Improving Participation and Physical Activity for Survivors of Brain Injury Through a Library Volunteer Program

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Introduction

- In the United States, there are 5.3 million people living with TBI
- In 2013, there were 2.8 million TBI related emergency department visits, hospitalizations, and deaths in the United States.
  - Between 2007-2013 the rates of TBI related Emergency Room visits increased by 47%
- In Europe, 2.5 million people suffer a TBI a year

From:
https://www.cdc.gov/traumaticbraininjury/get_the_facts.html
https://www.center-tbi.eu/
Why Volunteering?

- Volunteering may benefit mental and physical health, and reduce mortality (Jenkinson et al, 2013, Roger et al, 2016)
Why Volunteering

Why Volunteering

Volunteering Provides:

- A way to be active out of the house (Malec and Ponsford, 2000)
- Socialization, especially for individuals excluded from other social spheres (Bashir et al, 2013)
- Personal sense of accomplishment (CNSC, 2007)

Volunteering can be

- Enjoyable
- An exercise in choice
Therapeutic Volunteering Program Development

- Multi-institutional collaboration
- Public library provided the volunteering program framework, location, and staffing.
- University faculty member, also a licensed Physical Therapist, provided the clinical expertise
- Hospital librarian provided connections and assisted in various other roles as needed.
Volunteers signed up for the program through the Sacramento Public Library’s website.

Volunteers in the therapeutic program attended an orientation session specific to the program, and then were asked to attend a check-in session every 2 months.
Program Orientation

- Orientation session every 2 months
  - Clinical assessments
  - Overview of public library
  - Overview of volunteering program along with examples of tasks they would be done by volunteers
  - Opportunity to speak with other volunteers in the program
Program Check Ins

- Check in session
  - Combined with Orientation session
  - Clinical assessments
  - Verbal feedback collected
Program Work

- Participants were supervised by the Volunteer Coordinator and were part of the general volunteer program, however they generally only worked during hours when the library was closed.

- Participants could volunteer as often or as little as they wanted/were able, but were encouraged to volunteer for at least 1 hour once a week.
  - Volunteers were given work appropriate to their fall risks.
  - Volunteers from this program were integrated into the general volunteer population of the library.
All identified therapeutic volunteering work involved activities requiring physical, cognitive and psychosocial skills.
## Therapeutic Volunteering – Specific Tasks

<table>
<thead>
<tr>
<th>Ambulatory tasks</th>
<th>Seated tasks</th>
</tr>
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<tbody>
<tr>
<td>Shelf reading</td>
<td>Highlighting</td>
</tr>
<tr>
<td>Book shelving</td>
<td>Sorting tabs</td>
</tr>
<tr>
<td>Finding missing/duplicate books</td>
<td>Toy sorting</td>
</tr>
<tr>
<td>Alphabetizing hold items</td>
<td>DVD cleaning</td>
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<tr>
<td>Finding ‘Pick list’ books</td>
<td>Sorting equipment/ instrument requests</td>
</tr>
<tr>
<td>Shelving music DVDs/ videos</td>
<td>Cutting scratch paper/sharpening pencils</td>
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Participants

- Recruited from support groups, Easter Seals and programs for survivors of brain injury at local community college
- Recruitment via in-person information presentations, flyers at local medical centers and care centers, and program announcements on the Sacramento Public Library webpage
- 3 cohorts from the 3 orientation sessions, separated by 2 months

10 started volunteering program
6 volunteered for at least 2 months
1 Continued volunteering > 6 months
Results

- 6 Volunteers worked between 4-8 hours a week for at least 2 months
- 5 Volunteers participated in seated and ambulatory tasks
- 1 Volunteer participated in seated tasks only, due to minimal fall risks identified on BBS
- No significant changes in the clinical measures
- Participants did report positive physical, mental, and social benefits via survey and oral feedback

<table>
<thead>
<tr>
<th></th>
<th>Pre</th>
<th>Post</th>
<th>P-value</th>
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</thead>
<tbody>
<tr>
<td>MoCA</td>
<td>21.267 ± 3.77</td>
<td>22 ± 5.32</td>
<td>0.428</td>
</tr>
<tr>
<td>BBS</td>
<td>50 ± 8.5</td>
<td>51.33 ± 5.12</td>
<td>0.258</td>
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<tr>
<td>TUG</td>
<td>19.5 ± 7.81</td>
<td>15.72 ± 2.81</td>
<td>0.153</td>
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<tr>
<td>OPTIMAL (confidence)</td>
<td>38.16 ± 13.9</td>
<td>40.83 ± 13.9</td>
<td>0.50</td>
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<tr>
<td>OPTIMAL (difficulty)</td>
<td>34 ± 11.57</td>
<td>36.66 ± 13.9</td>
<td>0.325</td>
</tr>
</tbody>
</table>
Survey for Participants

- Only 1/3 of participants return survey
- Survey distributed through Volunteer Coordinator
- Surveys collected anonymously
Survey Feedback from Participants

- Question: How has this program helped you?
  - Improved concentration and confidence

- Question: What do you like about this program?
  - Interactions with people. “I like to come here and meet people.”

- Any comments
  - “It keeps me interested”
  - “It is not work, it is fun.”
“The most impressive improvement, possibly, is my new ability to concentrate at length under pressure. Last semester, when sitting for a quiz or exam, even with significant accommodations, my anxiety level was quite high. I knew I was attempting to perform a task I could not handle. Now, when seated for an exam under the exact same conditions and accommodations, I stay calm, focus on the problem at hand, and work steadily to completion. Even though I still have testing accommodations, I am within ten minutes of finishing my exams within the time frame set for nondisabled students.”
Survey for Library Staff

- 100% return rate (4/4)
- Despite initial hesitation of supervising volunteers from special population, staff survey showed that library staff participated enthusiastically
Survey Feedback from Library Staff

- Question: How has this program helped you?
  - Reduced work load
  - Volunteers worked on projects library staff “couldn’t get around to”

- Some quotes from the survey:
  - “enjoyed seeing the positive effect it has on the volunteers first hand”
  - “they were so great to have and a pleasure to work with”
  - “they were some of the best volunteers I’ve worked with in the library system”
Discussion

- Even though our clinical measures did not show improvements, there were perceived benefits of wellbeing and community engagement.
Discussion

Benefits for therapeutic volunteering program participants:
- Improved overall activity level in the day, but not as an additional exercise commitment
- Active leisure, also known as fun
- Satisfaction and improved sense of worth
- Socializing, being outdoors – positive psychosocial aspects
Discussion

- Limitations:
  - Activity level not measured
  - No measure for participation found
  - Limited number of participants
Feasibility

- Value in designing an ongoing program for survivors of Traumatic Brain Injury and Stroke
- Support from library staff at multiple Sacramento Public Library locations and interest from Administration
- Interest from libraries both public and VA in developing similar programs
Barriers

- Transportation
- Re-injury (off site)
- Limited staff availability/interest
- Funding
The Therapeutic Volunteering Program developed in collaboration with the Sacramento Public Library helped to improve functional activity, community participation and quality of life for the participants.

Similar programs can be developed by other libraries or similar institutions.

Collaboration in the development and activation of these programs between local institutions is encouraged.
References

- Bashir, N., Crisp, R., Dyson, C., Gilbertson, J. 2013, Final evaluation of the Volunteering for Stronger Communities programme, Sheffield: Centre for Regional Economic and Social Research


Thank you!

Questions?

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