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Predictors of return to work and psychological well-being among women during/after long-term sick leave due to common mental disorders - a prospective cohort study based on the theory of planned behaviour

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Abstract

Common mental disorders are associated with long-term sick leave, especially among women. There is a lack of theory-based research regarding the impact of personal factors on return to work and psychological well-being. Therefore, the aim of this study was to examine whether return-to-work beliefs and perceived health were predictors of return to work and psychological well-being among women during or after long-term sick leave for common mental disorders, based on the Theory of Planned Behaviour. This was a prospective cohort study with a 1-year follow-up. At baseline, women ($n = 282$) had been on full- or part-time sick leave for common mental disorders for 2–24 months. Data were collected in October 2019–January 2020 and October 2020–January 2021 in Sweden. The Social Insurance Agency identified the women at baseline. The Return-To-Work Beliefs Questionnaire, EuroQol Visual Analogue Scale and General Health Questionnaire-12 were used. Multiple logistic and linear regression analyses were conducted. The women were divided into two groups: full-time sick leave or part-time sick leave at baseline. The results showed that stronger return-to-work intention significantly predicted return to work among women on full-time sick leave at baseline. No significant predictors of return to work were found among women on part-time sick leave at baseline. Psychological well-being was predicted by stronger social pressure to return to work (full-time group) and a more positive attitude toward returning to work and better perceived health (part-time group). We concluded that the Theory of Planned Behaviour can be useful for understanding return to work among women on full-time sick leave, and what underlies psychological well-being in both groups. However, return to work and psychological well-being were predicted by different factors, indicating that a multifactorial approach should be used in supporting women to return to work after long-term sick leave for common mental disorders.

1 | INTRODUCTION

Although several predictors for return to work (RTW) after long-term sick leave due to common mental disorders (CMDs) have been identified in recent decades (de Vries et al., 2018), the mechanisms behind RTW are still partly unknown. As CMDs are associated with sick leave in several countries (Spasova et al., 2016), and such sick leave is often longer than other sick leave (Knudsen et al., 2013), it is important to approach this in a new way. Long-term sick leave affects both the individual him–/herself, e.g., as regards health, psychological well-being and personal economy (Floderus et al., 2005), and society, e.g., through loss of valuable workforce and large economic costs (Swedish Social Insurance Agency, 2020). If the sick leave is prolonged, it can lead to disability pensioning, i.e., that the individual is no longer part of the labour market (Mather et al., 2019). It is therefore important to support individuals to RTW after long-term sick leave due to CMDs. There is a need for more research about the impact of personal factors, such as beliefs and perceptions, on RTW (de Wit et al., 2018), particularly theory-based research (Nigatu et al., 2017). Furthermore, for RTW to be successful, it is important to have psychological well-being as an outcome measure as well.

Women are most often affected by sick leave due to CMDs (Steel et al., 2014) and the knowledge regarding RTW in this group is even sparser. Research has shown that factors of importance for RTW might differ between the genders (Holmgren et al., 2013). This reasoning is strengthened further by the facts that women more often are employed in certain professions, more often have the main responsibility for the household (Bisello & Mascherini, 2017), are affected differently by long-term sick leave (Floderus et al., 2005), and are subject to a different cultural norm in society (Helman, 2007). Studies have shown that the female gender is a barrier to RTW (de Vries et al., 2018).

Returning to work has been described as a process, starting on the first day of sick leave and extending to the (gradual) RTW and, subsequently, maintenance (Franche & Krause, 2002), making outcome measures vary widely (de Vries et al., 2018; Steenstra et al., 2012). Examples include time to when sick leave benefits stop, full RTW for a number of weeks and being at work after a year (de Vries et al., 2018). If participants are on part-time sick leave at baseline, this might affect the outcome by encompassing multiple behaviours (continuing to work/staying at work vs. returning to work) (Dunstan et al., 2013; Hedlund et al., 2021). However, this has rarely been taken into account in previous studies. Several predictors of RTW after sick leave due to CMDs have been identified from longitudinal studies, e.g., employer support (Mikkelsen & Rosholm, 2018), symptom burden, perceived health (de Vries et al., 2018), sleep quality (Sonnenschein et al., 2008), comorbidities, previous sick leave, socioeconomic status, age, work ability (Gragnano et al., 2018) and RTW expectations (de Vries et al., 2018). There are indications

What is known about this topic?

- Return to work after long-term sick leave due to common mental disorders is a complex process encompassing health, private life and working life.
- There is a lack of evidence regarding the role of return-to-work beliefs and perceived health in return to work and psychological well-being among women during or after long-term sick leave due to common mental disorders.
- Theory-based research in the area of return to work and common mental disorders is requested.

What does this paper add?

- The Theory of Planned Behaviour can serve to predict return to work in terms of 'beginning to work' but not in terms of 'increasing the percentage of work', among women during or after long-term sick leave due to common mental disorders.
- Return to work and psychological well-being have different predictors, indicating that multiple aspects should be taken into consideration to promote successful return to work among women after long-term sick leave due to common mental disorders.
- Women's health in the return-to-work process is an aspect that should be investigated more deeply in future research.

that physical activity might have a role in RTW among individuals after sick leave for CMDs (de Vries et al., 2018) or for other reasons (Skagseth et al., 2020). Generally, the number of children a person has appears to impact on RTW (Kvam et al., 2014). However, de Wit et al. (de Wit et al., 2018) concluded in their systematic review that there was a lack of evidence regarding the impact of personal factors such as RTW beliefs after sick leave for a number of health problems (including CMDs). This was because the existing studies showed inconsistent results, for example regarding fear-avoidance beliefs, catastrophizing and motivation. A reason for this might be inconsistencies in measures used, e.g., that different aspects of motivation were targeted in different studies (de Wit et al., 2018). Furthermore, theory-based research is requested in the area (Nigatu et al., 2017). In a previous cross-sectional study (Hedlund et al., 2021), based on the Theory of Planned Behaviour (TPB), our research group found that RTW beliefs were positively associated with RTW intention among women on long-term sick leave for CMDs. The beliefs were attitude toward RTW, social pressure regarding RTW and perceived

behavioural control over RTW, where attitude toward RTW was the strongest determinant of RTW intention. We aimed to take this a step further by investigating if these RTW beliefs could also predict *actual* RTW among women on long-term sick leave due to CMDs.

The TPB is a commonly used theory for explaining and predicting a behaviour based on beliefs regarding that specific behaviour (Ajzen, 1991, 2020) (Figure 1). Belief is defined as an individual's own estimated probability of something happening (Fishbein & Ajzen, 1975). The basic idea is that a behaviour results from the intention to perform that specific behaviour. Intention, in turn, is determined by attitude, subjective norms (social pressure) and perceived behavioural control. Attitude is the individual's evaluation of the positive and negative consequences of the behaviour. A subjective norm is the individual's perception of social pressure from other people to perform the behaviour. The third determinant, perceived behavioural control, concerns beliefs regarding the barriers to or facilitators of the behaviour (Ajzen, 1991). Though attitude, subjective norms and perceived behaviour control are seen as determinants of intentions, all four factors are often used as direct predictors of behaviour (Brouwer et al., 2009; Jalilian et al., 2020; Ying Cheng et al., 2019). The TPB has been used successfully to explain and predict RTW among individuals on sick leave in general (Brouwer et al., 2009), individuals with musculoskeletal disorders (Dunstan et al., 2013) and individuals with CMDs as a subgroup in a larger study including other health conditions (Brouwer et al., 2009). Ajzen, who developed the TPB, also suggested inclusion of additional variables that are independent of the original predictors but still likely to affect the behaviour (Ajzen, 2020). This would strengthen the explanatory power of the TPB model. Because perceived health is a well-known predictor of RTW among individuals (both genders) on sick leave due to CMDs (de Vries et al., 2018), this was used as an additional predictor in the TPB model in the current study.

However, RTW is not the only important outcome measure. A systematic review has concluded that more focus should be placed on employees' psychological well-being after RTW, for instance through identifying predictors thereof (Figueredo et al., 2020). Carol

Ryff (Ryff, 2013), known for her studies on psychological well-being, has stated that the trend of using psychological well-being only as a predictor should be turned around; instead, well-being should be used as an outcome, especially in the recovery process for individuals with CMDs (Ryff, 2013). High psychological well-being is beneficial for the individual him−/herself, his/her employer and society as a whole (Figueredo et al., 2020), because it signifies an absence of CMD symptoms (Sconfienza, 1998) and an increase in positive feelings, such as purpose in life, personal growth, positive relations and self-acceptance (Ryff, 2013). It is also believed to increase the chance of RTW being sustainable and successful (e.g., better job performance) (Figueredo et al., 2020). However, to date, no predictors of psychological well-being have been identified among women on long-term sick leave for CMDs. Studies of other samples in other contexts have shown that social support (Santini et al., 2020), resilience (Mayordomo et al., 2016), self-efficacy (Xie et al., 2020), physical function and optimism (Avis et al., 2021) are predictors of psychological well-being. A previous cross-sectional study conducted by the authors of this study revealed a moderate correlation between perceived health and psychological well-being among women on long-term sick leave due to CMDs (Hedlund et al., 2021). However, it is an open question whether RTW beliefs and perceived health are predictors of psychological well-being over time.

To manage the challenges related to RTW among women on long-term sick leave due to CMDs, it is important to strengthen the knowledge about personal factors, preferably based on theory. Having both RTW and psychological well-being as outcome measures, and separating 'beginning to work' from 'increasing the percentage of work', enables a more comprehensive understanding of the importance of RTW beliefs for successful RTW among women during or after long-term sick leave due to CMDs. We hypothesized, based on the TPB, that the stronger the RTW intention, the more positive the attitude toward RTW, the stronger the social pressure to RTW, the higher the perceived control over RTW and the better the perceived health at baseline, the higher the probability of having RTW (having begun working or increased
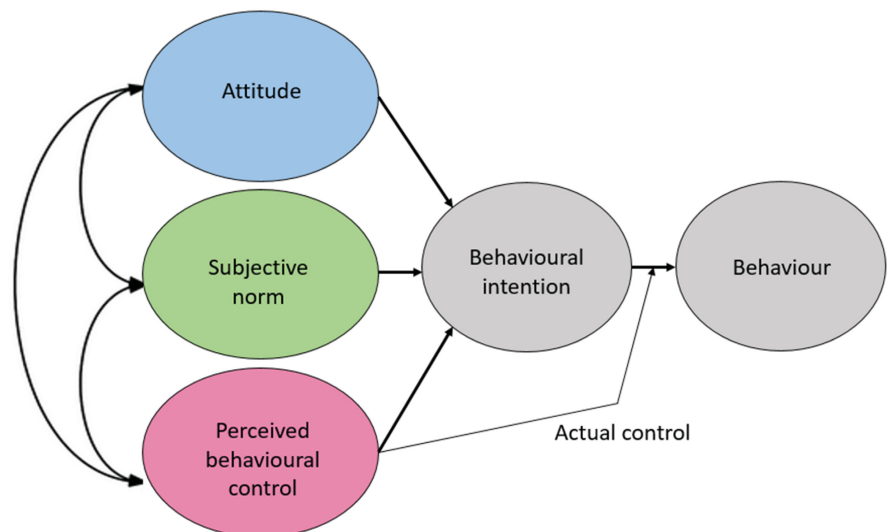
FIGURE 1 The theory of planned behaviour (TPB), inspired by Icek Ajzen (1991).

Baseline   1-year follow up
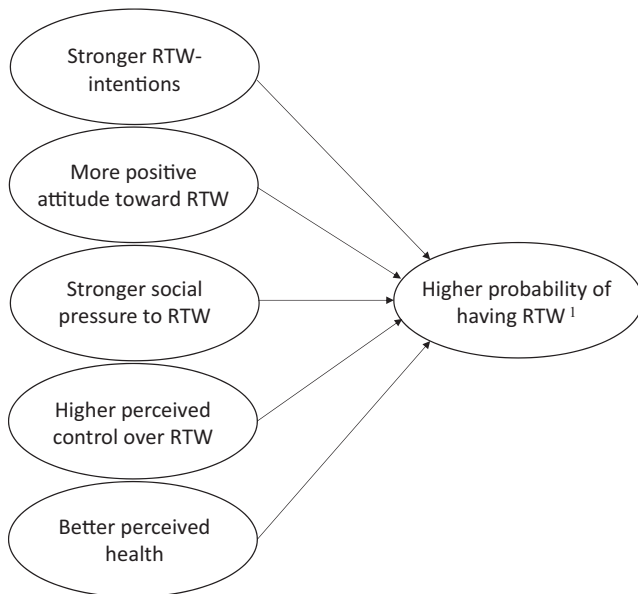
FIGURE 2 Illustration of hypothesis 1. RTW = return to work. 1. Having begun working or increased the percentage of work.

the percentage of work) 1 year later would be (I) (Figure 2). We also hypothesized that RTW intention would be the strongest predictor of RTW (having begun working or increased the percentage of work), followed by attitude toward RTW (II). Further, we wanted to investigate if the intention to RTW, attitude toward RTW, social pressure to RTW, perceived control over RTW and perceived health at baseline were able to predict psychological well-being 1 year later.

2 | MATERIALS & METHODS

2.1 | Study design

This cohort study had a prospective design with a quantitative approach. The STROBE checklist (STROBE, 2021) for cohort studies was used for reporting the study.

2.2 | Participants and setting

Baseline data were collected from two regions in central Sweden from October 2019 to January 2020, and the longitudinal data 1 year later, from October 2020 to January 2021. To be eligible for the study, the women had to fulfil the following criteria: a physician's diagnosis within F32–F33, F35–F39 (mood disorders) and/or F40–F48 (neurotic, stress-related and somatoform syndromes), sick leave duration >2 months and <2 years (partial or full), age > 18 years and understanding written Swedish. Exclusion criteria were unemployment, severe mental illness such as schizophrenia, full-time parental

leave, full-time studies or retirement. The sample size was determined using the recommendations of Polit and Beck regarding the required sample size for an effect size of 0.35 and a power of 0.8 (Polit & Beck, 2016). We expected a response rate of around 30% based on previous research in similar samples.

2.3 | Data collection

The women were identified and invited by the Social Insurance Agency, based on the eligibility criteria. The invitation included an information letter, consent forms, a response envelope and questionnaires. At baseline, 1196 women were invited, of whom 371 responded (response rate 31%). Of those, 89 were excluded based on the exclusion criteria. Thus, 282 women were included at baseline. The women were asked to send in their name and home address, so that the researchers could send the follow-up questionnaires 1 year later. At the 1-year follow up, questionnaires were sent to the women who had agreed to participate in the follow-up ($n = 275$). The women could choose to respond to the researchers electronically or on paper. Of the 275 women, 184 responded (response rate 66.9%). However, 22 were excluded because they were unemployed, on full-time parental leave, full-time students or had retired at follow-up. Hence, the 1-year follow-up comprised 162 women. Demographic questions and questions on current work situation were included at both baseline and follow-up, covering age, diagnosis, profession, extent of sick leave (0%, 25%, 50%, 75% or 100%), comorbidities (no/yes), perceived support from the employer to RTW (no/yes), hours of sleep per night, number of children at home and days of physical exercise per week (0, 1–3, 4–5, 6–7), economic situation (1–5, higher values meant worsened situation), and education level (1–4, higher values meant higher level). Two questions about the perceived influence of the pandemic on RTW were included in the questionnaire at the 1-year follow-up: 'Do you believe that the coronavirus pandemic has affected your RTW?' and 'Do you believe that the coronavirus pandemic has affected your current well-being?' (no/yes and free-text field).

2.4 | Return to work (outcome)

Return to work was measured using the question 'Enter your percentage of work' and was defined in two different ways, depending on whether a woman was on full- or part-time sick leave at baseline. If she was on full-time sick leave at baseline, RTW was defined as having begun working. If she worked part-time at baseline, RTW was defined as having increased the percentage of work.

2.5 | Psychological well-being (outcome)

The General Health Questionnaire-12 (GHQ-12) is a validated and commonly used instrument for measuring psychological well-being,

first developed for detecting non-psychotic mental disorders (Goldberg, 1972). It consists of 12 items that are scored on Likert scales 0–3, where a higher total score corresponds to more distress, i.e., lower psychological well-being. Six of the items are positively worded and six negatively. Before analysis, the positively worded items were reversed, so that a higher score corresponded to a higher level of distress for all 12 items. The cut-off point is often set to 12 (Goldberg et al., 1998), meaning that a total score ≥ 12 is assessed as reduced well-being. Research has shown that the GHQ-12 has very good internal consistency and is most probably unidimensional (Romppel et al., 2013). It has shown good test–retest reliability and seems to be sensitive to changes (Beaudreuil et al., 2021). Cronbach's alpha in the current sample, at the 1-year follow-up, was 0.92.

2.6 | Return-to-work beliefs (predictor)

Return-to-work beliefs were measured using the RTW Beliefs Questionnaire, developed and psychometrically tested by the authors and used in a previous study (Hedlund et al., 2021). This questionnaire is based on the TPB and contains 60 items with responses given on a seven-point scale ranging from 1 to 7 or from −3 to +3. It encompasses seven factors, but only four were included in the current study: RTW intention (three items), attitude (four items), subjective norms (three items) and perceived behavioural control (four items). All items were worded to suit women on full-time or part-time sick leave, respectively, i.e., women who were on full-time sick leave focused on 'RTW' and women who worked to some extent focused on 'staying at work' when responding. Because of low item-total correlation, one item in the perceived behavioural control scale was left out in the analyses. Cronbach's alpha for the subscales at baseline were 0.91 (intention), 0.84 (attitude), 0.37 (subjective norms) and 0.64 (perceived behavioural control).

2.7 | Perceived health (predictor)

The EuroQol-Visual Analogue Scale (EQ-VAS) was included in the current study as a measure of perceived health status. This instrument is a single-item vertical scale from 0–100, where 0 is the worst imaginable health status and 100 is the best imaginable. The instrument has shown good test–retest reliability (Zhou et al., 2021). The EQ-VAS is a part of EQ-5D (EuroQol, 2020), which measures various aspects of health. The EQ-5D has shown acceptable predictive and concurrent validity (Lamu et al., 2021).

2.8 | Potential confounders

Potential confounders were determined by comparing characteristics between those who had RTW and those who did not. Characteristics were chosen from the literature (de Vries et al., 2018;

Gragnano et al., 2018; Mikkelsen & Rosholm, 2018; Sonnenschein et al., 2008) before reviewing the data. Age, number of children at home, education level, economic situation, days of physical exercise per week and number of hours of sleep per night was compared using Mann–Whitney U tests and previous sick leave, comorbidities, marital status, and employers actions were compared using chi-squared tests. No significant differences were found among women who were on part-time sick leave at baseline, and hence, no potential confounders were included. For women who were on full-time sick leave at baseline, employer's actions ($p = 0.038$) and comorbidity ($p = 0.015$) showed a significant difference and were therefore chosen as potential confounders.

2.9 | Non-response analyses

One hundred and twenty women (42.5%) from baseline were not included in the 1-year follow-up. The women did not differ in age from those who were included in the 1-year follow-up (age range 22–66 years, M = 45.3). Mann–Whitney U tests and chi-squared tests were used to compare characteristics between the women who were included in the 1-year follow-up and those who were not. The compared characteristics were age, number of children at home, education level, days of exercise per week, economic situation, hours of sleep per night, previous sick leave, comorbidities, marital status, employer's actions, perceived health, psychological well-being, RTW intention, attitude, subjective norms and perceived behavioural control. The non-response analyses showed that women who were included in the 1-year follow-up had higher education levels ($p = 0.001$), slept more hours per night ($p = 0.023$) and had stronger RTW intention ($p = 0.001$) at baseline than the women who were not included in the follow-up.

2.10 | Statistical analyses

The analyses were conducted in IBM SPSS Statistics 27. Before the analyses, the women were divided into two groups, those on full-time sick leave at baseline and those on part-time sick leave at baseline. Participant characteristics were calculated with descriptive statistics such as frequencies and mean. Baseline characteristics were compared using Mann–Whitney U tests and chi-squared tests. Multiple logistic regression analyses were performed to identify predictors of RTW (dichotomous no/yes). Standard multiple linear regression analyses were performed to identify predictors of psychological well-being (continuous variable). The RTW beliefs intention, attitude, subjective norms and perceived behavioural control and perceived health at baseline were entered as independent variables in all regression analyses. Assumptions were generally met for the regression analyses. The sample size was relatively small, but acceptable (Austin & Steyerberg, 2015; Vittinghoff & McCulloch, 2007). Correlations (rho and phi) between the independent variables ranged from −25 to 0.57 and the variance

inflation factors were ≤1.69, indicating no presence of multicollinearity (Kim, 2019). In the multiple linear regression analyses, the normal P–P Plots of Regression Standardised Residuals and Scatterplot showed a linear pattern. Missing data were handled by choosing 'exclude cases pairwise'. The level of significance was set to $p < 0.05$. The number of participants with missing data for each scale varied between one (subjective norms and perceived health) and four (psychological well-being).

2.11 | Ethics

The study was approved by the Swedish Ethical Review Authority (Reg.no. 2019–04043).

3 | RESULTS

3.1 | Participants

A total of 282 women were included at baseline and 162 of them responded to the 1-year follow-up. One hundred and eight women had ended their sick leave and 38 were still on sick leave, at least to some extent. Ten women had ended their sick leave during the year, but then relapsed and were on sick leave again at follow-up. The reported reasons for relapse were CMDs, eating disorders and substance abuse. Six women did not report their sick leave duration. Of the 162 women who responded to the 1-year follow-up, 50 were on full-time sick leave at baseline and 112 were on part-time sick leave at baseline. Fifty percent ($n = 25$) of the women who were on full-time sick leave at baseline had RTW, i.e., begun working to some extent, at the 1-year follow-up. Most of them ($n = 21$) worked 75%–100%. Of the women who were on part-time sick leave at baseline, 80.4% ($n = 90$) had RTW, i.e., increased their percentage of work, at the 1-year follow-up. Most of them ($n = 78$) had increased their percentage of work by between 25–50% and worked 75–100% at follow-up ($n = 85$). The women on full-time sick leave at baseline were 23–63 years old (M = 44.1) and the women on part-time sick leave at baseline were 22–64 years old (M = 45.5). Participant characteristics at baseline are presented in Table 1. Regarding women on full-time sick leave at baseline, those who had RTW reported more support from their employer ($p = 0.038$) and more comorbidities ($p = 0.015$) than those who had not RTW. They also had significantly stronger RTW intention, more positive attitudes and higher perceived control and psychological well-being at baseline compared with the 25 women who had not RTW, see Table 2.

3.2 | Predictors of return to work

Our null hypothesis (I) was partly rejected. Among women on full-time sick leave at baseline, the unadjusted analysis showed RTW intention and perceived behavioural control over RTW to be significant predictors of having begun working 1 year later. However, social pressure to RTW and perceived health were not. As hypothesized (II), RTW intention was the strongest predictor of having begun working after 1 year. However, higher perceived behavioural control over RTW was the second strongest predictor, which was not in line with our hypothesis that attitude would play this role. In the adjusted analysis, RTW intention was the only remaining significant predictor of having begun working. This means that stronger RTW intention in women on full-time sick leave increased the probability of having begun working 1 year later. Both the unadjusted and adjusted model were significant. The adjusted model explained 63.6% (Cox and Snell R square) to 84.7% (Nagelkerke R squared) of the variance in RTW. For full results of the multiple logistic regression analyses of women on full-time sick leave at baseline, see Table 3.

Regarding women on part-time sick leave at baseline, no significant predictors of RTW (i.e., increasing the percentage of work) were identified, and this model was not significant, see Table 4. Hence, the null hypotheses (I–II) could not be rejected for this group.

3.3 | Predictors of psychological well-being

Multiple linear regression analyses showed that significant predictors of psychological well-being at follow-up among women who were on full-time sick leave at baseline were RTW intention and social pressure to RTW. However, in the adjusted analysis, only social pressure (subjective norms) to RTW significantly predicted psychological well-being. This means that stronger social pressure to RTW at baseline predicted more distress 1 year later, i.e., lower psychological well-being. Both models were significant (Table 5).

As regards women on part-time sick leave at baseline, attitude toward RTW and perceived health were significant predictors of psychological well-being This means that women who had a more positive attitude toward RTW and better perceived health at baseline had higher psychological well-being 1 year later. The model was significant and explained 29.3% of the variance in psychological well-being (Table 6).

4 | DISCUSSION

The results showed that the null hypotheses were only partly correct, as RTW intention was a significant predictor, and the strongest one, of RTW among women on full-time sick leave at baseline. However, the other hypothesized predictors of RTW, i.e., attitude toward RTW, social pressure to RTW, perceived control over RTW and perceived health did not significantly predict RTW. For women on part-time sick leave, no significant predictors of RTW were identified, i.e., the null hypotheses could not be rejected. Significant predictors for psychological well-being were identified for both women on full-time sick leave at baseline (i.e., social pressure to RTW at baseline) and women on part-time sick leave (i.e., attitude toward RTW and perceived health at baseline).

TABLE 1 Baseline characteristics of the women

	Women on full-time sick leave at baseline (n = 50)		Women on part-time sick leave at baseline (n = 112)	
	RTW (n = 25)	Not RTW (n = 25)	RTW (n = 90)	Not RTW (n = 22)
Variables	Frequency (%)	Frequency (%)	Frequency (%)	Frequency (%)
Children at home[a]				
Have ≥1 children living at home	14 (56.0)	9 (36.0)	48 (53.3)	10 (45.5)
Have no children at home	11 (44.0)	16 (64.0)	40 (44.4)	12 (54.5)
Missing	0 (0.0)	0 (0.0)	2 (2.2)	0 (0.0)
Marital status				
Living with partner/parents	20 (80.0)	18 (72.0)	65 (72.2)	15 (68.2)
Living alone with/without children	5 (20.0)	7 (28.0)	25 (27.8)	7 (31.8)
Missing	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Diagnosis				
Stress-related disorders	9 (36.0)	9 (36.0)	48 (53.3)	7 (31.2)
Depression	3 (12.0)	7 (28.0)	16 (17.8)	8 (36.4)
Anxiety	1 (4.0)	0 (0.0)	1 (1.1)	0 (0.0)
A combination of CMDs	8 (32.0)	8 (32.0)	23 (25.6)	7 (31.8)
Other[b]	2 (8.0)	1 (4.0)	1 (1.1)	0 (0.0)
Missing	0 (0.0)	0 (0.0)	1 (1.1)	0 (0.0)
Profession				
Health care, schools and social service	12 (48.0)	14 (56.0)	41 (45.6)	14 (63.6)
Administrative work	6 (20.0)	2 (8.0)	16 (17.8)	0 (0.0)
Sales and service	2 (8.0)	4 (16.0)	11 (12.2)	4 (18.2)
Leading position or self-employed	0 (0.0)	4 (16.0)	10 (11.1)	1 (4.5)
Industry workers and engineers	3 (12.0)	0 (0.0)	5 (5.6)	1 (4.5)
Missing	2 (8.0)	1 (4.0)	7 (7.8)	2 (9.1)
Comorbidities				
Yes[c]	**12 (48.0)**	**4 (16.0)**	38 (42.2)	8 (36.4)
No	**13 (52.0)**	**21 (84.0)**	51 (56.7)	14 (63.6)
Missing	0 (0.0)	0 (0.0)	1 (1.1)	0 (0.0)
Education[d]				
Elementary	6 (24.0)	1 (4.0)	5 (5.6)	2 (9.1)
Upper secondary	9 (36.0)	14 (56.0)	30 (33.3)	6 (27.3)
Post-upper secondary	0 (0.0)	1 (4.0)	2 (2.2)	0 (0.0)
University	10 (40.0)	9 (36.0)	53 (58.9)	14 (63.6)
Missing	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Employer had taken actions to facilitate the woman's RTW				
Yes[e]	**11 (44.0)**	**20 (80.0)**	73 (81.1)	17 (77.3)
No	**14 (56.0)**	**4 (16.0)**	17 (18.9)	5 (22.7)
Missing	0 (0.0)	1 (4.0)	0 (0.0)	0 (0.0)
Previous episodes of sick leave due to CMDs				
Yes	17 (68.0)	15 (60.0)	48 (53.3)	16 (72.7)
No	8 (32.0)	10 (40.0)	42 (46.7)	6 (27.3)
Missing	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)

(Continues)

TABLE 1 (Continued)

Variables	Women on full-time sick leave at baseline (n = 50)		Women on part-time sick leave at baseline (n = 112)	
	RTW (n = 25)	Not RTW (n = 25)	RTW (n = 90)	Not RTW (n = 22)
	Frequency (%)	Frequency (%)	Frequency (%)	Frequency (%)
Economic situation[f]				
Very good/good	5 (20.0)	7 (28.0)	27 (30.0)	5 (22.7)
Acceptable	6 (24.0)	9 (36.0)	41 (45.6)	12 (54.5)
Unsatisfactory/very unsatisfactory	14 (56.0)	9 (36.0)	22 (24.4)	5 (22.7)
Days of physical exercise (> 30 min) per week[g]				
0	6 (24.0)	4 (16.0)	9 (10.1)	3 (13.6)
1–3	8 (32.0)	12 (48.0)	55 (61.1)	14 (63.6)
4–5	6 (24.0)	3 (12.0)	11 (12.2)	2 (9.1)
6–7	5 (20.0)	5 (20.0)	14 (15.6)	3 (13.6)
Missing	0 (0.0)	1 (4.0)	1 (1.1)	0 (0.0)
Hours of sleep/night[h]				
<7	9 (36.0)	11 (44.0)	41 (45.6)	13 (59.1)
≥7	16 (64.0)	14 (56.0)	47 (52.2)	9 (40.9)
Missing	0 (0.0)	0 (0.0)	2 (2.2)	0 (0.0)
Covid-19 pandemic affected RTW				
Yes	15 (60.0)	11 (44.0)	26 (28.9)	9 (40.9)
No	9 (36.0)	13 (52.0)	59 (65.6)	13 (59.1)
Missing	1 (4.0)	1 (4.0)	5 (5.6)	0 (0.0)
Covid-19 pandemic affected well-being				
Yes	20 (80.0)	14 (56.0)	54 (60.0)	15 (68.2)
No	4 (16.0)	10 (40.0)	31 (34.4)	7 (31.8)
Missing	1 (4.0)	1 (4.0)	5 (5.6)	0 (0.0)

Note: Bold values represent significant differences with Chi-Squared test. Comorbidities: $p = 0.015$, Employers actions:. $p = 0.038$.

[a]Used as a continuous scale in the analyses.

[b]E.g., attention deficit hyperactivity disorder.

[c]E.g., musculoskeletal disorders or diabetes.

[d]Measured on a 4-point scale where higher values means higher education level.

[e]Most often reduced demands and individual adaptation of the work situation.

[f]Measured on a 5-point scale where higher values means worsened economic situation.

[g]Measured on a 4-point scale where higher values means more exercise.

[h]Used as a continuous scale in the analyses.

Among women on full-time sick leave at baseline, RTW intention significantly predicted RTW. This is in line with the TPB, which assumes that a behaviour is based on intention with regard to that behaviour (Ajzen, 1991). This means that intention to RTW (i.e., expectation, willingness and intention) should be considered by RTW stakeholders such as health care and employers. Women on full-time sick leave, with a low intention to RTW, might need targeted support to end their sick leave. At present, it is unclear what kind of support this could be. Some of the excluded women in the present study had begun full-time studies instead of working, which might have been the right path for them. Previous research has shown that sick leave can offer women an opportunity to discover their 'true self' and change direction in life (Nielsen et al., 2013). Hence, the support does not always have to be to increase the RTW intention, but it can also be to support a woman to find another goal for which she has a stronger intention. Surprisingly, more women with comorbidities had RTW compared to women without comorbidities (Table 1). Because the response rate was relatively low, this might be due to selection bias. For example, women with comorbidities may be the ones that already have strategies to manage limitations at work caused by health problems. However, comorbidities were not significant predictors of RTW in the regression analyses.

For women on part-time sick leave at baseline, an 'intention-behaviour gap' was found, meaning that RTW intention did not

TABLE 2 Comparisons of variables at baseline between women who had RTW and not RTW[a]

Variables	Women on full-time sick leave at baseline (n = 50)			Women on part-time sick leave at baseline (n = 112)		
	RTW (n = 25) Md	Not RTW (n = 25) Md	P[e]	RTW (n = 90) Md	Not RTW (n = 22) Md	P[e]
Intention[b] to RTW	**6.7**	**2.7**	**<0.001**	7.0	7.0	0.408
Attitude[b]	**4.4**	**3.5**	**0.017**	5.0	4.5	0.065
Subjective norm[b]	5.0	5.0	0.441	5.0	5.5	0.096
Perceived behavioural control[b]	**4.0**	**2.3**	**<0.001**	4.7	3.8	0.118
Psychological well-being[c]	**17.5**	**25.0**	**0.010**	16.0	19.0	0.052
Perceived health[d]	45.0	30.0	0.123	55.0	50.0	0.517

Note: Bold values represent significant values.

[a]Return to work. If the woman was on full-time sick leave at baseline, RTW was defined as having begun working. If the woman worked part-time at baseline, RTW was defined as having increased the percentage of work.

[b]Range 1–7. The higher the value, the more positive the attitude/stronger the social pressure/higher the perceived behavioural control.

[c]Range 0–36. The higher the value, the more reduced psychological well-being. Cut-off point = 12.

[d]Range 0–100. 0 =worst imaginable health state, 100 = best imaginable health state.

[e]Mann–Whitney U tests.

TABLE 3 Multiple logistic regression predicting return to work[a] among the women who were on full-time sick leave at baseline (n =45)

Variables	Unadjusted model			Adjusted model		
	B	p	OR (95% CI)	B	p	OR (95% CI)
Intention[b]	**1.133**	**0.005**	**3.106 (1.402–6.881)**	**1.999**	**0.041**	**7.379 (1.080–50.412)**
Attitude[b]	−0.259	0.537	0.772 (0.339–1.758)	−0.448	0.457	0.639 (0.196–2.082)
Subjective norm[b]	0.251	0.618	1.285 (0.479–3.448)	0.540	0.602	1.716 (0.225–13.081)
Perceived behavioural control[b]	**1.231**	**0.046**	**3.423 (1.019–11.496)**	2.286	0.135	9.831 (0.489–197.638)
Perceived health[c]	−0.082	0.07	0.921 (0.843–1.007)	−0.245	0.089	0.783 (0.590–1.038)
Comorbidities[d]				−6.043	0.054	0.002 (0.000–1.119)
Employers actions[e]				1.738	0.260	5.688 (0.276–117.009)
Model	$\chi^2(5,45) = 32.82, p<0.001$			$\chi^2(7,45) = 45.42, p<0.001$		
Cox and Snell R square	**0.510**			**0.636**		
Nagelkerke R squared	**0.681**			**0.847**		

Note: Bold numbers represent significant values.

Abbreviation: OR, Odds Ratio.

[a]Data coding: not return to work = 0, return to work = 1, i.e., higher OR implies higher odds of return to work.

[b]The higher the value, the more positive the attitude/stronger the social pressure/higher the perceived behavioural control.

[c]The higher the value, the better the perceived health.

[d]Data coding: no comorbidities = 0, comorbidities = 1.

[e]Data coding: employer has not taken actions to facilitate return to work = 0, employer has taken actions to facilitate return to work = 1.

significantly predict RTW. According to Ajzen, this type of finding might be due to a 'lack of compatibility' (Ajzen, 2020), which occurs when items in a survey cover a broader phenomenon than the actual outcome. In the previous study, the women on part-time sick leave were asked about 'staying at work', while the outcome was 'increased the percentage of work'. It is reasonable to assume that this discrepancy might have affected the relation between RTW intention and actual RTW. Furthermore, a 'change of mind' (Ajzen, 2020) is worth considering. This refers to the fact that intentions can change over time, and that the women may have acted on their most recent intention at follow-up, which was not necessarily the same intention that they reported in the questionnaire 1 year earlier. It is worth considering if the COVID-19 pandemic, which began soon after the first data collection, played a part in this. Furthermore, increasing work is a different behaviour than starting to working (Franche & Krause, 2002). The TPB may be more appropriate for the latter, which would be relevant to consider in future research.

TABLE 4 Multiple logistic regression predicting return to work[a] among the women who were on part-time sick leave at baseline ($n = 110$)

Variables	Unadjusted model		
	B	p	OR (95% CI)
Intention[b]	0.239	0.381	1.270 (0.744–2.169)
Attitude[b]	0.087	0.752	1.091 (0.635–1.876)
Subjective norm[b]	−0.463	0.083	0.629 (0.373–1.062)
Perceived behavioural control[b]	0.267	0.258	1.306 (0.822–2.073)
Perceived health[c]	0.004	0.784	1.004 (0.974–1.036)
Model	$\chi^2(5110) = 7.11, p < 0.213$		
Cox and Snell R^2	0.063		
Nagelkerke R^2	0.100		

Abbreviation: OR, Odds Ratio.

[a]Data coding: not return to work = 0, return to work = 1, i.e., higher OR implies higher odds of return to work. For this group, return to work was defined as having increased the percentage of work.

[b]The higher the value, the more positive the attitude/stronger the social pressure/higher the perceived behavioural control.

[c]The higher the value, the better the perceived health.

TABLE 5 Multiple linear regression predicting psychological well-being[a] among the women who were on full-time sick leave at baseline ($n = 46$)

Variables	Unadjusted model		Adjusted model	
	β	p	β	p
Intention[b]	**−0.32**	**0.031**	−0.24	0.107
Attitude[b]	−0.12	0.446	−0.13	0.394
Subjective norm[b]	**0.33**	**0.010**	**0.31**	**0.011**
Perceived behavioural control[b]	−0.31	0.059	−0.23	0.152
Perceived health[c]	−0.09	0.513	−0.06	0.649
Comorbidities[d]			0.15	0.218
Employers actions[e]			−0.22	0.105
Model	R^2 adj. $= 0.408, F(5, 40) = 7.20, p < 0.001$		R^2 adj. $= 0.447, F(7, 38) = 6.20, p < 0.001$	

Note: Bold numbers represent significant values.

[a]The higher the value, the more reduced psychological well-being.

[b]The higher the value, the more positive the attitude/stronger the social pressure/higher the perceived behavioural control.

[c]The higher the value, the better perceived health.

[d]Data coding: no comorbidities = 0, comorbidities = 1.

[e]Data coding: employer has not taken actions to facilitate return to work = 0, employer has taken actions to facilitate return to work = 1.

Perceived health could not significantly predict RTW, neither for women on full-time sick leave at baseline nor for women on part-time sick leave at baseline. This goes against previous studies, which have shown that perceived health is a robust predictor of RTW among those on sick leave in general (de Wit et al., 2018) and those on sick leave due to CMDs (de Vries et al., 2018; Gragnano et al., 2018). However, a cross-sectional study (Hedlund et al., 2021) showed similar results as the present study, i.e., that perceived health was not significantly associated with RTW intention among women on long-term sick leave due to CMDs. Hence, the role of health in relation to RTW seems to be complex in this group, and further research to deepen this knowledge, for example qualitative explorations, is needed. Perhaps notions of future health (asked about in the RTW Beliefs Questionnaire) outcompete the experience of present health?

TABLE 6 Multiple linear regression predicting psychological well-being[a]. Among women who were on part-time sick leave at baseline (n = 109)

Unadjusted model		
Variables	**β**	**p**
Intention[b]	0.11	0.255
Attitude[b]	**−0.34**	**0.002**
Subjective norm[b]	0.10	0.245
Perceived behavioural control[b]	−0.14	0.127
Perceived health[c]	**−0.32**	**0.000**
Model	R^2 adj. = 0.293, $F(5, 103)$ = 9.96, $p < 0.001$	

Note: Bold numbers represent significant values.
[a]The higher the value, the more reduced psychological well-being.
[b]The higher the value, the more positive the attitude/stronger the social pressure/higher the perceived behavioural control.
[c]The higher the value, the better perceived health.

The predictors of RTW were not the same as those of psychological well-being, indicating that multiple aspects should be targeted if the aim is to promote both RTW and psychological well-being among women after long-term sick leave due to CMDs. Previous research has shown similar results, i.e., that what entails symptom relief is not necessarily what promotes RTW (Perski et al., 2017). It is important to remember that this is only an *indication*, as this study does not reveal if there are different predictors of psychological well-being among women who have RTW and women who have not. Among women on full-time sick leave at baseline, higher social pressure (subjective norms) to RTW predicted lower psychological well-being 1 year later. The association between social pressure and psychological well-being is not an entirely new finding. A previous study revealed that social pressure to feel better increased depressive symptoms (Dejonckheere et al., 2017). This indicates that social pressure, regardless of its focus (e.g., to feel better or to RTW), is negative for psychological well-being. RTW stakeholders should therefore take heed of the social pressure experienced by women on full-time sick leave. Among women on part-time sick leave at baseline, a positive attitude toward RTW and good perceived health were significantly associated with high levels of psychological well-being one year later. This is partly in line with previous research, showing a relationship between optimism and psychological well-being among elderly women (Avis et al., 2021),

4.1 | Limitations

Limitations of the study include that the sample size was relatively small, which jeopardises the statistical power and the generalizability. Furthermore, the RTW Beliefs Questionnaire is newly developed and some of its psychometric properties therefore remain unknown. This means that the results should be interpreted with some caution.

Furthermore, we do not know when each woman's first RTW occurred during the year. Hence, the results only describe RTW after 1 year, not necessarily the first RTW. It should also be mentioned that the group was heterogeneous as regards factors we have not taken into consideration in the analyses, e.g., work experience, type of employment, profession, diagnosis and the cause of the diagnosis. This made it more difficult to determine clinical implications than if the group had been more homogeneous. Unfortunately, a non-response analysis at baseline could not be performed. However, women in this study corresponded to the national pattern in terms of the distribution of diagnoses and professions (Swedish Social Insurance Agency, 2020). It is also important to remember that baseline data were collected right before the COVID-19 pandemic, and the follow-up data were collected during the pandemic. It is reasonable to assume that this may have affected the results in some way, for example that changing conditions at work made it more difficult to RTW or changed the women's beliefs about RTW, their perceived health or psychological well-being. A majority of the women on full-time sick leave at baseline felt that the pandemic had affected their RTW and a majority in both groups felt that the pandemic had affected their well-being (Table 1).

4.2 | Suggestions for future research

The findings should be confirmed in a larger sample. A larger sample would also enable the use of more advanced analyses, such as structural equation modelling, which could help explain relationships between variables in greater detail. Studying the role of RTW beliefs and perceived health in relation to sustainable RTW and psychological well-being at work could be the next step. Because no predictors of RTW were found for women on part-time sick leave at baseline, more research should be done to close the intention-behaviour gap. For example, this could be achieved with a more homogeneous sample or a different wording of items ('increase the percentage of work' instead of 'stay at work'). It would also be useful to investigate predictors of RTW intention among women on full-time sick leave, to promote such intention in future interventions. The TPB could be useful for this purpose (Ajzen, 1991).

5 | CONCLUSION

This theory-based study with both RTW and psychological well-being as outcomes opens a door to increased understanding of personal factors of importance for RTW after long-term sick leave due to CMDs among women. The study demonstrates that RTW and psychological well-being are predicted by different factors, indicating a need for a multifactorial approach in the RTW process. The TPB was more applicable for women on full-time sick leave at baseline than women on part-time sick leave at baseline. However, due to the sample size, the study should be replicated in a larger context. Nevertheless, the results from the current study indicate that

cognitions are important for RTW and psychological well-being, and RTW-stakeholders should therefore pay attention to them.

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