A new approach in vocational rehabilitation in Iceland: Preliminary report

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Abstract. The lack of vocational rehabilitation in Iceland inspired the Janus Rehabilitation initiative in the year 2000. The team currently consists of two occupational therapists, a social worker, a physiotherapist, a psychologist, and a physician. Janus uses resources from local education establishments and is located at the Reykjavík Technical School. A client-centred approach is used, enabling a flexible rehabilitation timeframe. The aim is to help the client back to employment/education. Advantage is taken of the facilities of the school where integration between education and rehabilitation takes place.
Forty individuals have been admitted, with a mean time from work of 2.9 years, (range: 0–11 years). Seventeen (43%) have returned to employment/education. Twenty-three of those entering the programme are still on invalidity pension. The Canadian Occupational Performance Measurement (COPM) shows improvement in occupational performance and satisfaction. The Icelandic Quality of Life measurement also shows improvement. The results have been promising. However, a larger group is needed in order to draw clear unequivocal conclusions.

Keywords: Vocational therapy, vocational training, work rehabilitation, work, education, multidiscipline team work

1. Introduction

Iceland is a small nation with a harsh natural environment. The existence of the individual, as well as of the entire society, requires a lot of work. Each Icelander works long hours and unemployment is lower than in neighbouring countries [10]. Being able to work, therefore, is important for each individual in terms of self-esteem [23]. It is also important economically, since disabled people are compensated less from the State Social Security Institute in Iceland than in other Scandinavian countries [25]. The definition of health is subjective [3] and is associated with work [26]. Long-term sick leave reduces confidence and induces both mental and physical illness [6,14].

There are also national economic values at stake in early retirement. The mean cost of early retirement as a percent of Gross National Production in the OECD was 6.3% in 1998 and had increased from 5.8% in 1980. Hungary topped the list in 1998 with 15.9% and Iceland was bottom of the list with only 0.5% [13]. In Iceland, the number of people registered as invalids increased from 3,500 in 1985 to almost 9,000 in the year 2000. During the same period, the population increased about 15% [27]. The most usual causes for early retirement recorded by the United Pension Fund, fourth largest pension fund in Iceland between 1997 and 2001, were musculo-skeletal disorders 22%, cardiovascular diseases 16%, and psychiatric disorders 15%. Half of the clients applying for an early retirement pension are over 50 years of age [29].


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The aim of the project is to help the client regain employment/education by helping them to realize their potential and use it to increase the quality of their lives. In many cases, people must select a new vocation.

It is important to rehabilitate the client in a program that takes advantage of his/her interests and beliefs and in a way that is cost effective for the society. In the program, a client-centred approach [26] helps the client to understand how the environment (a broad term) may have an enabling or constraining effect on their occupational performance, health, and quality of life. Wanting to return to work is connected to the client’s view of his possibilities [1]. Motivation is paramount.

It is, therefore, beneficial to integrate health care and the educational system. The risks of participating in active rehabilitation have been regarded as minimal for the individual and are overshadowed by potential gains for all concerned [21].

2. Method

Clients are referred to the project by Pension Funds, the University Hospital, Landspítaliinn, the State Social Security Institute, and by individual psychiatrists and other professionals involved in rehabilitation and working in different locations. The aim was to get clients into rehabilitation as soon as problems were observed. Before being admitted to an interview with the JR team, physicians had already been evaluated the clients. The team members are from different disciplines and are comprised of occupational therapists, a physician, physiotherapist, a social worker and a psychologist. The team has the right to refuse to take the client for rehabilitation if the team believe that the client is not motivated or the program will not suit the client.

Every client who comes to rehabilitation at Janus has to want to go to work on the labour market. Exceptions to this rule were the 12 first clients who came to Janus, which at that time had no restrictions for entering into the program. The diagnoses for the group are diverse and reflect the presumed distribution for compensations from the pension funds and the State Social Security Institute: Musculo-skeletal disorders, heart disorders, psychiatric disorders, thyroid dysfunction, lung diseases, skin disorders and infectious diseases.

The project is located at the largest Technical School in Iceland, “1ðnskólinn í Reykjavík”. The project uses school facilities and important integration takes place between education and rehabilitation. A flexible rehabilitation time frame is used. Six teachers co-operate with the rehabilitation team without knowledge of the client’s diagnosis. A member of the rehabilitation team is present in the classroom, observing and only taking initiative if necessary from a rehabilitation point of view. The setting is an ordinary workplace where pupils, teachers, and other staff members support the client strength and help him/her to deal with stimuli from a healthy milieu enabling the client to break away from the disorder pattern.

A client-centred approach is used, which is collaborative. This partnership approach helps support the client’s occupation [26]. The team demonstrates respect for clients, involves them in decision-making, and recognizes their experience and knowledge.

The Canadian Occupational Performance Measurement (COPM) is semi-structured interview with structured scoring method. It is used to detect change in a client’s self-perception of occupational performance over time. It measure a client’s belief in their own performance and satisfaction with the performance [17]. The client is encouraged to discuss areas of activity that may present problems for him/her and he/she wants to carry out on a regular basis. The client’s five most important problems are the focus of intervention and the outcome measurement. The client rates his/her perception of performance and satisfaction with this performance in the selected problem areas. After the intervention process the client is asked to reassess and a difference of 2 – points between the assessments carried out indicate a significant change according to experience in clinical practice [4]. The reliability and validity of the scale has been published [3,4,18,23].

To measure quality of life the Icelandic Quality of Life (IQL) [12] was used. The IQL has 30 questions and visual analogue items, which measure 11 aspects of health-related quality of life. A total score is calculated and a score of 50 is normal for the average Icelander. The IQL reliability and validity is acceptable. The measurement has been validated on an Icelandic population and correlates well with more severely ill and disabled persons [2,12].

2.1. Janus Rehabilitation offers two programs

(a) A group of twelve clients receive vocational therapy each semester and follow the JR schedule. During the first semester the JR schedule includes appropriate courses taught at the Technical School. Emphasis is put on subjects such as: Icelandic and sociology, which focuses on the individual and society aiming for growing confidence in formulating the client’s own opinions and
putting forward arguments for his/hers views. Design, which practices cognitive abilities. Computer knowledge, which has a goal of making the client “computer literate”.

Furthermore, there are courses in health and self-reinforcement, physical training, individual and/or family interviews among other things. The occupational therapists, the physiotherapist and the social worker are responsible for the health and self-reinforcement courses with the possibility of inviting visiting lectures. The aim is better control over factors affecting their health and insight into possibilities for future work or studies according to present health status. Increasing confidence, training communication and belief in own capabilities. The program as a whole qualifies for educational units in the Technical School. If the clients fulfil certain conditions they have the opportunity to enter the traditional lectures at the Technical School.

The clients usually attend, at most, two semesters, with few exceptions. During the second semester, which usually is a follow up, the clients attend extended courses in health and self-reinforcement, physical training and have access to counselling which includes interviews and other available rehabilitation services. During the latter semester, some may have chosen to attend different courses at the Technical School. Others may have started working.

(b) In the other program clients are not in contact with the Technical School through JR but get all other rehabilitation services. This part of the program has been used only by few clients, mostly those who are still working or about to lose their employment because of disability.

3. Results

From January 2000 to December 2001 forty clients have been admitted, 13 women and 27 men. A follow-up of 10–33 months was carried out in November 2002. The age of the clients is 24–57 years (mean 39.8 for both sexes). Mean time from work before entering was 2.9 years. (0–11) years. However, three clients participating were still working when entering the program. If they are excluded, the shortest time away for work for those out of the employment market was 5 months. The mean time away from work in that group, which comprises almost the entire group was 36.5 months.

Fourteen of the men and three women had returned to work or education. The difference between gender was not significant (\( p = 0.082 \) Fisher’s exact test). Men admitted had a mean time of 7.3 months until entering the labour market and 2 months until entering school. Women had a mean time of 7.5 months until entering the labour market. The mean time until entering the labour market is similar for both genders. One woman was only in school at the follow-up time (Table 1).

Twenty-three people are still on some kind of invalidity pension. Eight have returned to full-time employment, two to part-time work, two to part-time work and education and five to school. The men had higher level of education than the women. The level of education makes a difference on the probability of returning to work or education as only 7 of 22 (32%) clients with primary school education returned to work or education compared with 9 out of 15 (60%) with technical school education (\( p = 0.042 \), Fisher’s exact test) (Table 2).

Eight clients have full-time or part-time work without being on any payroll. Five are working at home, taking care of children etc. Two were admitted to a hospital at the time of follow up and one is still having a follow up in JR.

Thirty clients were measured with COPM at the beginning of the program and again a few months later. The results of the measurement are presented as the means of the scores calculated for the self-perceived performance and satisfaction with that performance. Performance score 1 and performance score 2: mean difference = 2.3 (−2–6.5); and satisfaction score 1 and satisfaction score 2: mean difference = 2.8 (−2–7).

Seventeen (57%) had a score of 2 and more in performance and nineteen (48%) in satisfaction. Eight (27%) had a score of four or more in performance and 12 (40%) in satisfaction.

IQL was only measured in the last group, 10 clients. A normal Icelandic has a score of 50. At the beginning of the program the mean score for the group was 23.6 (4–38), after 3 months 31.1 (4–44) and after 9 months 25.5 (19–36).

4. Discussion

The aim was to help the individual back to employment/education. Forty-three percent of the clients in this trial (17/40) are participating in work or school after 10 to 33 months. The time away from work has a significant impact on the likelihood of returning to work after rehabilitation [15]. Most of our clients had been away from work over 30 months and had been subjected to other rehabilitation previously, so the group had a bad prognosis.
Table 1
Ten to thirty-three month’s of follow-up of rehabilitation. Clients no, age, mean time from work and mean time (months) until entering work/education

<table>
<thead>
<tr>
<th>Sex</th>
<th>Number</th>
<th>Mean age</th>
<th>Mean time from work in months</th>
<th>No clients back to work</th>
<th>Mean time (months) until back to work</th>
<th>No clients entering education</th>
<th>Mean time (months) until entering education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td>27</td>
<td>39.79</td>
<td>32.4 (0–132)</td>
<td>10</td>
<td>7.3 (0–30)</td>
<td>4</td>
<td>2 (0–4)</td>
</tr>
<tr>
<td>Women</td>
<td>13</td>
<td>39.75</td>
<td>36.0 (2–69)</td>
<td>2</td>
<td>7.5 (4–11)</td>
<td>1</td>
<td>24</td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>39.8</td>
<td>34.2</td>
<td>12</td>
<td>7.4</td>
<td>5</td>
<td>8.3</td>
</tr>
</tbody>
</table>

Table 2
Results of ten to thirty-three months of follow-up of rehabilitation according to sex and education

<table>
<thead>
<tr>
<th>Education</th>
<th>Men</th>
<th>Women</th>
<th>Total</th>
<th>Full-time work</th>
<th>Part-time work</th>
<th>Part-time work &amp; education</th>
<th>To school</th>
<th>On some kind of invalidity pension</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary school</td>
<td>14</td>
<td>8</td>
<td>22</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Grammar school</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Technical school</td>
<td>12</td>
<td>3</td>
<td>15</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>University</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Another education</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>27</td>
<td>13</td>
<td>40</td>
<td>8</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>23</td>
</tr>
</tbody>
</table>

The number of clients in this paper is small and does not allow us to draw any unequivocal conclusions. We do not have any control group either. However, our clients consist mostly of individuals for whom other resources have failed and were, therefore, considered unlikely to manage to return unaided to any type of work.

Return to work is usually affected by many factors. Psychosocial factors, such as job satisfaction, have been found to significantly influence the rate of returning to work for patients with lower back pain [8] and after laparoscopic cholecystectomy [7]. In the Janus program, a selection of new job and education is available, thereby possibly facilitating return to a new type of work.

Studies enrolling patients after 3–4 months of sick leaves usually show a return to work rate between 66 and 75% at twelve months [8,19]. Selecting the right treatment is of importance for the chance of returning to work. The prognosis of returning to work at 14 months was significantly better for patients with musculo-skeletal pain receiving multidisciplinary treatment instead of ordinary, 55% vs. 37% respectively [11]. In our protocol, full consideration is taken to the wishes of the clients, despite a long period away from work. The program is also multidisciplinary and is rooted in the healthy environment of a school. We consider our results satisfactory bearing in mind the bad prognosis for the group. Our results are not entirely comparable with the figures above.

The aim of our protocol is return to work. Therefore, the main emphasis is vocational training and re-education at the Technical School. Only minor emphasis was placed on physical training since intensive physical training and improved physical performance has not been found to play a crucial role in the rehabilitation of chronic lower back pain when return to work was used as the outcome criterion [20].

The choice of a school may influence the probability to go back to work or another profession. In our case, more than half of the clients who went to work on the labour market or to school had a technical school education. This may facilitate the rehabilitation process in this subgroup since the clients are already on "home ground". In our study, only six out of fifteen (40%) with a technical school education, were still on invalid pension at follow-up. The other large group, primary school, had fifteen out of twenty-two (68%) still on invalid pension at follow up time. This factor must be considered if a large group of clients with another background is to be rehabilitated.

Economical consequences of early retirement are twofold. On the one hand, there is the cost to society and the pension funds. In Iceland, in 1999, the estimated additional costs for the pension fund system for a client retiring at the age of 30 instead of 67 was $411,513 (ISK 29,880,005). For an individual aged 50 at early retirement, the costs is $285,535 (ISK 20,732,742). On the other hand, there is the accumulated direct income loss for the individual him/herself. This has been estimated as $557,658 (ISK 40,491,599) if the individual retires at 30 and $144,758 (ISK 10,510,881) at the age of 50. [9]. It is apparent that the client is the number one loser in this equation. Clearly, there is a lot of money to be saved in successful rehabilitation even if the treatment itself is costly. Light multidisciplinary rehabilitation treatment has been found to be cost effective for men with lower back pain and
5. Conclusions

Our client centred vocational rehabilitation program has managed to integrate the health care and the educational system and support 43% of the clients back to employment or education. The group of clients we were dealing with had a long absence from the employment market, almost three years on average. Long absence is usually associated with low probability of returning to work. Our results are therefore promising.

A larger group is needed for analysis to enable us to draw clear unequivocal conclusions.

Our program seems to be safe for the clients and no mishaps or complications have occurred so far. Rehabilitation in the “healthy” environment of the school has not in any aspect been a disadvantage, especially after the first year but at that time point the program began to work smoothly. The design of the program takes advantage of existing infrastructure in health care and education and is therefore relatively inexpensive.

6. Summary

- Client centred approach with integration of the health care and the education system appears to be effective in vocational therapy.
- Forty-three percent of clients went back to work or school after 2.9 years on average away from work.

References
