Results informed Phase 2 of the study. SPAN will be designed to support teens with TBI. The ultimate aim of this three phase study is to develop an app-based coaching intervention to promote social participation for teens with TBI who are lacking. Content analyses were used to organize data (from interviews, focus groups and web-based resources) into key content categories and responses. Table 1: Demographics

<table>
<thead>
<tr>
<th>College student demographics</th>
<th>Teenager demographics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Age range</td>
</tr>
<tr>
<td>Male 30% (F)</td>
<td>18 – 20 years old</td>
</tr>
<tr>
<td>Female 70% (M)</td>
<td>20 – 40 years old</td>
</tr>
<tr>
<td>Male 58% (F)</td>
<td>41 – 55 years old</td>
</tr>
<tr>
<td>Female 42% (M)</td>
<td>56 – 60 years old</td>
</tr>
<tr>
<td>Race &amp; Ethnicity</td>
<td>White 70% (F); Black 30% (M)</td>
</tr>
<tr>
<td>Asian 5% (F); Latino 10% (M)</td>
<td>White 50% (F); Black 50% (M)</td>
</tr>
<tr>
<td>Mixed Race 5% (M)</td>
<td>White 70% (F); Black 50% (M)</td>
</tr>
<tr>
<td>Family background</td>
<td>TBI Status</td>
</tr>
<tr>
<td>History of TBI</td>
<td>No TBI 70% (F)</td>
</tr>
<tr>
<td>n=4</td>
<td>History of TBI 50% (M)</td>
</tr>
</tbody>
</table>
| n=6                        | Summary

Table 2: Social Participation Barriers

<table>
<thead>
<tr>
<th>Teens without TBI</th>
<th>Teens with TBI</th>
</tr>
</thead>
</table>
| Lack of understanding and empathy from peers | "They don't understand that we change, and usually for the better."
| Talking with or excluding peers is exhausting | Right after my injury, I was kind of standoffish and not really wanting to be anything with my friends, but now I try to initiate stuff and it's more difficult because they're just like, I want, I thought you were the one I want to hang out with."
| People treat them differently post-TBI | "If there were a less intense option or a place to play 'hooky' for fun, that would probably help."
| Lack of a companion to explore activities | Also, lack of regularity would not be good, or not an expectation to be there every week for the game if you have a bunch of other work to do."

Table 3: SPAN Phase 1 Feedback

<table>
<thead>
<tr>
<th>Categories</th>
<th>Key Responses</th>
<th>Illustrative Quotes</th>
</tr>
</thead>
</table>
| Positive feedback & concerns | College students are reliable; they will need to be understanding, good listeners, positive, and available | Having someone I trust to say, 'How do you think people perceived that?'' could be good for when mistakes are made and you know you're isolated as a result. You need to express yourself and learn from your mistakes."
| Curriculum | "It was among anonymous, we could say 'hey, this is the problem I had today'. You might be able to relate to it."
| College student without TBI | "I would be all for letting him be in control of it."

Purpose

The purpose of Phase I of this study was to systematically examine the perspectives of stakeholders in order to inform the SPAN design and functionality. The three research aims were to:

1. Increase understanding of factors influencing social participation among teens with TBI
2. Identify preferred approaches for facilitating and supporting social participation
3. Describe perspectives about feasibility and key features to consider for SPAN: Use of smart phones, mobile apps, college student coaches, and strategies and information resources.

Key Methods

This multi-site study had 4 participant pools: college students (n=77), mainly from The University of Wisconsin-Madison, 2010; college students with TBI (n=17 and Children's Health Care of Atlanta, n=9), college students with TBI (University of Wisconsin-Madison, n=4, seniors), teens without TBI (Tufts, n=6), and teens with TBI and their parents (Cincinnati Children's Hospital, teens, n=6; parents; n=7). Data were collected via survey, interviews and focus groups. Surveys were developed to collect data on technology use, preferred activities and participation frequency, as well as barriers and facilitators to participation. Interview and focus group guides focused on barriers and supports to participation, views about college student coaching and key content and features for SPAN. Content analyses were used to organize data (from interviews, focus groups and web-based resources) into key content categories and responses.

Background

- Teens with traumatic brain injury (TBI) often experience limitations in their social participation within school and community activities.
- Social participation is associated with enhanced quality of life and is a primary rehabilitation outcome.1-3
- Despite evidence that social participation is critical for successful outcomes, evidence-based interventions to promote social participation for teens with TBI are lacking.4
- Teens with TBI and their parents underscore concerns with social isolation, lack of meaningful friendships, and exclusion from social activities and opportunities.5,6
- The ultimate aim of this three phase study is to develop an intervention, Social Participation and Navigation (SPAN), to promote social participation among teens with TBI via smart phones, a mobile app, college student coaches and links to a virtual community.
- SPAN will be designed to support teens with TBI in developing and achieving social participation goals with assistance from coaches, a mobile app, strategies and information resources.

Discussion

- The teens with TBI experienced feelings of isolation from peers, fatigue, behavioral challenges, life balance difficulties, seizure and a lack of understanding from peers about the effects of TBI.
- Consequently, teens with TBI experienced unique barriers to social participation.
- Teens and college students without disabilities were more likely to report systematic strategies for facilitating social participation, such as scheduling things ahead, checking lists of weekly activities, and joining clubs.
- There was consensus about the value of having college student coaches help promote teens' social participation.
- Results gave insights into ideal qualities of prospective coaches (e.g. availability, interpersonal skills), the degree to which parents should be involved, the pros and cons of having a social chat room, and the type of training and supervision needed for college students.
- Results informed Phase 2 of the larger study that involved initial development of SPAN and design of the prototype app.
- Usability and pilot testing is underway to examine feasibility and obtain feedback to inform further revisions.
- Teens with TBI have paired with college student coaches from two universities to help teens use the SPAN app and web-based resources to identify, create and implement plans to achieve social participation goals.

References

3. Wells, R. L. & Wells, P. (1998). Time constraints, due to school and other extracurricular activities. "It would be good for when mistakes are made and you know you're isolated as a result. You need to express yourself and learn from your mistakes."
5. Dabbs, J., Barcellona, B. & Farnsworth, R. D. (2011). Structured training at the beginning would be helpful because it's important for the teen to know how to engage the kids, how to maintain sensitive to certain things.
6. College student without TBI

Acknowledgements

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