted of ten experts, including two occupational physicians from different OHSs (one male, one female), a case manager (male), an occupational social worker (male), an employer (female), an HR manager (female), two psychologists (one male, one female), and two employees with lived experience of MHPs who were linked to the Dutch Anti-Stigma Association (two females). The group was heterogenous in terms of age, gender and work experience.

Data collection

One senior researcher (MJ) with extensive experience in conducting qualitative studies facilitated the multi-stakeholder expert meeting. A second researcher (MS) supported the facilitator by presenting the main RTW trajectories to the stakeholders, making notes and providing short summaries.

The meeting took place in a conference room at Tilburg University (the Netherlands) and lasted two hours. At the start, both the stakeholders and the researchers introduced themselves and mentioned their professional backgrounds. Following this, the five RTW trajectories identified in our project were presented. Next, stakeholders were asked to reflect on the following questions: (1) Do you recognise the five different RTW trajectories from practice? (2) According to you, what characterises the different RTW trajectories? and (3) According to you, what is needed to prevent (unnecessarily) long trajectories and relapse? At the end of the meeting, participants were thanked for their participation and received a voucher of 20 euros as a token of appreciation.

Data analysis

The multi-stakeholder expert meeting was audiotaped and transcribed verbatim. Furthermore, transcripts were anonymised before the analyses took place. Deductive and inductive thematic content analysis (36) was performed using the software package ATLAS-ti, version 7.5.16. The three main questions discussed during the meeting (see above) were used as pre-defined categories. Within these categories, themes and subthemes were identified by the method of constant comparison[36]. In other words, different codes were compared continuously and reflection on the relation between the different codes took place to

detect emerging themes. One researcher (MS) repeatedly read and coded the transcript, clustered the codes and defined emerging themes. Subsequently, results were discussed with another researcher (MJ) until consensus was reached regarding the interpretation of the emerging themes.

RESULTS

Recognisability

In general, stakeholders indicated that they recognised the five different RTW trajectories identified in our earlier research. In this section, quotes that specifically concern the recognisability of the different trajectories were reported. Implicitly, the recognisability of the trajectories also becomes clear in the next section on characteristics of the different trajectories.

Stakeholders specifically addressed the recognisability of Class 2 (*slow RTW without relapse*), Class 3 (*fast RTW with relapse*), and Class 4 (*slow RTW with relapse*).

> Stakeholder about employees with anxiety complaints: "[...] if you push too fast, then you get this change pattern [Class 4], and actually that only goes well if you do [Class] 2. And then you get these very long patterns where you have to help people over the threshold very slowly with exposure. So Class 2, yeah, actually I recognise all of them."

> Stakeholder about Class 4: "Yes, I indeed had something like this. In hindsight, I started way too soon again after my first depression and then I got another big life event and then I ended up in a second depression and after that I restarted way slower with building up."

Stakeholders did not comment specifically on the recognisability of Class 1 (*fast RTW without relapse*). One stakeholder did suggest that Classes 1 and 5 (*very fast RTW without relapse*) may be the same type of group in terms of characteristics. While Class 5 was considered least recognisable of all trajectories, stakeholders considered this trajectory plausible when psychological complaints occur due to a recent and specific negative life event, for instance in the case of mourning or an accident.

> Stakeholders about Class 5:
> Stakeholder: "[…] And if you look at Class 5, immediately 100 per cent again, yes… I do not recognise that."
> Stakeholder: "I also question this. […], I am not a doctor but… then I think… how sick were you if you immediately went to 100 per cent..."
> Stakeholder: "It is a special group."

> Stakeholder about Class 5: "Are you also talking about mourning, for example, because then I can imagine that this person has a difficult time and that it goes relatively quickly."

General characteristics of the five trajectories

When it came to the general characteristics of the five RTW trajectories, three themes were identified. Stakeholders generally agreed that the trajectories are partly characterised by different types of MHPs. Furthermore, stakeholders indicated that the trajectories cannot be fully labelled on the basis of MHPs. Work-related factors, such as the reaction and the supportiveness of the work environment, affect the RTW process as well. Stakeholders also pointed out that problems in an employee's private life that are unrelated to work, such as a divorce or financial problems, for example, influence an employee's RTW pattern.

> Stakeholder: "[...] the bomb in your relationship or you are evicted or whatever, there are so many [factors]… It is so complex […], the circumstances of that person make that they are not going to recover linearly […]."

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General characteristics of slow versus fast trajectories

Two themes emerged when discussing differences between slower and faster trajectories. Stakeholders indicated that these trajectories often differ in terms of the severity of MHPs and the presence of co-morbidity.

Severity of MHPs

Stakeholders generally agreed that fast trajectories tend to be characterised by distress, while slower trajectories tend to be characterised by more severe MHPs such as burnout, depression, and anxiety disorder.

> Stakeholder: "I do recognise these different patterns and I wonder whether [Classes] 1 and 5 are not actually the same group as well. Because then you would think more of an adjustment disorder, so that means… there are psychological complaints, but very reactive towards a certain stressful event. […], and then you see that people can indeed recover rather quickly if the situation is handled well. While I find that [Class] 2 [is more] the case of a burnout or depression."

Co-morbidity

Apart from the severity of MHPs, it was pointed out that co-morbidity often plays a role in slower trajectories. Employees may have multiple MHPs, or physical health problems that are additional to their MHP.

> Stakeholder: "I also find co-morbidity a very important one, so, are there other types of complaints? That can be other psychological complaints, depression with anxiety complaints or a personality disorder in addition. I think this is the case for both Class 2 and Class 4."

> Stakeholder: "With that Class 2 I have a lady in mind who… it takes so long because actually all sorts of things are at play; […] physical complaints play a role, had a heart attack in the past, energetic [constraints], is in revalidation, actually all sorts of things are going on."

Characteristics of relapse occurrence

With regard to the causes of relapse occurrence, two themes emerged from the data: pressure from employees themselves and pressure from the work environment. Importantly, it may be noted that stakeholders did not necessarily see relapse as a fully negative event.

> Stakeholder: "I am thankful for my relapse, because it allows me to realise how I can handle it in the future, it just gives insight, a relapse. So I always say, it is a 'forwardlapse', only… in that moment it does not feel that way, but in hindsight I think: yes it was insightful."

Pressure from employees themselves

Stakeholders indicated that employees with MHPs often put pressure on themselves to resume work quickly, because they want to prove themselves and/or due to feelings of guilt towards the employer and other colleagues. In this context of self-pressure, it was mentioned that giving these employees too much room to determine their own RTW process can result in patterns with relapse.

> Stakeholder: "I recognise myself in this very much as well. [Thinking]: I have to show again that I can do things, I do have to show that I can participate and then bam, [relapse] again."

Pressure from work environment

While the stakeholders in our meeting focused more on pressure from employees themselves, pressure from the work environment was also mentioned as a cause of relapse.

Stakeholder about Class 3: "I have a recent example of this, a lady that indeed had substantial anxiety complaints, no therapy yet, but to please the occupational physician and the supervisor, she quickly built up to half days, so really within four weeks and then she had an enormous relapse, the complaints increased enormously."

Characteristics of both slow trajectories and relapse

Two themes were identified regarding characteristics of both slow trajectories and relapse; namely, sub-optimal communication between stakeholders, and stigma.

Sub-optimal communication between stakeholders

Several stakeholders mentioned that lack of communication as well as bad communication (eg contradicting information) between different people involved in the RTW process results in both lengthier trajectories and relapse.

Stakeholder: "When [there are] different advices, from the GGZ [mental healthcare] and the occupational physician says something else and the employer wants this or that, that can be very stagnating or even cause relapse."

Stigma

Both stigma from the work environment and self-stigma were repeatedly mentioned as reasons for more problematic RTW patterns.

Stakeholder: "Yes, if colleague X has an appendicitis then it is a bouquet of flowers and a card and take it easy. But I saw people diving behind a plant [to avoid me] when I came back to the office. So besides your psychological disbalance and the hours that you build up, you also have to deal with stigma from your organisational culture versus your direct colleagues, versus everything… because that can also be a cause of some relapse or less quick build-up."

Concluding characterisation trajectories

After prolonged discussion, stakeholders came to the conclusion that the five different RTW trajectories might be the result of the type of MHP and circumstances. Stakeholders generally agreed that Classes 1 and 5 (the short trajectories without relapse) could be summarised as being characterised by less severe MHPs under favourable circumstances. Class 2 was described as either severe complaints under favourable circumstances *or* less severe complaints under unfavourable circumstances. Stakeholders described Class 3 as a combination of less severe complaints under unfavourable circumstances. Finally, Class 4 was described as severe complaints under unfavourable circumstances.

Conversation between stakeholders:
Stakeholder: "I think that [Classes] 1 and 5 […] are light complaints and favourable circumstances. […] Then you apparently have an employer who also thinks along, there is attention for it and someone returns rather quickly. With [Class] 2 I have the impression, these are heavier complaints but also favourable circumstances because there is a gradual build-up and eventually recovery in two years. And [Classes] 3 and 4, those are the more problematic profiles I think. I find that a somewhat whimsical course and the question is what is going on. With that [Class] 4 this could be, building up too fast as a result of which you relapse again and that [Class] 3 I find a very typical pattern actually… that that… yes I find that difficult to interpret."

Stakeholder about Class 2: "It can also be, light and heavily unfavourable and that this is the reason why it takes so long. You understand? The complaints may not be so bad, but if the circumstances are very heavy then it is going to take very long."

Needs

Regarding the needs of employees with MHPs, seven themes emerged from the data: hope and perspective, communication between stakeholders, communication with the employee, social support, autonomy, de-stigmatisation and system changes.

Hope and perspective

Stakeholders pointed out that healthcare professionals frequently sketch a negative perspective for employees with MHPs. Focusing more on the things that someone is still able to do and giving hope and perspective was considered highly important to facilitate the RTW process.

> Stakeholder: "I have been heavily depressed twice with a hospitalisation, I was sketched a future like: forget about it. I immediately thought like: pull out the plug because if this is my perspective… So that does not give hope."

> Stakeholder: "I think we should focus way more on what someone still can do instead of… there is so much focus on the sickness part. I am [name employee with lived experience of MHPs] with depression once, but I am not only my disease."

> Stakeholder: "But that hope, I often hear it back during my consultation hours: 'you gave me hope'. So occupational physicians, but also psychologists should pay much more attention to this."

Communication between stakeholders

The importance of communication between all stakeholders involved was stressed repeatedly. Several stakeholders mentioned that direct contact (phone, or preferably getting together) between different stakeholders is not always common, but very effective.

> Stakeholder: "[…] we have also had someone where the psychiatrist has been at work, together with the supervisor, really everyone was present to discuss and then it also helps if the case manager arranges one side and I [occupational physician] arrange the medical side and then you get somewhere."

Communication with the employee

Stakeholders also talked a lot about the importance of staying in touch with the employee. When the supervisor and colleagues do not get/stay in touch with an employee who is absent due to MHPs, this can result in feelings of bitterness, anger, disappointment, and demotivation. However, when the supervisor and colleagues do stay in touch, employees tend to be more willing to resume work.

> Stakeholder: "It starts with someone just visiting or calling like: how are you doing? Those sorts of things. But there are enormous differences in this. And you notice that, if this has been done well, that people themselves also keep thinking more about work and are also more willing to return. And if that does not happen there is an enormous anger and disappointment."

While communication with the employee was considered highly important, several stakeholders mentioned that this communication should be done in the right way and should not increase the stress-level of the employee.

> Stakeholder: "And as an employer, lower the bar, I think. They call and they want to provide a solution. I do not search for a solution with my employer. Just call me like: hey, how are you?"

Finally, it was mentioned that communication with the employee is not only beneficial for the employee in question but can also facilitate greater understanding in the work environment.

Stakeholder: "My experience is also that supervisors very often have a harsh judgment until they have visited the employee and see them in real life. Then their judgement all of a sudden becomes completely different.

Social support

When it came to social support, two subthemes were identified: Relations with colleagues and help with the implementation of solutions.

Relations with colleagues

Stakeholders mentioned that support from colleagues is highly important for employees with MHPs who resume work. It was suggested that identifying this social support can be difficult, as employees have sometimes damaged their relations with co-workers in the months before getting sick, resulting in lowered 'credits' in the work environment. Moreover, it is important that the supervisor and colleagues get used to, and support, an employee's more assertive behaviour after resuming work.

Stakeholder: "They have learned to behave assertively, […] that also has an effect on the relationship."
Stakeholder: "Yes, because that is characteristic of people who drop out, that they show sub-assertive behaviour."
Stakeholder: "You change this [sub-assertive behaviour] with the intervention, but then the environment does have to adapt to [the new assertive behaviour] again."

Help with implementation of solutions

Additionally, stakeholders mentioned that employees with MHPs do not always manage to implement the strategies they learned during their sickness absence, and that continued help in this area may be necessary.

Stakeholder: "[…] you help people and also provide support to deal with those things they have difficulty with. But if you look back five years then it turns out that relapse occurs again because they can apparently not apply it [insights/advices from therapy] in their own situation, whether it is work-related or private."

Autonomy

Stakeholders mentioned several times that a sense of control and autonomy over the RTW process is highly important for employees with MHPs. This may include control over the communication with the supervisor (eg when and how often) during sickness absence as well as control over the speed of resuming work and the performed work tasks.

Stakeholder: "Yes it is two buffers that people need at a certain moment in the case of work pressure and especially sickness absence; that is, on the one hand this social support and on the other hand these control options, this autonomy, that they can indicate their territory themselves and can indicate what they want to do. If they get that freedom, well, that gives satisfaction…"

De-stigmatisation

Several stakeholders mentioned that de-stigmatisation of MHPs at work can lead to more openness about MHPs, and consequently improved understanding among colleagues.

Conversation between two stakeholders:
Stakeholder: "[…] imagine that someone is working and has psychological complaints, but this person is not open about this and also does not feel the security to be open about this, then it can

also be that this [escalates to a] little bomb that at some point goes off and then… well you also ruin relationships… if there would be more openness, if it would not matter then you would maybe say: hey, I have psychoses or an anxiety disorder…"
Stakeholder: "That creates understanding."

System changes

Some stakeholders pointed out that certain system changes are necessary to improve RTW in employees with MHPs. Both the need for faster treatments (shorter waiting lists) and less bureaucracy were mentioned in this context.

Stakeholder: "[...] many people that are not directly in a crisis, they end up on a waiting list. Because there is not enough personnel to treat them. That is terrible for us as well […] I mean, the moment that you start a treatment people are already so demoralised by the waiting time, that is really not good."

DISCUSSION

This study aimed to (1) investigate which trajectories of RTW occur among employees with MHPs in practice, (2) provide a description of the different trajectories, (3) investigate how different trajectories are related to sustainable work resumption, and (4) assess the implications of our findings for practice. In our research, we used a mixed-methods approach with both quantitative research (longitudinal retrospective study) and qualitative research (multi-stakeholder expert meeting).

Main findings

First of all, we identified five distinct RTW trajectories using sickness absence data from the largest Dutch OHS: (1) Fast RTW without relapse during the RTW process, (2) Slow RTW without relapse during the RTW process, (3) Fast RTW with relapse during the RTW process, (4) Slow RTW with relapse during the RTW process, and (5) Very fast RTW without relapse during the RTW process. The identified trajectories differed on various personal and work characteristics. Most notably, the proportion of employees with stress complaints and adjustment disorders was higher in the faster trajectories, while the proportion of employees with burnout and depression was higher in the slower trajectories. Furthermore, older employees, women, and non-profit sector employees were more prevalent in the slower trajectories. Employees with part-time contracts did not show faster RTW trajectories compared to employees with full-time contracts. No differences between the trajectories were found on recurrent sickness absence in the two years after a full RTW. Individual variability in RTW trajectories among employees with MHPs has received limited attention in earlier studies.

Second, we discussed our findings in a multi-stakeholder expert meeting in order to give more context to our data and assess implications for practice. Stakeholders indicated that they recognised all identified trajectories and could think of examples of each one. Furthermore, stakeholders agreed that the trajectories were characterised by a combination of diverse MHPs, work related factors, and non-work-related factors. In line with our earlier findings, faster trajectories were said to be characterised by less severe MHPs, and slower trajectories by more severe MHPs. Moreover, co-morbidity was mentioned as a characteristic of slower trajectories. While no characteristics of relapse (versus no relapse) trajectories were identified in our first study, the multi-stakeholder expert meeting did provide insight into characteristics of relapse trajectories. According to our stakeholders, relapse during the RTW process often seems to be caused by pressure to resume work, either from employees themselves or from the work environment. Furthermore, they mentioned that sub-optimal communication and stigma (self-stigma and stigma from others in the work environment) can lead to slower trajectories as well as relapse. Stakeholders indicated that problematic trajectories may be prevented by providing hope and perspective, more frequent communication and better alignment between stakeholders, communication with the employee, social support, autonomy for employees, de-stigmatisation, and system changes.

Heterogeneity in RTW

The trajectories identified in our research varied with regard to the length of the RTW process and the occurrence of relapse during the RTW process. The majority of employees (60 per cent) fully returned to work within approximately six months (Classes 1 and 3). Approximately 30 per cent of employees needed approximately 14 months to resume work (Classes 2 and 4) and around 10 per cent returned very quickly, within one or two months (Class 5). Relapse occurred for approximately 20 per cent of the employees (Classes 3 and 4). In line with the latter result, findings from other studies also showed that relapse during the RTW process is quite common[20,25,26].

Characteristics of RTW trajectories

Both our quantitative and qualitative research shed light on what characterises employees in different RTW trajectories. This information can be used to identify which employees are at risk of a slow RTW and/or relapse. Regarding our sickness absence data, we had a large sample size (ie a high-powered study), which allowed us to detect both smaller and larger statistical differences. While differences between trajectories were found on most characteristics included in our dataset, the trajectories seemed to differ most strongly on the type of MHP. Stress complaints were more prevalent in the faster trajectories, while mood disorders occurred more in the slower trajectories. This finding is in line with previous studies that showed a positive relation between depression and the duration of work disability[9]. Furthermore, faster trajectories were characterised by a higher proportion of employees with adjustment disorders, but slower trajectories showed a higher proportion of employees with burnout (a specific type of adjustment disorder in our dataset). In line with this, work stress models propose that employees who suffer from chronic stress are at risk of developing more serious MHPs such as burnout and depression over time[37].

Our quantitative analyses also revealed that the average age of employees was higher in the slower trajectories. This negative association between age and RTW is supported by previous research [8,9]. Moreover, the proportion of females and non-profit sector employees was higher in slower trajectories. It seems likely that gender differences in RTW trajectories can be attributed to differences in the type of work. For example, women may be overrepresented in jobs where work adaptations are difficult to implement, such as the healthcare or education sector. The findings regarding profit versus non-profit sector may partially be explained by differences in job security. More in-depth research could further clarify these differences; for example, profit sector organisations might be putting more effort into getting employees back to work compared to non-profit sector organisations. Earlier research on the association between gender or work sector and work disability was inconclusive[8,9]. It may be noted that part-time employees did not resume work faster than full-time employees. While this may seem surprising at first, people generally work part-time because they have other duties (eg child care) that continue during sickness absence. As the characteristics included in our dataset may be correlated (eg gender and type of MHP), it may be noted that differences between trajectories on one characteristic (e. gender) may be partly explained by differences in another characteristic (eg type of MHP).

While our quantitative analyses did not reveal differences between relapse and no-relapse trajectories on the personal and work characteristics included in our dataset, the multi-stakeholder expert meeting did provide insight into potential differences between these trajectories. Moreover, additional characteristics of slower versus faster trajectories emerged from the expert meeting. The finding that longer trajectories may be characterised by more severe MHPs is supported by earlier research (see above)[9]. Co-morbidity, pressure to RTW, sub-optimal communication, and stigma were identified in earlier research as important barriers to a successful RTW[8,38-40]. However, previous studies did not connect these RTW barriers specifically to the length of the RTW process and/or the occurrence of relapse. The findings from the expert meeting suggest that some factors may be particularly related to trajectory length (severity of MHP, co-morbidity), some factors related to relapse during the RTW process (pressure to resume work), and some factors linked to both trajectory length and relapse (sub-optimal communication, stigma). Future studies may show whether quantitative research can substantiate these findings. The role of stigma in this area warrants further attention, as very recent publications indicate that this is a highly underestimated and complex factor that hampers sustainable employment of people with mental health issues and illness[41, 42]. For instance, due to the fear of stigma, workers with mental health issues may avoid seeking healthcare even if it is available, and untreated disorders may increase the risk of long-term sick leave. Moreover, whereas disclosure can lead to support and work adjustments that may facilitate RTW, disclosure is needed to achieve this. Hence, if workers are afraid that their disclosure will lead to stigma and discrimination, an opportunity to prevent long-term sick leave may be lost. As strategic disclosure can decrease stigma and discrimination[42–45], support in this area may increase psychological resilience and occupational outcomes. While quantitative studies on RTW often focus on demographic factors (eg age, gender) and objective work context factors (eg organisation size, sector[8,9], stakeholders

did not mention these factors when characterising the different trajectories. The absence of an association between relapse and type of MHP, work context, or demographics in the quantitative analyses, combined with the insights from the expert meeting, suggest that circumstantial and psychological factors may explain the occurrence of relapse. This is highly important from an intervention perspective, as many of these factors can potentially be influenced.

Relation between trajectories and recurrent sickness absence

Our results did not show any relation between the different RTW trajectories and recurrent sickness absence after achieving a full RTW. Although it is possible that there is no link between employees' RTW process and long-term outcomes regarding sustainable employability, it may also be the case that our measure of recurrent sickness absence was too indirect and therefore not always accurate. Namely, it was assumed that an employee did not pass through another sickness absence period if there was no other sickness absence file in the two years following a full RTW (there was no confirmation that an employee did not get sick anymore). It might be that later sickness absences could not be connected to previous sickness absences due to administrative errors. Furthermore, employees whose contract ended during the two years after fully resuming work were excluded from our analysis but may have experienced another sickness absence period while working for a new employer or while unemployed (46). Another possibility is that our measure of recurrent sickness absence (yes/no) was not sufficiently sensitive. It's possible that differences between trajectories would be found on the number of sickness absence days following a full RTW. Hence, more research is needed to study whether the identified trajectories differ on long-term outcomes. While shorter trajectories without relapse seem most advantageous in the short-term (particularly for employers), one may speculate that longer trajectories with an early RTW onset but a slow build-up may be more advantageous for some groups of employees in the long-term (eg in case of severe MHPs or complex circumstances in the home or work environment).

Needs of employees with MHPs

The multi-stakeholder expert meeting identified various needs of employees on sickness absence due to MHPs. Meeting these needs may prevent unnecessarily long trajectories and relapse during the RTW process. In line with previous research, stakeholders pointed out the importance of direct and thorough communication between all the involved parties, staying in touch with the employee, social support in the workplace, de-stigmatisation, autonomy over the RTW process for employees, and system changes aimed at making the interaction with the social security and healthcare system less stressful [38-40]. Additionally, our stakeholders stressed that it is very important that healthcare professionals give employees with MHPs hope and provide them with a future perspective. While this finding is supported by another recent qualitative study[47], the relevance of this factor has received limited attention in RTW literature. Future research may shed light on the relation between hope and RTW, as well as ways in which hope can be raised among employees with MHPs.

Strengths and limitations

In our research, we employed a combination of both quantitative and qualitative research, benefitting from the advantages of both types of research. For our first study, we used unique sickness absence data from the largest Dutch OHS. The large and representative sample size, including employees with different demographical backgrounds from various work environments, is a major strength of the present research. As gradual RTW is common and well-registered in the Netherlands, we were able to investigate individual variation in the RTW process in detail. Latent class transition analysis was performed to identify subgroups with regard to RTW trajectories. This is an innovative and complex analysis approach that is suitable for data with stepwise changes.

A limitation of the sickness absence data used in our research was that these data were gathered for administrative reasons, and not for research purposes. Consequently, no information was available on factors such as co-morbidity, psycho-social work environment, and psychological variables (eg self-

efficacy)[48]. In addition, the interventions an employee was exposed to and the effectiveness of these interventions(medical or psychological) remain unknown, which might have an impact on the recovery and RTW process of the employee. Furthermore, some OPs only reported a broader diagnosis (eg adjustment disorder) and did not register a specific diagnosis (eg burnout). While sickness absence information had to be reported thoroughly and accurately for administrative purposes, it is possible that mistakes occurred in sickness absence registrations (eg late reporting of a change in RTW percentage). Finally, data from employees whose temporary contract ended during the sickness absence period were excluded, which may have led to some bias in the data.

The multi-stakeholder expert meeting provided insight into the recognisability and characteristics of the identified trajectories and the implications of our findings. As our expert meeting included occupational physicians, psychologists, employees with lived experience of MHPs, an employer, an occupational social worker, a case manager and an HR employee, we gained insights into the perspective of different stakeholders involved in the RTW process. The expert meeting featured interactions between participants, thereby enriching the conversation. By discussing the recognisability of the identified trajectories with various stakeholders, we investigated and confirmed the ecological validity of our findings. As noted above, our sickness absence data provided limited information on circumstantial and psychological variables. The multi-stakeholder expert meeting allowed us to gain more insight into the characteristics of different RTW trajectories.

Although the expert meeting gave ample context to our findings, it is unclear whether we reached saturation. Additional expert meetings may have resulted in more information on the recognisability and characteristics of the identified trajectories, as well as the needs of employees with MHPs. Furthermore, we do not know to what extent the findings of the expert meeting can be generalised. As we recruited participants directly and indirectly via our own networks, we may have selected stakeholders who are particularly interested in evidence-based methods to guide the RTW process of employees with MHPs. Furthermore, both participants with lived experience of MHPs in our expert meeting were associated with the Dutch Anti-Stigma Association, which may have led to a particular focus on the role of stigma in the RTW process.

Implications for research and practice

Using data from the largest Dutch OHS, we identified five distinct RTW trajectories among employees on sickness absence due to MHPs. It is important to take this heterogeneity into account in future research and not treat employees with MHPs as one group. Trajectories with and without relapse did not vary on the characteristics included in our sickness absence data. Moreover, stakeholders mentioned various characteristics of faster versus slower trajectories that were not included in our data. The findings from the expert meeting suggest that trajectories differ on circumstantial (work and private) and psychological factors that are not measured by OHSs. In order to obtain more quantitative insight into predictors of problematic trajectories, it is important that OHSs and researchers jointly gather data on circumstantial and psychological factors such as frequency, timing and quality of communication between stakeholders[49,50], psychosocial characteristics of the work environment[51], experienced autonomy regarding RTW[52], and RTW self-efficacy[48]. In order to relate different RTW trajectories to long-term outcomes, better measures of recurrent sickness absence after a full RTW are needed. Furthermore, it would be highly interesting to investigate the relation between different RTW trajectories and employees' productivity and well-being during and after resuming work. This may provide more insight into the advantages and disadvantages of different trajectories in the long-term.

Our findings have several implications for stakeholders involved in the RTW process of employees with MHPs. Presenting the different identified RTW trajectories to occupational physicians, employees with MHPs, employers and other stakeholders can increase awareness of the diversity of trajectories employees with MHPs pass through before reaching a full RTW. It is important, however, when creating such awareness, to avoid further stigmatisation of the subgroups with slower trajectories and to emphasise that sickness absence duration can also decrease in these trajectories with more tailored

treatments. The finding that faster trajectories are characterised by adjustment disorders, while slower trajectories are characterised by burnout suggests that timely interventions may prevent more severe MHPs and long RTW trajectories. Furthermore, both our sickness absence data and the multi-stakeholder expert meeting suggest that trajectories with and without relapse did not vary with the type of MHP, objective work characteristics (eg size of organisation), or demographical factors. Based on the findings from the expert meeting, it appears that relapse is likely to depend on circumstantial and psychological factors that are potentially modifiable. This means that it may be possible to prevent relapse trajectories. Finally, the expert meeting highlighted several needs of employees with MHPs. In particular, the importance of providing hope and perspective has received limited attention in previous literature focused on RTW among employees with MHPs. The needs identified in this study should be taken into account when designing RTW interventions.

In conclusion, this research enhances our knowledge of different RTW trajectories and their characteristics among employees with MHPs. Knowledge on heterogeneity in the RTW process and characteristics of more problematic trajectories is useful when identifying risk groups as well as developing personalised RTW interventions.

APPENDIX

In the tables below, transition odds can be found for Classes 1 to 5 of the 5-class model. In these tables, 'origin' refers to the starting point of a specific RTW step (eg RTW percentage of 60-79 per cent), and 'destination' refers to the end point of a specific RTW step (eg RTW percentage of 80-99 per cent). Transition odds reflect the odds that a certain RTW step will occur.

Table A. Transition odds for Class 1 of the 5-class model (fast RTW without relapse)

		Destination						
		1	2	3	4	5	6	7
		(0%)	(1-19%)	(20-39%)	(40-59%)	(60-79%)	(80-99%)	(100%)
Origin	1 (0%)	0.33	0.23	0.16	0.11	0.08	0.05	0.04
	2 (1-19%)	0.00	0.35	0.24	0.17	0.11	0.08	0.05
	3 (20-39%)	0.00	0.00	0.37	0.25	0.17	0.12	0.08
	4 (40-59%)	00.00	00.00	0.00	0.40	0.28	0.19	0.13
	5 (60-79%)	00.00	00.00	00.00	0.00	0.46	0.32	0.22
	6 (80-99%)	00.00	00.00	0.00	00.00	0.00	0.59	0.41

Table B. Transition odds for Class 2 of the 5-class model (slow RTW without relapse)

		Destination						
		1	2	3	4	5	6	7
		(0%)	(1-19%)	(20-39%)	(40-59%)	(60-79%)	(80-99%)	(100%)
Origin	1 (0%)	0.63	0.23	0.089	0.03	0.01	0.00	0.00
	2 (1-19%)	0.01	0.63	0.23	0.08	0.03	0.01	0.00
	3 (20-39%)	0.00	0.01	0.63	0.23	0.08	0.03	0.01
	4 (40-59%)	00.00	0.00	0.01	0.64	0.23	0.09	0.03
	5 (60-79%)	0.00	00.00	0.00	0.01	0.66	0.24	0.09
	6 (80-99%)	0.00	00.00	00.00	0.00	0.01	0.72	0.26

Table C. Transition odds for Class 3 of the 5-class model (fast RTW with relapse)

		Destination						
		1	2	3	4	5	6	7
		(0%)	(1-19%)	(20-39%)	(40-59%)	(60-79%)	(80-99%)	(100%)
Origin	1 (0%)	0.22	0.19	0.16	0.14	0.12	0.10	0.08
	2 (1-19%)	0.14	0.21	0.18	0.15	0.13	0.11	0.09
	3 (20-39%)	0.09	0.14	0.21	0.18	0.15	0.13	0.11
	4 (40-59%)	0.06	0.10	0.14	0.22	0.19	0.16	0.14
	5 (60-79%)	0.05	0.07	0.11	0.16	0.24	0.21	0.17
	6 (80-99%)	0.04	0.05	0.08	0.12	0.19	0.28	0.24

Table D. Transition odds for Class 4 of the 5-class model (slow RTW with relapse)

		Destination						
		1	2	3	4	5	6	7
		(0%)	(1-19%)	(20-39%)	(40-59%)	(60-79%)	(80-99%)	(100%)
Origin	1 (0%)	0.53	0.25	0.12	0.06	0.03	0.01	0.01
	2 (1-19%)	0.18	0.44	0.21	0.10	0.046	0.02	0.01
	3 (20-39%)	0.07	0.17	0.41	0.19	0.09	0.04	0.02
	4 (40-59%)	0.03	0.07	0.17	0.41	0.19	0.09	0.04
	5 (60-79%)	0.01	0.03	0.07	0.17	0.42	0.20	0.09
	6 (80-99%)	0.01	0.01	0.03	0.08	0.19	0.46	0.22

Table E. Transition odds for Class 5 of the 5-class model (very fast RTW without relapse)

		Destination						
		1	2	3	4	5	6	7
		(0%)	(1-19%)	(20-39%)	(40-59%)	(60-79%)	(80-99%)	(100%)
Origin	**1 (0%)**	0.00	0.00	0.00	0.00	0.00	0.00	1.00
	2 (1-19%)	0.00	0.00	0.00	0.00	0.00	0.00	1.00
	3 (20-39%)	0.00	0.00	0.00	0.00	0.00	0.00	1.00
	4 (40-59%)	0.00	0.00	0.00	0.00	0.00	0.00	1.00
	5 (60-79%)	0.00	0.00	0.00	0.00	0.00	0.00	1.00
	6 (80-99%)	0.06	0.02	0.00	0.00	0.00	0.00	0.91

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