Social Participation and Navigation: A Usability Study
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Introduction
Social Participation and Navigation (SPAN) is a technology-based program designed to promote social participation in teenagers (14-19) who have sustained a traumatic brain injury (TBI). SPAN includes three major components:
1) iOS Mobile Application
2) Video Coaching
3) Didactic Information - Tips and Topics

Purpose & Objectives
A pilot study to assess the feasibility and usability of SPAN as an app-based intervention.
- Identify strengths and limitations of SPAN
- Summarize feedback on usability and feasibility
- Provide suggestions for future SPAN updates

Background
- Social support is crucial to psychological and physical well-being and is currently understudied.4
- Common complications with TBI affecting social participation include: maladaptive behaviors, difficulty with self-monitoring, impulsivity, irritability, poor insight.3

Participants
Four Tufts University - Boston School of Occupational Therapy students, took the dual role as participants/researchers:
- Male, 29 yo, Asian, post professional
- Female, 23 yo, Asian, post professional
- Female, 23 yo, Caucasian, entry level master’s
- Female 24 yo, Caucasian, entry level master’s

Procedure
Pre-SPAN:
- Social Participation and SPAN Surveys
- Weekly group meeting

Week 1:
- SPAN trial
  - Creation of profile, goals, steps and strategies
  - Progress Note
  - Weekly group meeting

Week 2:
- SPAN trial
  - Progression toward goal achievement
  - Progress Note
  - Weekly group meeting

Post-SPAN:
- Social Participation and SPAN Surveys
- Summative Feedback
- Weekly group meeting

Data Analysis
- Examined qualitative and quantitative data
- Collaborative review and discussion in weekly group meeting

Results

Participant Feedback

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<tr>
<th>Strengths of SPAN</th>
<th>Common Responses</th>
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<tr>
<td>- Creation of own strategies- in planning steps, users are able to input their own strategies</td>
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<td>- Availability of saved strategies- previously used strategies available for use with new goals</td>
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<td>- Previous goal list- after completed, goals remain visible for future reference</td>
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<td>- Steps and Strategies- distinguishing the difference between them was challenging and unclear</td>
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<td>- My Goals and Next Steps- redundancy between the two tabs interfered with process flow</td>
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<td>- Lack of Reminders- users failed to meet set deadlines</td>
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<td>- Compatibility- application only designed for iOS software (iPhones/iPads)</td>
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<td>- No progress monitoring- successful completion of steps and goals is not celebrated or tracked</td>
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<th>Limitations of SPAN</th>
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<td>- Calendar View- visual representation of timelines, allowing users to set long term goals and repeat goals biweekly, monthly, etc.</td>
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<td>- Push Notifications- reminders of upcoming due dates</td>
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<td>- Elimination of Next Steps Tab- incorporate all aspects into My Goals tab</td>
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<td>- Interactive Planning Wizard- with capabilities to act like an online coach</td>
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<td>- Strategy Bank- separate location for retrieval of previously used strategies to prevent an overwhelming, extensive drop down menu</td>
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Discussion
- Participants found creating self-made goals, steps, and strategies was useful for achieving goals, consistent with a previous study.4
- Participants perceived that SPAN would be useful for the target population with modifications and coaching.
- The use of push notifications was both supported by participants and cited by prior research as effective for task completion.3
- Suggestions are aimed at modifications that will ensure the target population can successfully navigate the application when coaching has been terminated.4
- Limitations include: small sample size; not representative of target population; absence of coaching component and different frames of reference among participants when answering surveys.
- Because of the above limitations, participants rated SPAN as more understandable than useful.

Future Work
Results from this pilot will inform updates made prior to phase three of the larger study, a 10-week trial with teenagers with TBI (n=20) paired with college student coaches.

References

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