A Preliminary Study of Work-Focused Cognitive-Behavioural Group Therapy for Japanese Workers

Daisuke Ito, Asuka Watanabe, Sakino Takeichi, Ayako Ishihara, Kazuyoshi Yamamoto

Daisuke Ito, Faculty of Law and Letters, University of the Ryukyus, Okinawa, Japan; Asuka Watatabe, Yamamoto Clinic; Sakino Takeichi, Yamamoto Clinic, Okinawa, Japan; Ayako Ishihara, Yamamoto Clinic, Okinawa, Japan; Kazuyoshi Yamamoto, Yamamoto Clinic, Okinawa, Japan.

Daisuke Ito is now at the Graduate School of Education, Hyogo University to Teacher Education.

Correspondence concerning this article should be addressed to Daisuke Ito, Graduate School of Education, Hyogo University to Teacher Education, 942-1 Shimokume, Kato, Hyogo 673-1494, Japan

Phone number: +81-795-44-2282

E-mail: dito@hyogo-u.ac.jp

*Keywords:* work-focused cognitive-behavioural group therapy; sickness absence; depression; difficulty in return to work

**Abstract**

**Background:**In Japan, cognitive-behavioural therapy (CBT) has been introduced in the ‘Rework Program’, but its impact on return to work (RTW) has not been fully clarified. **Aims:** This pilot study investigated the initial efficacy of a work-focused cognitive-behavioural group therapy (WF-CBGT) for Japanese workers on sick leave due to depression.**Method:** Twenty-three patients on leave due to depression were recruited from a mental health clinic. WF-CBGT including behavioural activation therapy, cognitive therapy, and problem-solving therapy techniques was conducted for eight weekly 150-minute sessions. Participants completed questionnaires on depression and anxiety (Kessler-6), social adaptation (Social Adaptation Self-Evaluation Scale), and difficulty in RTW (Difficulty in Returning to Work Inventory) at pre- and post-intervention time points. Rates of reinstatement after the intervention were examined. **Results:** One participant dropped out, but 22 participants successfully completed the intervention. All scale scores significantly improved after intervention and, except for difficulty in RTW related to physical fitness, all effect sizes were above the moderate classification. All participants who completed the intervention succeeded in RTW. **Conclusions:** Results suggested the possibility that WF-CBGT may be a feasible and promising intervention for Japanese workers on leave due to depression regardless of cross-cultural differences, but that additional research examining effectiveness using controlled designs and other samples is needed. Future research should examine the efficacy of this programme more systematically to provide relevant data to aid in the continued development of an evidence-based intervention.

*Keywords:* Work-focused cognitive-behavioural group therapy, sickness absence, depression, difficulty in return to work, pilot study

**Introduction**

 Apart from many mental illnesses, the prevalence of depression is increasing because of the recent economic crisis. Accordingly, many companies are facing the substantial challenge of addressing the absence of workers due to depression, and are attempting to facilitate a rapid return to work (RTW). Recently, although many interventions aimed at the reduction in mental health complaints have been developed and evaluated, little scientific evidence has been made available on methods that successfully enhance RTW for workers with common mental health disorders. A few controlled studies on the effects of psychotherapy [mostly cognitive-behavioural therapy (CBT)] on RTW underline the need for more research in this field and for adapting existing psychotherapeutic interventions.

Regular CBT offered by mental health professionals often lacks a focus on work and RTW (Rebergen, Bruinvels, van Tulder, van der Beek, and van Mechelen, 2009). The effectiveness of psychotherapy on RTW may therefore be enhanced when work (or RTW) is more explicitly addressed during treatment, and if psychologists are trained in workplace issues. The central idea behind work-focused interventions is that any CBT technique may be applied to the work context, to achieve regular psychotherapeutic treatment goals and RTW. Recently, a large-scale, randomized controlled trial (RCT) found that CBT focusing on the workplace improved depression, anxiety, health-related quality of life, and workplace participation, and that more people who underwent work-focused CBT succeeded in RTW than those that received typical care (Reme, Grasdal, Løvvik, Lie, and Øverland, 2015).

Therefore, our pilot study investigated the initial efficacy of a work-focused intervention programme for Japanese workers who took leave due to depression. In Japan, RTW often means returning to the place where the worker was originally working, and the purpose of the ‘rework programme’ is to restore workers to work and to prevent recurrence. Although the Japanese Ministry of Health, Labour and Welfare (2012) has republished the guidelines on support for RTW and recommended their use in the workplace, Japanese companies are not fully utilizing it (The Japan Institute for Labour Policy and Training, 2012). Therefore, it is common to return to work after participating in the ‘Rework Programme’ at a mental health clinic during a leave of absence. CBT has been introduced in the ‘rework programme’ in Japan, but its impact on RTW has not been fully clarified. For example, Tanoue et al. (2011) demonstrated that regular CBT programmes such as cognitive therapy (Beck, 1979) and problem-solving therapies (Nezu, 1987) are effective for improving depressive symptoms and social adaptation, but not necessarily for difficulties in RTW. The present study contributes substantially to the existing knowledge, because many workers on leave due to depression also contribute to social problems in Japan. Furthermore, the models and therapeutic components of CBT were mostly developed based on Western conceptualizations of depression, and most studies demonstrating the efficacy of CBT were conducted in Europe and North America (APA, 2000). Empirical support for CBT in Japanese clinical settings is lacking. Especially, cultural differences pertaining to workplace problems tend to occur. Especially, cultural differences tend to occur with regard to problems in the workplace. Despite the applicability and initial efficacy of CBT focusing on the difficulty of RTW for workers with depression, few studies have verified the efficiency of interventions for worker who take leave due to depression in non-Western settings.

**Method**

**Participants**

 The participants were introduced to the rework programme when they visited a mental clinic offering general medical services as an outpatient. Participants in the study included outpatients who could participate in the WF-CBGT, those currently diagnosed with major depressive disorder (MDD) by a psychiatrist, and outpatients who hoped to RTW. In other words, the participants were those that had MDD and hoped to RTW. Exclusion criteria were current or previous diagnosis of a psychotic spectrum disorder, evidence of organic brain disorder, developmental delay, personality disorder, current high risk of suicide, substance abuse, and/or major somatic disease.

An a priori power analysis (Effect size = 0.8, α error = .05, 1-β= .80) revealed that a minimum of 15 participants were necessary. The programme was introduced to twenty-seven outpatients; two refused to participate and two met the exclusion criteria. Therefore, we obtained written informed consent from twenty-three patients (male = 14, female = 9, Mage = 40.96 ± 8.28 years).

**Treatment Procedures**

A psychiatrist screened participants. WF-CBGT was conducted over eight weekly 150-minute sessions for groups with four or five patients each, by a clinical psychologist and a psychological staff. The treatment programme was based on behavioural activation therapy, cognitive therapy, and problem-solving therapy. First, psycho-education about depression was imparted and behavioural activation and cognitive therapies, which are proven intervention methods for depressive disorders, were conducted to improve depression symptoms and social adaptation (Sessions 1─5). Next, psycho-education focusing on problems after RTW in Japan was imparted and problem-solving therapy was conducted (Sessions 6─8). Tanoue et al. (2012) indicated three problems (pertaining to human relationships, physical fitness, and cognitive function) as difficulties in RTW in Japan. Therefore, problem-solving therapy was applied to concerns of workplace relationships, such as those with colleagues and bosses, to improve difficulty in RTW (e.g., human relationships). Furthermore, we encouraged them to perform exercises (e.g., walking and swimming) and cognitive tasks (e.g., reproduce and summarize long sentences using a PC) in daily life other than during intervention time using problem-solving therapy and behaviour analysis to improve difficulty in RTW (e.g., physical fitness and cognitive function). The treatment programme also used structured diaries and homework assignments. The flow of each session was shown in the Table 1.

**Measures**

The primary outcome was that participants succeeded in RTW. In other words, we asked the participants whether they worked regularly within three months after the intervention and judged the success of the intervention based on their answers. Then the secondary outcome was the following three questionnaires, assessed at baseline (pre-intervention) and post-intervention.

The original Kessler-6 (K6) was developed by Kessler et al. (2002). The Japanese version of the Kessler-6 (K6), developed by Furukawa et al. (2008), which consists of 6 items, with scores for each item ranging from 0 (*Never*) to 4 (*Always*), and is designed to assess nonspecific psychological distress (depressive moods and anxiety) over the preceding four weeks was used. MDD has a high comorbidity with anxiety disorder, and so we could evaluate anxiety symptoms as well as depression using K6; considering the burden of participants in responding to the questionnaires, we used K6 with a small number of items. A previous study by Furukawa et al. (2008) demonstrated the reliability and validity of this measure. A total score of 5 was decided as a cut-off point for ‘probable mood and anxiety disorders’.

The original Social Adaptation Self-evaluation Scale (SASS) was developed by Bosc, Dubini, and Polin (1977). The Japanese version of the Social Adaptation Self-evaluation Scale (SASS), developed by Goto et al. (2005), consists of 20 items, with scores for each item ranging from 0 (*Not at all*) to 3 (*Extremely good*), and measures the social functioning of individuals. A previous study by Goto et al. (2005) demonstrated its reliability and validity. The optimal cut-off point to divide the working group from the non-working group was a total score of 25.

The original Difficulty in Returning to Work Inventory (DRW), developed by Tanoue et al. (2012), is a 10-item self-report scale with scores for each item ranging from 1 (*Not at all*) to 4 (*Extremely difficult*), and was designed to assess difficulty levels in RTW before participation in rework programmes. It has three subscales: Difficulty in RTW before rework programmes for physical fitness (e.g., ‘I'm worried whether I have the physical strength necessary when work time increases’), human relationships (e.g., ‘I appear fine from the outside, so I'm worried whether co-workers can understand my sickness’), and cognitive function (e.g., ‘I am worried whether I can concentrate efficiently on work’). Tanoue et al. (2012) demonstrated high reliability and validity of this measure. The cut-off point was not established, but the average score before intervention of depressed patients of the previous study (Tanoue et al., 2012) was 26.68 (*SD* = 5.37).

**Data Analysis**

Statistical analysis was performed using IBM SPSS 22 Statistics. We analyzed the data collected at pre-intervention, post-intervention by using a paired t test. In addition, Cohen’s d (Cohen, 1988) was calculated to estimate effect size.

**Results**

 One participant dropped out, but 22 participants (male = 13, female = 9; *M*age = 40.68 years, *SD* = 8.37 years) successfully completed the intervention and RTW. K6, SASS, and DRW scores were analysed with paired *t* tests, and effect sizes were assessed (see Table 2). Although, there was no significant improvement between pre-intervention and post-intervention in physical fitness (DRW), *t*(21) = 1.48, *n.s*., *d* = .27, 95% Cl[-.35, .88], there were significant improvements in K6, *t*(21) = 5.81, *p*<.00, *d* = 1.12, 95% Cl[.46, 1.77]; SASS, *t*(21) = -4.31, *p*<.00, *d* = -.77, 95% Cl[-1.40, -.14]; DRW, *t*(21) = 3.50, *p*<.00, *d* = .69, 95% Cl[.06, 1.31]; Human relationship (DRW), *t*(21) = 4.21, *p*<.00, *d* = .90, 95% Cl[.26, 1.54]; and Cognitive function (DRW), *t*(21) = 3.19, *p*<.00, *d* = .64, 95% Cl[.02, 1.26] (Cohen’s *d*: small = .20, medium = .50, large = .80). In addition, all participants except the individual who dropped out were able to RTW after the intervention.

**Discussion**

 The results supported the hypothesis that our WF-CBGT programme is efficient for Japanese workers on leave due to depression. Particularly, depression symptoms and social adaptation improved, difficulty in RTW reduced, and all participants except the individual who dropped out were able to RTW. In Japan, approximately 45% of workers who took leave due to mental health problems and used a system of leave at workplace whereby they could return to work; thus, it can be interpreted that the returning rate of workers participating in this programme was relatively high. The results were consistent with that of previous research, such as that on WF-CBT (Rame et al., 2015) validating the efficacy of CBT on RTW. Previous intervention studies in Japan (Tanoue et al., 2012) focused on improving depression symptoms, but they have not necessarily dealt positively with workplace problems. There is, however, no one-to-one relationship between disorder, symptom levels, and work participation (Henderson et al., 2011), and focusing on workplace problems appears beneficial. Despite possibly being invasive in asking participants to report problems in previous workplaces and those that may arise after RTW, our programme may be effective because most participants successfully completed the intervention; however, additional research examining its effectiveness is essential.

 Although literature recommends evidence-based interventions such as CBT for workers on leave due to depression, empirical studies on its validity, especially in Japan, are lacking. Therefore, whether treatments for depression in the West can be effective in Japan is unclear (Fujisawa et al., 2010). Thus, our findings have important implications suggesting that WF-CBT can valuably contribute to Japanese workers on leave due to depression, despite cross-cultural differences.

The research protocol of this study has several limitations. First, as there was no control group, the findings are inconclusive. For example, it took 367.09 days (*SD* = 305.90) to receive psychotherapy in the previous study (Tanoue et al., 2012), whereas the average duration of sick leave due to depression was 101.83 days (*SD* = 122.43) in this study. Since the score on K6 in the baseline period was higher than the cut-off score, although the severity was high, the relatively short leave duration may have influenced the positive effect. Second, we assessed symptoms using only self-report questionnaires rather than a structured clinical interview. Although we assessed symptoms and the possibility of RTW after intervention, its long-term effectiveness was not verified, because the symptoms and social adaptation after RTW were not evaluated. Third, because the first and second authors conducted the programme, its generalizability is unknown, as there may have been a therapist effect leading to overestimation of the treatment benefit. Despite such limitations, our findings are encouraging because they indicate the effectiveness of a WF-CBGT programme in non-Western settings. Future research should examine the efficacy of this programme more systematically to continue developing evidence-based interventions.

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***Conflict of interests***

The authors declare that they have no conflict of interest.

***Ethical statement***

This research was conducted with the approval of the ethics committee of University of Ryukyus

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Table 1.

*The structure of each session*

|  |
| --- |
| 1. Confirmation and share of homework assignment |
| 2. Share goals for each session |
| 3. Activities of each session (Lecture, Individual work and Group work) |
| 4. Description of homework assignment |
| 5. Session Summary |

Table 2.

*Outcomes of Work-focused Cognitive-Behavioural Group Therapy*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Pre | Post | *t*  | *p*  | *d* a  | 95% Cl |
|   |  *M* |  *SD* |  *M* |  *SD* |
| K6 | 11.73 | 5.19 | 6.14 | 4.80 | 5.81 | .00 | 1.12 | [0.46, 1.77] |
| SASS | 27.01 | 6.91 | 32.44 | 7.21 | -4.31 | .00 | -.77 | [-1.40, -0.14] |
| DRW | 31.32 | 7.64 | 26.23 | 7.21 | 3.50 | .00 | .69 | [0.06, 1.31] |
| Physical fitness (DRW) | 9.32 | 3.01 | 8.50 | 3.16 | 1.48 | .15 | .27 | [-0.35, 0.88] |
| Human relationship (DRW) | 12.50 | 3.07 | 9.91 | 2.67 | 4.21 | .00 | .90 | [0.26, 1.54] |
| Cognitive function (DRW) | 9.50 | 2.79 | 7.82 | 2.44 | 3.19 | .00 | .64 | [0.02, 1.26] |

*Note.* K6 = Kessler-6; SASS = Social Adaptation Self-Evaluation Scale; DRW = Difficulty in Returning to Work Inventory.

a Cohen's *d* = .20 (small), .50 (medium), 0.80 (large).