Quality of life and client satisfaction as outcomes of the Redesigning Daily Occupations (ReDO) programme for women with stress-related disorders: A comparative study

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Abstract

OBJECTIVE: The outcomes, in terms of quality of life and satisfaction with rehabilitation, of the 16-week Redesigning Daily Occupations (ReDO) programme as a work rehabilitation method for women with stress-related disorders was evaluated. It was hypothesised that, compared to women who got Care as Usual (CAU), the ReDO group would improve their quality of life and self-mastery more, and that those differences would prevail at follow-ups after 6 and 12 months. Another hypothesis was that the ReDO group would be more satisfied than the CAU group with the rehabilitation received.

PARTICIPANTS: Forty-two women were recruited to the ReDO intervention and a matched comparison group got CAU.

METHODS: The data consisted of self-ratings of quality of life, self-mastery and satisfaction with the work rehabilitation received.

RESULTS: The first hypothesis was only partially verified. No general group differences were identified, but closer examination indicated different trajectories in the two groups. There was an increase in quality of life in the ReDO group from baseline to completion of the work rehabilitation, and further increase at the six-month follow-up, while the quality of life in the CAU group was stable over time. Regarding self-mastery there was an increase from baseline to completed rehabilitation in the ReDO group but a pronounced decrease in the CAU group. Thereafter the group differences levelled out. The second hypothesis was verified. The ratings of client satisfaction were considerably higher in the ReDO group.

CONCLUSION: The ReDO seems a promising work rehabilitation method for strengthening quality of life and self-mastery for the target group. Future research should include larger groups and be based on randomised controlled designs.

Keywords: Quality of life, self-mastery, work rehabilitation

1. Introduction

Work rehabilitation for people with stress-related disorders is an important matter, since this group constitutes a substantial proportion of those who are on sick-leave. People with mental health problems in general are estimated to be among the leading contributors...
to disability and overall disease burden worldwide [1]. It has been estimated that 10–18% of the working population in developed countries are on sick leave for a mental disorder, and up to 90% of those have a stress-related disorder [2]. Thus, developing effective work rehabilitation interventions for this group is imperative.

Recently, the Redesigning Daily Occupations (ReDO) programme was devised as a 16-week work rehabilitation method for women with stress-related disorders [3]. The idea behind that programme is that enabling reorganisation of people’s daily occupations — including everything they do; not only work, but also home chores and leisure and social occupations — will result in a better balance between different everyday occupations, in turn leading to better well-being and increased abilities to return to work. An evaluation of the ReDO programme is ongoing, and a first study focusing on return to work and sick-leave rate showed that, in a 12-month perspective after completed rehabilitation, those who received ReDO returned to work more often and decreased their sick-leave more than a comparison group receiving “care-as-usual” (CAU) [4]. The ReDO group also improved their self-esteem more than the CAU group, while there was no difference between the groups regarding level of perceived stress, which was stable over time in both groups. Secondary outcomes such as these, and also clients’ well-being and quality of life, are besides primary outcomes such as return to work and sick-leave rate seen as desired outcomes in health care and rehabilitation [5]. It has also been shown that people’s perceived self-mastery, i.e. the tendency to see oneself as being in control of things that importantly affect one’s life situation, is important for both quality of life [6] and a good working life [7,8]. This makes self-mastery another interesting outcome in the context of work rehabilitation. The aim of the present study was to further assess secondary outcomes, pertaining to quality of life, self-mastery and client satisfaction, of the ReDO programme. It was hypothesised that, compared to women who got CAU, the ReDO group would improve their quality of life and self-mastery more and that those differences would prevail at follow-ups after 6 and 12 months. Another hypothesis was that the ReDO group would be more satisfied than the CAU group with the rehabilitation received.

2. Methods

2.1. Study design

This study was part of a quasi-experimental investigation comparing two rehabilitation conditions, ReDO and traditional rehabilitation (CAU). The study took place in southern Sweden from 2008 to 2010, in two neighbouring districts; the one where the intervention was carried out and another where a matched comparison group was selected. All women in both groups had their rehabilitation administered by the Social Insurance Offices (SIO). Measurements in the ReDO group were made before entering the rehabilitation, after completion of the 16-week ReDO and at two follow-ups, 6 and 12 months after completed ReDO. Data collection with the same intervals was made in the comparison group receiving CAU. The research was carried out in compliance with the Helsinki declaration and the participants’ informed consents were documented. The study was approved by the regional ethical review board at Lund University (Nos. 922/2004 and 149/2007).

2.2. The interventions

The ReDO comprises 16-weeks, divided into three phases. The first five weeks constitute Phase I, when the focus is particularly on occupational self-analysis. The next five weeks form Phase II, during which the rehabilitations is concentrated around goal setting and strategies for accomplishing needed changes in the women’s patterns of everyday occupations. The ReDO is group based, and during these in all ten weeks the group meets for two, 2½-hour sessions per week. The last six weeks, Phase III, constitute a period of work placement, preferably at the woman’s ordinary work but otherwise at a new workplace. The group meets three times during Phase III, to give support and monitor the work placement. The ReDO was implemented in two towns of the selected district. This meant that two groups ran in parallel, and each group was led by two licensed occupational therapists who were specifically trained for leading the ReDO programme.

CAU meant that the woman had follow-ups with the SIO officer and the employer. The additional support varied, but many women in the CAU group also had some kind of active rehabilitation, ranging from visits to a physical therapist or social worker to more comprehensive rehabilitation programmes, including work rehabilitation and stress management programmes. The comparison women were selected from the total group receiving CAU without any restrictions regarding type of adjuvant rehabilitation.

2.3. Selection procedure and participants

Women who were on sick leave for stress-related diagnoses (F43 or F32) in accordance with the ICD-
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Table 1
Baseline characteristics of the participants ($N = 84$)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>ReDO group</th>
<th>CAU group</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age; mean (SD)</td>
<td>45 (19)</td>
<td>46 (9)</td>
<td>0.628</td>
</tr>
<tr>
<td>Living single; n (%)</td>
<td>30 (71%)</td>
<td>27 (64%)</td>
<td>0.320</td>
</tr>
<tr>
<td>Number of children; mean (SD)</td>
<td>2.4 (1.4)</td>
<td>2 (1)</td>
<td>0.085</td>
</tr>
<tr>
<td>Type of work</td>
<td></td>
<td></td>
<td>0.193</td>
</tr>
<tr>
<td>Managers and professionals</td>
<td>21 (50%)</td>
<td>15 (36%)</td>
<td></td>
</tr>
<tr>
<td>Technicians and associate professionals</td>
<td>6 (14%)</td>
<td>13 (31%)</td>
<td></td>
</tr>
<tr>
<td>Clerical support, service and sales workers</td>
<td>15 (35%)</td>
<td>13 (31%)</td>
<td></td>
</tr>
<tr>
<td>Plant and machine operators</td>
<td>–</td>
<td>1 (2%)</td>
<td></td>
</tr>
<tr>
<td>Having a university degree; n (%)</td>
<td>16 (40%)</td>
<td>21 (51%)</td>
<td>0.284</td>
</tr>
<tr>
<td>Living situation – owning a flat/villa/farm; n (%)</td>
<td>34 (81%)</td>
<td>32 (78%)</td>
<td>0.743</td>
</tr>
<tr>
<td>First diagnosis</td>
<td></td>
<td></td>
<td>0.662</td>
</tr>
<tr>
<td>Depression; F32</td>
<td>19 (45%)</td>
<td>23 (54%)</td>
<td></td>
</tr>
<tr>
<td>Stress/Exhaustion; F43</td>
<td>20 (48%)</td>
<td>17 (41%)</td>
<td></td>
</tr>
<tr>
<td>Physical main diagnosis; M54</td>
<td>3 (7%)</td>
<td>2 (5%)</td>
<td></td>
</tr>
<tr>
<td>Percentage of current sick-leave; mean (SD)</td>
<td>92 (18%)</td>
<td>83 (26%)</td>
<td>0.086</td>
</tr>
<tr>
<td>Sick-leave (months) before baseline; mean (SD)</td>
<td>13 (20)</td>
<td>10 (10)</td>
<td>0.414</td>
</tr>
<tr>
<td>Having had previous work rehabilitation n (%)</td>
<td>5 (12%)</td>
<td>15 (36%)</td>
<td>0.030</td>
</tr>
</tbody>
</table>

*One response missing.

10 [9], had employment and had been on sick leave for two months or more were eligible for the study. Standard procedures were followed by the SIO officer in charge when assessing which rehabilitation alternatives to suggest to a client, the ReDO or any of the CAU alternatives mentioned above. In Sweden, a rehabilitation plan must be set up after 4 weeks of sick leave, in cooperation between the employer, the employee and the SIO. Since 1 July 2008 there are also strict limits for maximum length of sick leave: 364 days during a period of 450 days. Before that, if needed, an employee could be on sick-leave for noticeably longer periods. The reform was implemented less than a year after the ReDO project had commenced, but while it was still ongoing, and the consequences of that are further described below (see section ‘Final study participants’).

A power calculation was made, based on the assumption that difference corresponding to effect size of 0.6 between the groups would be a clinically important difference. The calculation indicated that 40 subjects in each group were needed to detect an effect size of about 0.6 with 80% power at $p < 0.05$.

2.3.1. The ReDO group

Women entering the ReDO programme during the project period, which lasted from September 2007 to March 2009, were eligible for the study. Ten groups were carried through during that period, each composed of 3–6 clients. In all, 42 women entered the ReDO, and all agreed to take part in the study.

2.3.2. The comparison group

Matched subjects were sought in the comparison district, among clients registered at the SIO. Following the inclusion criteria, they already matched the ReDO group regarding having a stress-related disorder and being employed. Additional criteria when making the match were age, civil status, number of children, the specific stress diagnosis, type of work, and duration of sick leave.

2.3.3. Final study participants

The ReDO programme was implemented between September 2007 and March 2009, thus on both sides of the sick-leave reform that limited the possibility of long-term sick leave. For natural reasons, the ReDO women were included first, and the matching of control women lacked behind about six months. Most women in the comparison group, 35 out of the 42, were therefore included after 1 July 2008, while only few in the ReDO group, 6 out of the 42, were included after that date.

There were some dropouts over time in both groups. In the assessments 16 weeks after baseline, 38 women from the ReDO group and 40 from the CAU group participated. There was further attrition at the follow-ups, and 37 women in the ReDO group and 34 in the CAU group participated at all four measurement points.

Table 1 displays the women’s socio-demographic characteristics at baseline and shows that the two groups were comparable on the variables on which the women were matched (age, civil status, number of children, the specific stress diagnosis, type of work, duration of sick leave). They were also equivalent regarding education and extent of sick leave at baseline. However, the groups differed regarding previous work rehabilitation, which the CAU had received to a greater
extent. Sixteen of them currently received some type of adjuvant rehabilitation, such as vocational training or physiotherapy.

In the assessment of client satisfaction, which took place 16 weeks after baseline, 38 women from the ReDO group and 40 from the CAU group participated.

2.4. Instruments

Quality of life was estimated by the Manchester Short Assessment (MANSA) of quality of life [10]. The Swedish version, shown to have good psychometric properties in terms of internal consistency and ability to discriminate between people with and without known ill-health [11,12], was used. By summarising the respondent’s ratings of satisfaction within eleven life domains, a general quality of life index is obtained. Each domain is reflected in one item, responded to on a seven-point scale ranging from could not be worse (1) to could not be better (7). A higher score denotes better quality of life. Cronbach’s alpha for the present sample was 0.77, indicating satisfactory internal consistency.

Self-mastery was assessed by means of the Swedish version of Pearlin’s mastery scale. Both the American original [13,14] and the Swedish version [15,16] have been tested for psychometric properties and been found sound in that respect. The instrument has seven items that are rated on a four-point response scale, from strongly disagree (1) to strongly agree (4). A high score indicates a high level of self-mastery. Rasch analysis of the Swedish version [15] indicated that item number six, which has to do with belief in being able to master what happens in the future, might not measure the same construct as the other items. Therefore, in the present study item number six was analysed separately and a summed index of the other six items was referred to as general self-mastery. For the current sample, the Cronbach alpha coefficient for the six items was 0.79.

In order to assess satisfaction with the rehabilitation the Client Satisfaction Questionnaire (CSQ) [17] was used. It consists of eight items measuring the clients’ satisfaction with the type of rehabilitation they got. The items are rated on a four-point scale ranging from very dissatisfied (1) to very satisfied (4). To our knowledge, there is no publication indicating that the Swedish version has been psychometrically tested, but a Cronbach’s alpha coefficient of 0.94, thus excellent, was obtained for the present sample.

2.5. Data analysis

The data were reasonably normally distributed and parametric statistics were used. Independent samples t-test was used to analyse differences between the ReDO and the CAU groups. The t-tests were supplemented with Cohen’s d to indicate effect sizes.

Analyses of changes over time, while also considering the group factor, were made by means of repeated measures MANCOVA. Polynomial contrast was used in order to identify any differing trends between the groups at the different measurement points. To explicitly focus on each group’s change over time, repeated measures with difference contrast was used. For the description of socio-demographic data at baseline, the t-test for independent samples was used to analyse continuous variables and the chi² test to examine ordinal data.

Imputation with the subject’s mean was made in a few cases in order to reduce attrition for the variables that were based on rating scales (quality of life, self-mastery and satisfaction with the rehabilitation). This was done if not all, but at least 75%, of the items of a scale had been answered. The software used was the SPSS/PASW 18.0.

3. Results

3.1. Changes in quality of life and self-mastery

Figure 1 illustrates the women’s ratings of quality of life on the four measurement occasions. There was an overall between-subjects effect, indicating that the CAU groups had a better quality of life over the study period ($F = 5.82; p = 0.019$). The effect sizes for dif-
ferences between the groups at the four measurement points were $d = 0.7$, $d = 0.7$, $d = 0.3$ and $d = 0.5$, respectively. No statistically significant difference between the two groups regarding change over time was found (the values for a linear trend were $F = 2.74; p = 0.103$). As reflected in Fig. 1, however, the changes over time went in different directions in the two groups. When the CAU was analysed separately, no change was identified ($F = 0.26; p = 0.854$), while in the ReDO group a statistically significant increment in quality of life over time was found ($F = 5.26; p = 0.002$). The trend was an increase between measurement I and II ($p = 0.023; d = 0.4$), between II and III ($p = 0.011; d = 0.4$), but no difference between measurement III and IV ($p = 0.173$). Thus, the increase continued until the 6-month follow-up for the ReDO group, and then the women’s quality of life was stable between the 6-month and the 12-month follow-up, while for the CAU group their quality of life was stable over the whole study period.

Regarding general self-mastery (with item six excluded), the two groups followed different trajectories, as seen in Fig. 2. This was indicated by the MANCO-VA, analysing the trend over time, which identified differences between the groups in terms of both a quadratic ($F = 9.97; p = 0.002$) and a cubic ($F = 5.93; p = 0.018$) trend but found no statistically significant linear trend ($F = 0.75; p = 0.391$). We then scrutinized the differences further by t-tests. At baseline, the CAU group scored higher than the ReDO group regarding general self-mastery ($t = -3.55; p = 0.001; d = 0.7$). Regarding item 6, belief in mastering future life (Fig. 3), there was no difference at all at baseline ($t = 0.00; p = 1$). After the 16 weeks of rehabilitation, the ReDO women scored higher than the CAU group, concerning both general self-mastery ($t = 2.36; p = 0.021; d = 0.5$) and belief in mastering future life ($t = 4.12; p < 0.001; d = 0.9$). At the 6-month follow-up there were no statistically significant differences between the groups, nor was there any difference in general self-mastery at the 12-month follow-up. However, at the 12-month follow-up the CAU had a stronger belief in mastering future life ($t = -2.02; p = 0.047; d = 0.3$).

3.2. Satisfaction with the work rehabilitation

Regarding satisfaction with the rehabilitation received, a strongly statistically significant difference was found ($t = 4.28; p < 0.001; d = 0.9$), the mean rating being 3.4 (SD = 0.6) for the ReDO group and 2.6 (SD = 0.9) for the CAU group on the scale ranging from 1–4. A closer look at the different items (see Table 2) revealed that regarding items 2 and 3, which concerned getting the desired and needed support, there were no differences between the groups. The ratings on those items were the lowest ones given by the ReDO group and the highest ones in the CAU group. Items 1, 4, 7 and 8 concerned the quality of and general satisfaction with the work rehabilitation, if one would recommend it to a friend and if one would choose the same work rehabilitation again, and in these respects the ReDO group was substantially more satisfied than the CAU group.
4. Discussion

The findings formed an interesting pattern with respect to secondary outcomes in terms of quality of life and client satisfaction, with more positive trends of change in the ReDO group. The women in that group improved their quality of life while participating in the work rehabilitation and had improved it further at the six-month follow-up, whereas quality of life was stable in the CAU group. The ReDO women also developed positively regarding self-mastery, and they especially increased their general self-mastery during the period of work rehabilitation. During the corresponding time period there was a pronounced drop in both general self-mastery and belief in mastering future life in the CAU group. Thus, it seemed that the period of sick leave was detrimental for self-mastery in the CAU group. The ReDO women also developed positively regarding self-mastery, and they especially increased their general self-mastery during the period of work rehabilitation. During the corresponding time period there was a pronounced drop in both general self-mastery and belief in mastering future life in the CAU group. Thus, it seemed that the period of sick leave was detrimental for self-mastery in the CAU group. The ReDO group had increased their rate of self-mastery and self-efficacy, which indicates that self-mastery may be affected by work-related factors. A general interpretation of our own results, as well as previous research, is that it is possible to impact on the quality of life and self-mastery among women with stress-related disorders.

With regard to satisfaction with the rehabilitation received, the findings showed that the ReDO group’s satisfaction surpassed by far that of the CAU group. The effect size obtained was 0.9, which is considered large in the context of therapy [21]. In one respect, getting the wanted and needed support, the groups were equally satisfied, however, and gave a rating of around 3 of a possible maximum of 4. Focusing on the ReDO women, they were especially satisfied with the work rehabilitation in terms of its quality, that they would recommend it to a friend and that they would choose the same type of work rehabilitation again. The scores were close to the maximum rating of 4. High ratings of client satisfaction are common in health care research [22,23], and in light of that it is perhaps the CAU group’s ratings that appear as low.

The fact that the ReDO group had increased their ratings of self-mastery after completion of the intervention and at that time scored higher than the CAU group regarding both general self-mastery and belief in mastering future life may be explained by a difference in received support, as indicated by the result regarding satisfaction with the rehabilitation. A person’s own belief about his or her future was by Hansen and colleagues found to be a strong predictor of return to work in a population of long-term sick in north of Sweden [24]. Furthermore, a similar factor, perceived self-efficacy, was together with work attitude and social support related to the time to return to work among individuals on sick leave due to both physical and mental health conditions [25]. Thus, the increase in self-mastery that occurred in the ReDO group may be highly significant for their ability to return to work while the drop identified in the CAU group may have prolonged their time on sick-leave. Although this is somewhat speculative it can be held true that work rehabilitation programmes may lead to improved self-mastery and that it is important to apply rehabilitation strategies that enable self-propelled increases in self-mastery and self-efficacy among the clients.

### Table 2

<table>
<thead>
<tr>
<th>CSQ Item</th>
<th>ReDO group; mean (SD)</th>
<th>CAU group; mean (SD)</th>
<th>t-value</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The quality of the work rehabilitation was good</td>
<td>3.5 (0.7)</td>
<td>2.4 (1.1)</td>
<td>5.358</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>2. Got the support I wanted</td>
<td>3.1 (0.8)</td>
<td>2.8 (1.1)</td>
<td>1.532</td>
<td>0.130</td>
</tr>
<tr>
<td>3. My needs were met</td>
<td>3.0 (0.7)</td>
<td>2.8 (1.0)</td>
<td>1.247</td>
<td>0.216</td>
</tr>
<tr>
<td>4. Would recommend the work rehabilitation to a friend</td>
<td>3.7 (0.6)</td>
<td>2.6 (1.0)</td>
<td>5.454</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>5. Satisfied with the scope of the work rehabilitation</td>
<td>3.2 (0.8)</td>
<td>2.6 (1.0)</td>
<td>3.060</td>
<td>0.003</td>
</tr>
<tr>
<td>6. The work rehabilitation helped me handle my problems</td>
<td>3.6 (0.7)</td>
<td>2.8 (1.0)</td>
<td>3.452</td>
<td>0.001</td>
</tr>
<tr>
<td>7. Generally satisfied with the work rehabilitation</td>
<td>3.4 (0.8)</td>
<td>2.5 (1.0)</td>
<td>4.581</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>8. Would chose the same again</td>
<td>3.6 (0.6)</td>
<td>2.6 (1.0)</td>
<td>5.404</td>
<td>&lt; 0.001</td>
</tr>
</tbody>
</table>
4.1. Methodological discussion

This study included two follow-ups after completed interventions, which must be seen as a strength, and matching was accomplished on several important client characteristics. This was not a randomised controlled study, however, and an alternative interpretation of the different trends in the groups regarding quality of life and self-mastery may be that they illustrate biased selection of participants. The selection of women for the intervention may have been influenced by certain subtle criteria such as specific needs interpreted by the SIO officers, and similar subtle reasoning could not be a basis for recruitment of the CAU group, which was made from registers in a neighbouring district. The fact that the groups did not differ on objective life conditions, such as the matching criteria, but differed at baseline on both quality of life and self-mastery indicates such a selection bias. This must be held in mind when valuing the findings. Besides, the CAU group had to a greater extent than the ReDO group received previous work rehabilitation, which may have influenced their trajectories regarding quality of life and self-mastery and their satisfaction with the current rehabilitation. Another shortcoming of the study is the fairly low number of participants. It could be speculated that important differences between the groups might have gone undetected due to insufficient statistical power [26]. Still, as shown by the findings, effect sizes of a moderate magnitude, down to 0.3, became statistically significant. Thus, the study design should not have led to an underestimation of the true differences between the groups. Because of the quasi-experimental design, however, and the fact that the study was based solely on women, the external validity of this study is restricted.

4.2. Conclusion

Although afflicted with some methodological shortcomings, this study showed that the ReDO intervention positively affected the women’s quality of life and self-mastery. Such a positive trend over time was not found in the CAU group, where the quality of life was stable over time and there was a pronounced drop during the intervention period in both general self-mastery and belief in mastering future life. The ReDO group was also significantly more satisfied with the work rehabilitation received. These findings indicate that the ReDO intervention is a promising method for work rehabilitation among women on sick-leave for stress-related disorders. However, further research on the intervention is needed and future studies should include larger groups and randomised controlled designs. Besides, the ReDO intervention also needs to be tested with male clients.

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References


