Web-enhanced return-to-work coordination for employees with common mental disorders: reduction of sick leave duration and relapse

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Abstract

Background Common mental disorders (CMDs) are highly prevalent in workplace settings, and have become a significant public health challenge. This study aims to assess the effectiveness of PRATICA[dr], a web application facilitated by a Return-to-Work Coordinator (RTW-C), with a focus on reducing sick leave duration and preventing relapse in individuals with CMDs.

Methods PRATICA[dr], designed to enhance collaboration among Return-to-Work (RTW) stakeholders and provide systematic support throughout the RTW process, was evaluated in a quasi-experimental study. Survival analyses were used to compare sick leave durations and relapses between the experimental group (PRATICA[dr] with RTW-C), and control groups (RTW-C only). Both conditions had equal distribution of 50% from large public health organizations ($n = 35$) and 50% from a large private financial organization ($n = 35$). Mixed linear models were used to observe changes in clinical symptoms over time, especially for the experimental group.

Results The experimental group demonstrated significantly shorter sick leave durations and fewer relapses compared to the control group. Notably, the average absence duration was close to 3 months shorter in the experimental group. This difference was found when the RTW-C intervention (rehabilitation care) began 2 months after the onset of sick leave. Relapses occurred only in the control group (13.2%). The absence of relapses in the experimental group is noteworthy, along with the significant decrease in depressive and anxious symptoms over time.

Conclusions The findings suggest that incorporating PRATICA[dr] into RTW-C intervention can lead to substantial cost savings by facilitating coordination among stakeholders and guiding the RTW process with validated tools. Initiation of RTW-C intervention alongside PRATICA[dr] within the first month of absence is recommended for optimal health and work outcomes.

Keywords Web application, Stakeholder, Return-to-work coordinator, Clinical symptoms, Cost-savings

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Introduction

Common mental disorders (CMDs) are highly prevalent in workplace settings, and have become a significant public health challenge [1, 2]. CMDs, including depressive and anxiety disorders, along with adjustment disorders, account for 30–50% of reasons for workplace absenteeism [3–5]. Recurrence rates among returning employees range from 20 to 30% [6], regardless of the specific CMD and time evaluation, with projected costs reaching $3–6 trillion by 2030 [7, 8]. In Canada, CMDs incur an estimated $51 billion in costs, including medical expenses, and productivity loss [9]. In the province of Québec, the average cost is $125,000 for employee relapse compared to $69 000 for those with CMDs without relapse [10]. Absences due to CMDs impact individual's professional identity, skills confidence, and exacerbate symptoms, affecting work environments [11]. Stakeholders including employers, HR professionals, managers, and health professionals across diverse sectors must collaborate to develop strategies to reduce sick leave duration and prevent relapses upon return to work [12].

Grounded in the literature and tailored for large Canadian organisations, both public and private, the Return to Work (RTW) process is structured into three phases with 10 milestones [13]. Phase 1 involves initiating sickness absence management, Phase 2 focuses on treatment rehabilitation and RTW preparation, and Phase 3 encompasses gradual RTW and follow-up. The RTW process entails a series of interactions and interventions conducted by various stakeholders within diverse environments and systems, such as work (e.g., employer, manager, unions), health (e.g., family physician, rehabilitation professionals), and insurance (e.g., insurer) [14, 15]. Improving communication and collaboration among these stakeholders is crucial for reducing sick leave duration and preventing relapses [16]. As the responsibility for the RTW process is distributed among multiple stakeholders, there is a risk of responsibility fragmentation and gaps in orchestrating actions, leading to efficiency and quality issues [17]. A meta-synthesis of qualitative research on mental health and work issues highlights a lack of coordination among stakeholders from the three systems mentioned above [18]. Efforts towards building more integrated healthcare systems internationally aim to address these challenges [19].

Many Scandinavian countries, particularly Finland, Norway, Sweden, and Denmark have implemented RTW Coordinators (RTW-C) to enhance communication and collaboration among stakeholders involved in the RTW process [20, 21]. Timely RTW is crucial to prevent permanent work disability, and RTW-C provision aims to improve program timing and planning [22]. Despite several literature reviews and meta-analyses of randomised controlled trials, there is ongoing debate about the impact of the RTW-C [22, 23]. Some studies suggest that the RTW-C model, or certain components of the model, may reduce the duration of work disability, while others argue that offering RTW coordination has no discernible benefits compared to usual practice [21, 22, 24]. Based on the Cochrane review by Vogel et al. [23], the uncertainty in evidence regarding the benefits of RTW coordination programs may be attributed to the low quality of research and variations in the organization and implementation of these programs. Among the studies included in Vogel et al. [23], only two focused exclusively on CMDs, and there is no uniform definition of RTW coordination programs across studies. It might be possible that the coordination model, where the RTW-C is placed in specialist healthcare services without real possibilities to coordinate and accommodate at the workplace, does not facilitate RTW [20].

In the literature, coordination among RTW stakeholders is described as vertical, spanning different levels and institutions, and horizontal, occurring within one level or service [19]. Dialogue mechanisms between employees and managers [25] or occupational physicians [26] in Europe positively impact RTW. Despite numerous stakeholders playing crucial roles throughout the RTW process, coordination often involves exclusive dyadic relationships [13, 14]. Timing of intervention and systematic, centralized information are also critical. Online mental health technologies offer a solution to access issues in mental health services and can enhance coordination among stakeholders [27]. Transforming effective RTW interventions into digital solutions can increase accessibility regardless of location and time [28]. Furthermore, a recent meta-analysis has been conducted on online interventions in the field of mental health and work [29], along with a meta-review of mobile applications deployed in mental health [30] indicating no application or web platform facilitating RTW for CMDs. Together, the applications identified in these meta-analyses, meta-review, and more recent studies do not address the issue of coordinating actions among multiple RTW stakeholders. They generally focus on a single user or a dyad (e.g., the occupational physician and the employee on sick leave).

To fill the existing gap in evidence-based digital support for sustainable RTW for individuals with CMDs and RTW stakeholders, this study aimed to implement a web application tailored for this purpose. The web application, named PRATICA^dr, is specifically designed for employees with CMD and RTW stakeholders, including RTW-C, General Practitioners (GPs), Managers, and Occupational and Health Professionals. Following Vogel et al.'s [23] recommendation, we not only track RTW occurrences but also monitor relapses into sick leave, providing a detailed intervention description. In our

quasi-experimental study, we evaluated the effectiveness RTW-C assisted by PRATICA[dr], compared to a usual (control) group receiving standard RTW-C support without PRATICA[dr].

Our hypotheses were as follows:

Intergroup Comparisons (experimental vs. control group):

Hyp1: PRATICA[dr] + RTW-C participants will have shorter sick leave duration compared to the usual intervention (only RTW-C).
Hyp2: PRATICA[dr] + RTW-C participants will have fewer relapses during follow-up than those in the usual intervention group.

Intragroup Analysis (experimental group only):

Hyp3: Participants in the PRATICA[dr] group will observe a reduction in depressive and anxious symptoms over time.

Methods

Study design and participant recruitment

For this quasi-experimental preliminary study, participants were recruited into the experimental condition, or to the control condition. Inclusion criteria for both groups were: (1) a documented sick-leave prescription with a diagnosis of a CMD (depression, anxiety and adjustment disorders), (2) the ability to communicate in French, and (3) receiving services from a RTW-C in a participating clinic (from the private or public sector). For the control condition, the criteria were the same, but with added matching on key variables (see below). The two large organisations, each with over 15,000 employees that participated in the implementation of PRATICA[dr] are described in Corbière et al. [13]. In this study, the RTW-C is external to the private organization but internal to the public organization, where employees receive a salary insurance from their public employer. To prevent intervention contamination during PRATICA[dr] implementation across the two organizations, we adopted the following approach: For the control group of the large health organization, we selected a comparable health organization in Quebec, ensuring that it had an existing RTW-C on the team, or a recently hired one trained by the RTW-C from the experimental group. We chose a different public health organization for the control group to prevent contamination within the experimental organization, as participants could be drawn from any department, risking the spread of PRATICA[dr] intervention. In the private sector, only certain departments of a large organisation participated in the experimental group to avoid contamination in the other departments, allowing

us to use the remaining departments (comparable in terms of sick leave and types of services) as the control group. We initially recruited 40 participants for the experimental group by inviting them to take part in the PRATICA[dr] program; three were excluded shortly after baseline as they no longer met the inclusion criteria (i.e. they developed significant physical health issues interfering with the return-to-work process), which could have affected the length of their sick leave. Consequently, to match the 37 individuals in the experimental group, we identified the same number of participants (with same characteristics) for the control condition. Additionally, two individuals from the control group were later excluded for similar reasons such as undergoing surgery. In the end, both groups had an equal distribution, with 50% from large public health organizations ($n = 35$) and 50% from a large private financial organization ($n = 35$).

Matching criteria included demographic and clinical characteristics, employment-related factors (Table 1). Given that all participants in the experimental condition had recently returned to work after a sick leave due to common mental illness, this was also a matching criterion. Fisher exact tests showed no significant differences between groups (Table 1). Duration of sick leave and relapses were assessed three months after RTW for both groups. Relapse is defined as being for a minimum of 5 working days due to reasons associated with a CMD. Following the three phases of the RTW process and applicable only to the experimental group, clinical measures (depressive and anxious symptoms) were administered at baseline (pre-intervention, phase 1), intervention (phase 2), during therapeutic RTW (phase 3), as well as 1-month follow-up (post-therapeutic RTW) and 3-month follow-up (post-therapeutic RTW). Sustainable RTW is defined as 30 days of work following the sickness benefit period [31].

Intervention and procedures

Participants in the experimental group were provided access to the PRATICA[dr] application, facilitated by the research team. PRATICA[dr] is a technology-driven solution developed from evidence-based interventions with the aim of enhancing collaboration between RTW stakeholders and providing systematic support throughout the RTW process. Key features of PRATICA[dr] include:

1) Facilitation of collaboration among multiple RTW stakeholders across healthcare, enterprise, and insurance sectors, with a focus on the RTW-C,
2) User-friendly interface tailored for employees on sick leave and RTW stakeholders,
3) Integration of each stakeholder's action into the sick leave employee's RTW process,

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Table 1 Sociodemographic information for experimental and group controls according to the sector of activity

Variables		Public sector		Private sector		*P* value
		Experimental (*n*=18)	Control (*n*=17)	Experimental (*n*=19)	Control (*n*=16)	
Sex	Male	1	1	1	1	11
	Female	17	16	18	15	
Age	< 45 years	9	7	10	8	0.91
	≥ 45 years	9	10	9	8	
Diagnosis	Adjustment disorder	15	11	11	10	0.501
	Depression	1	5	6	4	
	Anxiety	2	1	2	2	
Type of employment	Nurse	9	6	-	-	0.471
	Social worker	4	3	-	-	
	Beneficiary caregiver	3	2	-	-	
	Support staff	1	3	-	-	
	Administrative officer	1	3	-	-	
	Counsellor	-	-	10	4	0.271
	Director	-	-	5	5	
	Analyst	-	-	2	2	
	Customer service	-	-	1	3	
	Technical support	-	-	1	2	

[1] Fisher's exact test

4) Sequential process aligned with the three phases of the RTW,

5) Integration of organizational-specific best practice guides for RTW stakeholders,

6) Inclusion of validated tools covering various topics such as RTW barriers, self-efficacy, workplace accommodations, and clinical symptoms,

7) Centralization of information through data collection,

8) Capacity to handle large volumes of cloud-based data, ensuring accessibility and adaptability for tracking employee progress,

9) Assurance of confidentiality through encrypted personal data storage.

Before the intervention, the research coordinator thoroughly explained the research protocol and the sequential phases of the RTW program integrated into the application to each participant and RTW-C. Each participant was assigned a dedicated set of stakeholders involved in their RTW process, including a RTW-C, healthcare provider (e.g., family physician or nurse practitioner), rehabilitation professional (e.g., occupational therapist or physiotherapist), manager, and insurer. Upon obtaining informed consent from the participant, the RTW-C initiated contact with these stakeholders, granting them access to the application via email communication. The roles and responsibilities of each stakeholder were clearly communicated, with a focus on the availability of best practice guides embedded within the application. Practical guides within the application detailed the expected roles and actions of all stakeholders as recommended in the literature [14]. Upon initial login to the application, participants were prompted to provide electronic consent, signifying the start of the PRATICA[dr] intervention. The application followed a predetermined decision tree algorithm workflow that incorporated step-by-step evidence-based best practices [14] and the RTW program developed by the research team [13]. This approach aims to optimize the decision-making process by leveraging insights and strategies that have been validated through empirical evidence. Each stakeholder was informed via email regarding their platform access and the specific moments at which their input was essential according to the workflow, such as completing a designated task (e.g. meeting and communicating with a stakeholder, answering a questionnaire, or making a recommendation). Each stakeholder was provided with a distinct dashboard that granted access to specific data aligned with their role in the process, while maintaining the confidentiality of personal information. Following the completion of each stakeholder's task, the RTW-C received an email notification, enabling access to the updated dashboard with data visualization. Before transitioning between phases or making any critical decisions within the process, the RTW-C and the worker were prompted to arrange a meeting, either in-person or online, to discuss the current plan. Subsequently, the RTW-C revised the plan according to the mutual agreement reached during the discussions, leading to an updated workflow where each step informed the next. This structured approach ensured uniformity and adherence to established guidelines

throughout the intervention. Ethical approval for this study was obtained from the research ethics board of the CIUSSS de l'Est-de-l'Île-de-Montréal (#MP-12-2018-1155 and #2018 – 1052).

Depressive and anxiety symptoms

To assess CMD symptoms for the participants in the experimental group, we utilized the Patient Health Questionnaire (PHQ-9) [32] and the Generalized Anxiety Disorder Scale (GAD-7) [33]. The PHQ-9 includes 9 items evaluating depressive symptoms, while the GAD-7 consists of seven items assessing anxiety symptoms. Both scales employ a 4-level Likert scale (0 = never, 1 = several days, 2 = more than half the time, 3 = almost every day) for participant responses. Total scores are calculated by summing the responses, with specific scores ranges indicating varying levels of depression or anxiety severity. For the PHQ-9, reliability is excellent (α = 0.89) and test-retest reliability over a 7-day period is also high (ICC = 0.92) [34]. Similarly, the GAD-7 demonstrates excellent reliability (α = 0.92) and good test-retest reliability within a week (ICC = 0.83) [33]. A score of ≥ 10 on both scales, typically indicates moderate intensity of depression or generalized anxiety symptoms.

These measures were administered at each assessment time point including baseline or pre-intervention, post intervention, therapeutic RTW, 1-month and 3-month follow-ups. Comparisons between the experimental groups (private and public organisations) at the baseline revealed no significant differences in depressive and anxious symptoms (p-values of 0,58 and 0,88, respectively), enabling subsequent analyses combining both groups. Interestingly, as Nieuwenhuijsen et al. [35] demonstrated, the distinction between depressive and other disorders such as anxiety disorders or adjustment disorders becomes less relevant as new insights are emerging based on transdiagnostic psychopathology (see HiTop- [36]). This approach involves investigating the importance and connections of individual symptoms rather than disorders.

Analyses

Statistical analyses were performed using R [37] and the survival package [38]. *Survival analyses* were employed for H1 and H2. Cox regression analysis [39] was used to estimate the time until event occurrence, and the results were presented in terms of hazard ratios (HRs). As previously mentioned, all participants, both in experimental and control groups, returned to work. In the model, the *survival time* variable was "the duration of sick leave" measured in days. A Kaplan–Meier survival curve was utilized to estimate cumulative survival probabilities and assess RTW patterns over time. Additional analyses were conducted to assess the effect of the onset of the

rehabilitation care (start of the RTW-C intervention) on sick leave duration in both experimental and control groups. The median duration of the onset of the rehabilitation care (i.e. duration until the RTW-C assumes the responsibility after the onset of sick leave) was approximately 2 months (60 days), used as a threshold for analyses (< 60 days vs. ≥ 60 days). H2 was tested using a Fischer exact test due to the small sample size, determining differences between the experimental and control groups. To test hypothesis H3, regarding mean differences over time, mixed linear models were estimated.

The models were adjusted using the following formula:

$$y_{it} = \beta_{0i} + \beta_{1t} + \in_{it}$$

$$\beta_{0i} = \beta_0 + \xi_i$$

Where y_{it} represents the dependent variable of subject *i* at time *t*. β_{0i} represents a random coefficient comprising a fixed part β_0 and a random effect ξ_i. β_{1t} represents the time adjustment (2,..., 5) relative to time 1 ($\beta_{11} = 0$). Finally, $\in_{it}$ is a residual term for which we assume that the variance is a function of time ($\in_{it} \sim N\left(0, \sigma_t^2\right)$– variance heteroskedastic). This model was constructed using the nlme package.

Results

Figure 1 presents a graphical depiction of the Kaplan–Meier results for sick leave duration in both experimental and control groups. The survival curve indicates that 50% of employees in the experimental group returned to work within 215 (sd = 84) days, while it took 300 (sd = 139) days for the control group. The median sick leave duration was 7.2 months for the experimental group and 10 months for the control group, showing a nearly 3 months (or 85 days) difference in favor of the experimental group (HR = 2.5; $p < 0.001$).

Figures 2 and 3 illustrate Kaplan-Meier survival curve for time to RTW with the start of the RTW-C intervention either less than 60 days (< 60 days) after the onset of the employee's sick leave or 60 days or more (≥ 60 days) after the onset of sick leave. Figure 2 shows similar median sick leave durations (5.3 months) when the period of time between the start of sick leave and the start of the rehabilitation care (RTW-C intervention) was less than 2 months after the sick leave (HR = 0,87, $p = 0,80$). In Fig. 3, the experimental group had a median sick leave duration of 7.7 months (231 days; sd = 62) compared to 10,4 months (312 days; sd = 130) for the control group (HR = 3,44, $p < 0,001$) when rehabilitation care began 2 months after the onset of sick leave. Overall, the use of PRATICA[dr] by the RTW-C significantly reduced sick leave duration, particularly when rehabilitation care
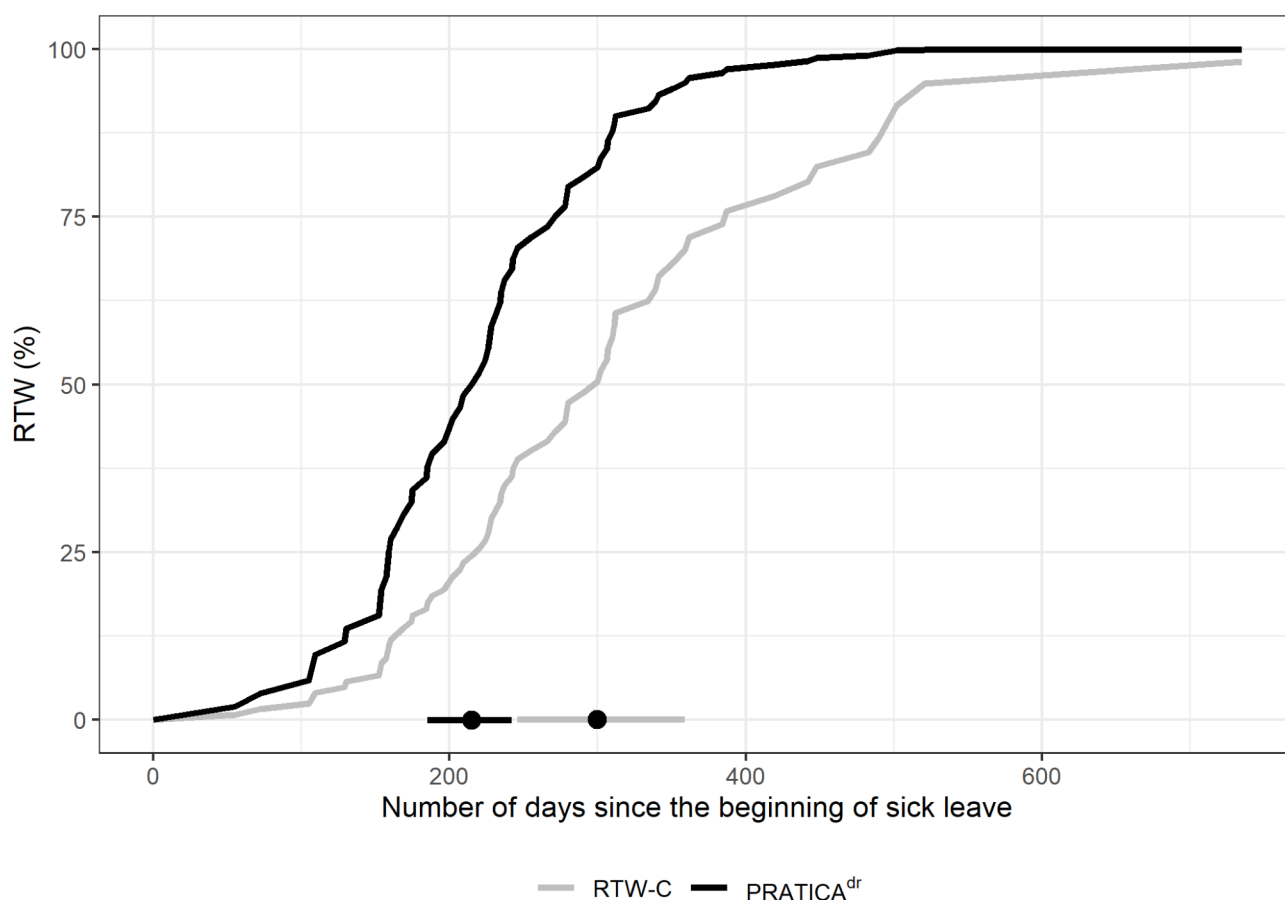
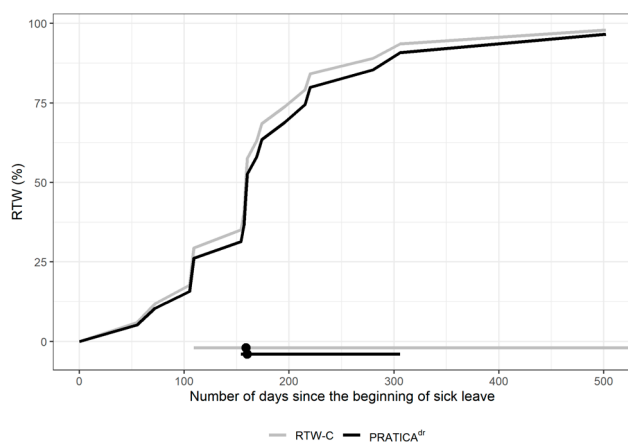**Fig. 1** Kaplan-Meier survival curve for time to RTW

Fig. 2 Kaplan-Meier survival curve for time to RTW with the start of the RTW-C intervention less than 60 days after the onset of the employee's sick leave
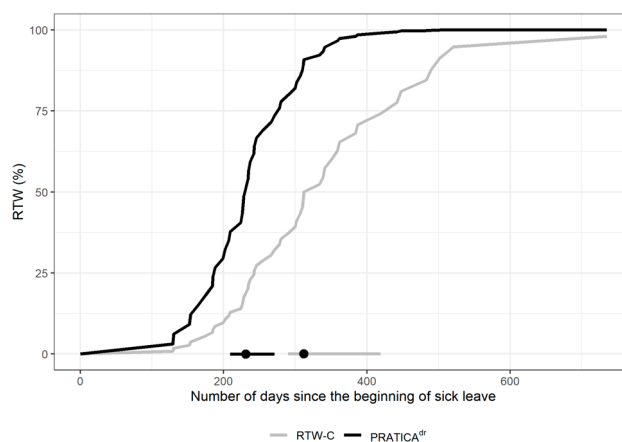

Fig. 3 Kaplan-Meier survival curve for time to RTW with the start of the RTW-C intervention more than 60 days after the onset of the employee's sick leave

(RTW-C intervention) started 2 months after the onset of sick leave.

Regarding relapses, a significant difference in relapse rates was found between the experimental and control groups ($p = 0.045$) based on a Fisher exact test. In the control group, 4 individuals (13,2%) experienced relapses

within 3 months after RTW, while no relapses were observed in the experimental group.

In terms of clinical symptoms within the experimental group (private and public), significant mean differences over time were observed, particularly for depressive symptoms between T0 and T1 ($p = 0,012$) and between

T2 and T3 ($p = 0,038$) (Fig. 4). Similarly, for anxiety symptoms (Fig. 4), significant differences were noted between T0 and T1 ($p = 0,045$) and between T2 and T3 ($p = 0,002$). Individuals exhibited clinically anxious and depressive scores at T0 (close to 10), whereas during therapeutic RTW (T3), scores dropped below 5, indicating minimal or no clinical symptoms upon reintegrating into their work environment (Fig. 4).

Discussion

Mobile applications and web platforms are increasingly being used for self-management of CMDs; however, there is a dearth of available eHealth applications providing evidence-based digital support for individuals with CMDs upon their RTW. Furthermore, other RTW stakeholders, such as managers and health professionals, are inconsistently integrated, sometimes only with dyad stakeholders [25, 26]. The RTW-C has emerged as a key player, tasked with orchestrating all actions involving RTW stakeholders stemming from various systems. Research should not only focus on people returning to work (RTW) but also on sustainable RTW, examining how well individuals can remain at work post-sick leave. This is vital due to the challenges many workers encounter in maintaining work following RTW.

This quasi-experimental study compared the use of the PRATICA^{dr} web platform by a RTW-C to the usual intervention of a RTW-C, on work outcomes such as duration of absence and relapses after 3 months following the RTW. Clinical variables were systematically evaluated for the experimental group only, to document their evolution over time, from the beginning of the intervention up to 3 months after the RTW. Results revealed significantly shorter sick leave duration and fewer relapses in the experimental group compared to the control group. Specifically, the average absence duration was 85 days shorter in the experimental group. This difference was found when the RTW-C intervention (rehabilitation care) began 2 months after the onset of sick leave. Relapses, occurring only in the control group (13.2%), were evenly distributed before and after the two-month of the RTW-C intervention without the use of PRATICA^{dr}.

In their systematic review and meta-analysis of randomized controlled trials (RCTs) investigating interventions for CMDs and RTW, Nigatu et al. [4] reported an average sick-leave duration until RTW ranging from 151 to 165 days for intervention and control groups, respectively. The mean difference was approximately 13 days in favor of the experimental group, indicating a low effect size. Our study aligns with these findings, particularly when the RTW-C starts rehabilitation care within two months of absence. Specifically, both experimental and control groups in our study had an average absence duration of 159–160 days. Our study provides nuanced
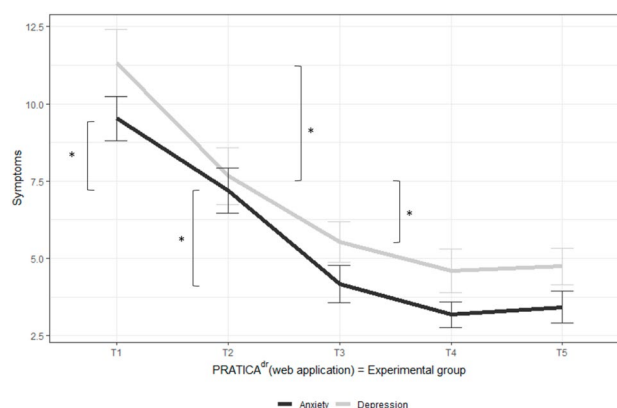

Fig. 4 Means of depressive symptoms (PHQ-9) and anxiety symptoms (GAD-7) according to mixed linear models

insights, demonstrating that when RTW-C intervention begins two months or more after the first day of absence, sick-leave duration is longer: 231 days for the experimental group and 312 days for the control group, with an 81-day advantage favoring the experimental group.

Nigatu et al. [4] suggested that even a 13-day difference in sick leave duration could have significant economic implications, leading to substantial savings in healthcare and employment costs at the population level. Tikka et al. [16] supported this idea, highlighting that a mere 5-day reduction in cumulative sick leave with RTW coordination could save €790 per person in Finland compared to usual care. In Finland and other Scandinavian countries, RTW-C is a governmental measure, with results indicating the benefit of short sick leave durations and recommending the use of RTW-C. Our study, incorporating RTW-C in both experimental and control groups, suggests that the addition of PRATICA^{dr}, a web platform guiding RTW with validated tools and systematic coordination with stakeholders, could result in significant cost savings.

Relapse rates in CMDs post-RTW have been highlighted as significant as RTW itself in the literature. Nielsen et al. [6] reported recurrence rates among returning employees ranging from 20 to 30%, irrespective of the specific CMD or evaluation timing. Consistent with these findings, our study found a 13.2% relapse rate ($n = 4$) within three months post-RTW, with no relapses observed in the experimental group. Economically, a CMD relapse after RTW incurs significant costs, with a total of 340,000 euros for four employees experiencing relapses, equivalent to $125,000 each in Quebec (or 85,000 euros). The use of PRATICA^{dr} appears to mitigate relapse risks, reinforcing sustainable RTW and cost-savings efforts.

Relapses were observed not only in employees receiving intervention after 2 months of sick leave, but also in those with more prompt RTW-C intervention (< 2

months). This suggests that PRATICA[dr] may effectively prevent relapses at any point in the RTW-C intervention. Additionally, the absence of relapses in the experimental group is noteworthy, along with the significant decrease in depressive and anxious symptoms over time. Despite initial moderate to severe symptoms, employees gradually RTW exhibited minimal or very mild symptoms, with stabilization observed during the 3-month follow-up. This stabilization may help mitigate the risk of relapses.

Clinical implications

The findings suggest that a web platform coupled with a RTW-C intervention decreases the duration of absence in employees with CMDs. Employing a low-intensity RTW intervention using PRATICA[dr], before two months of absence appears a suitable strategy. However, relapses could occur two months prior to the utilization of PRATICA[dr]. Therefore, initiating RTW-C intervention + PRATICA[dr] from the first month of absence might be even better. Participants who had recovered no longer felt the need to engage with an application such as PRATICA[dr] and incomplete questionnaires [12, 40]. For such cases, a short period after the onset of sick leave might suffice for spontaneous remission. One month or 30 days is suggested as an acceptable timeframe for the initial intervention, aligning with existing research [41].

This study also emphasizes the presence of a well-equipped RTW-C, especially for absences exceeding two months. PRATICA[dr] has the advantage of incorporating the necessary guidelines for the RTW process, along with tools to guide RTW-C intervention, including symptom assessment, workplace accommodations, and perceived obstacles to returning to work. Additionally, PRATICA[dr] outlines the roles and actions that each stakeholder should adopt in the form of practical guides. These tools and guidelines facilitate better support for employees by the RTW-C in the context of work rehabilitation. Furthermore, other stakeholders accessing PRATICA[dr] can real-time access relevant information due to centralized data, with medical information available exclusively to healthcare professionals.

Training on these elements becomes crucial for effective RTW-C support. Dol et al. [42], in their systematic review, conducted evidence synthesis (moderate to strong) regarding the best intervention components when there is an RTW-C, such as training RTWCs, developing an RTW plan, ergonomic worksite evaluation, communication between different stakeholders, and identifying barriers and facilitators to RTW. Dol et al. [42] also discussed the stressfulness of interactions with the RTW-C as a major contributing factor to positive RTW outcomes in their review. As for individuals with severe mental disorders, the working alliance inventory could be an interesting asset for sustainable RTW for people with CMDs followed by a RTW-C, assessing the dyadic interaction between the RTW-C and the employee, their mutual agreement on recovery goals, and sustainable RTW, along with tasks to achieve these objectives [43].

Limitations and futures avenues

Our study has certain limitations. It was conducted within two large organizations in a single country, potentially limiting the generalizability of findings in other countries' contexts. However, these organizations are considered representative of their respective sectors. For the constitution of the control groups, we either used a comparable public health organization to that of the experimental group or other departments within the same organization to prevent contamination risks. Despite these efforts, we could not fully control for biases such as the specific organizational culture of each workplace or potential biases related to the characteristics of employees in different organizations or departments who agree to take part in the study, although we matched individual in the control and experimental groups on several variables (i.e. sex, age, diagnosis, type of employment). Regarding organizational size, our conclusions may not be applicable to small organizations without human resource departments. More recently, Quebec's bill 59 highlighted the importance of revising health and safety committees for businesses with fewer than 20 employees. Therefore, recommending the involvement of an RTW-C for employees absent for more than one month using the PRATICA[dr] platform, aligns with these initiatives. While intervention structures may vary depending on national legislation and social security systems, common RTW coordination practices seems to transcend national boundaries [24].

The training duration recommended for RTW-C typically ranges from two to four days [13]. In our study, RTW-C training lasted only two days, focusing on PRATICA[dr] tool usage, and practical guideline content for stakeholders. Given the diverse professional backgrounds of RTW-C personnel, future implementations of PRATICA[dr] could benefit from supervision or co-development groups to enhance competencies and ensure comprehensive understanding of key issues [22]. Future research could also delve into identifying essential competencies for effective RTW coordination [44]. Also, in this study, we did not conduct a qualitative assessment of employee's needs at different stages of sick leave. However, the role of the RTW-C includes the assessment of clinical, functional and work-related dimensions, which are related to the employees' needs at different stages of sick leave. Finally, our study employed a quasi-experimental design with matched participants. Although this method

exhibits robustness, particularly when multiple variables are utilized in the pairing, it is strongly recommended for future studies to conduct a randomized controlled trial (RCT).

Conclusion

Common mental disorders (CMDs) have a significant impact on employees on sick leave, with relapse being common recurrences, carrying substantial public health and economic implications. The web platform PRATI-CA^{dr} utilized by a Return-to-Work Coordinator (RTW-C) outperformed the standard RTW-C intervention in two large organizations (public and private sectors). The experimental group exhibited positive and significant work outcomes, including an 85-day reduction in sick leave, irrespective of intervention onset, and an 81-day reduction when the intervention began after 2 months of sick leave. Furthermore, no relapses were observed in the experimental group, contrasting with a 13.2% relapse rate in the usual intervention group. These findings are supported by a reduction in clinical symptoms pre- and post-intervention in the experimental group. They underscore the significance of equipping an RTW-C with the addition of a platform that brings together key RTW stakeholders and utilizes validated tools and practical guides. Beyond study limitations, a randomized-controlled trial is warranted, alongside exhaustive assessments of RTW-C competencies.

Data availability
Data are available to interested researchers who obtained the principal investigator's (first author) consent for this study and approval from the research ethics board of the CIUSSS de l'Est-de-l'île-de-Montréal. As the consent form did not include a clause for open data sharing, we are unable to make the data publicly accessible. However, we are glad to accommodate data requests for collaborative secondary analyses when feasible.

Declarations

Ethics approval and consent to participate
The study follows the recommendations for research on human subjects as declared in the Helsinki Declaration. Ethical approval for this study was obtained from the research ethics board of the CIUSSS de l'Est-de-l'île-de-Montréal (#MP-12-2018-1155 and #2018 − 1052). All participants provided informed consent prior to participating in the study.

Consent for publication
Not applicable.

Competing interests
The authors declare no competing interests.

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