Wii™-habilitation and aphasia groups: Systematic observation of communicative acts during four aphasia Wii™ groups

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Background

Wii-habilitation
- Wii™-habilitation or Wii™ therapy is the use of the Nintendo® Wii™ gaming system in a rehabilitative capacity.
- Wii™-habilitation has emerged recently in physical therapy journals and in news and press releases from hospitals and rehabilitation centers across the world (Gacht, Bonaiti, Fike, Hutch, & Guasner-Bovell, 2008; Tanner, 2008; Coyne, 2008).
- Current reports discuss using Wii™ Sports (2007) to enhance motor skills.
- Reports of using the Wii™ in senior centers and nursing homes indicate benefits related to recreation and socialization (Waltgren, 2008).
- Information related to Wii™-habilitation for people with aphasia (PWA) is limited.
- Interest in virtual reality technology applications for aphasia research is rising, and the use of a commercially available system, such as the Wii™, should be more fully explored (Busbaun, 2008).

Adler Aphasia Center:
- Guided by the Life Participation Approach to Aphasia (LPA/Project Group, 2001).
- Provides group programming for PWA on a 15 week trimester schedule.
- Members participate in groups facilitated by speech-language pathologists, trained volunteers, or peers two days a week for three hours each day.

References

Preliminary review suggests the use of Nintendo’s® Wii™ Sports (2007) with PWA provides psychosocial benefits including experiencing group camaraderie, virtually engaging in a past activity, and sharing the experience with others. It also provides opportunities to communicate reactions, celebrations, disappointments, assistance, support, anticipation, competition, humor, and direct responses to other’s questions or comments.

Discussion

Preliminary review suggests the use of Nintendo’s® Wii™ Sports (2007) with PWA provides psychosocial benefits including experiencing group camaraderie, virtually engaging in a past activity, and sharing the experience with others. It also provides opportunities to communicate reactions, celebrations, disappointments, assistance, support, anticipation, competition, humor, and direct responses to other’s questions or comments.

Future research possibilities are vast and include refining this qualitative review, comparisons with traditional aphasia group activities, exploring use of other Wii™ applications, and studying factors that might impact communication level.

Methods

Aphasia Wii™ Groups:
- Two weekly one hour aphasia Wii™ groups were offered during consecutive trimesters.
- Group B was facilitated by a speech-language pathologist and Groups C and D by trained volunteer facilitators.
- All groups used the bowling application of the Wii™ Sports (2007) game. Some groups attempted additional sports as the semester progressed.

Participants:
- Participants elected to join the Wii™ group when selecting their program prior to the start of the semester.
- A total of 23 PWA, representing a range of aphasia types and severity levels, participated in the four groups with two members participating during both semesters (Table 1).
- Members with inconsistent attendance were excluded from the reported data, resulting in a total of 19 participants for analysis.

Table 1: Group Demographics

| Gender | Male | Female
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<tbody>
<tr>
<td>Group A</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Group B</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Group C</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Group D</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
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Support – offering verbal, non-verbal, or physical encouragement to others

Definition & Examples:
- Reaction – a non-emotional response to or comment on actual performance
- “That was a slider.”
- “Maybe you’ll get one, two, three (counting pins)”
- Assistance – providing or giving information to improve performance
- “A little more speed would cut right through them.”
- Member moves the ball line left while another member lines up shot.
- Celebration/Disappointment – expressing joy/disappointment in the outcome
- Member dances back to his seat after getting a strike.
- “Damn it, I thought I could do it.”
- Support – offering verbal, non-verbal, or physical encouragement to others
- Group members cheering on and encouraging another member who has difficulty using the remote at the start of her turn.
- Anticipation – predicting performance success or failure
- “Yeah, I think you’ll hit it.”
- “No, too much oil on the lane.”
- Question/comment response – direct question or response to posed question or comment by another member
- “You think so? I think so too.”
- “Too much oil on the lane.”
- Competition – friendly rivalry between participants
- Member laughing and clapping hands while watching his biggest competitor’s last pinobble but stay standing.

Types of Communicative Acts (Figure 1):
- 120 examples of communicative acts were collected.
- The first and third authors classified each example into one or more communicative act types. This resulted in 186 classifications represented by the 8 communicative act types described below.

Figure 1: Classification of Communicative Acts

| Frequency of Communicative Acts (Table 2): Average number of communicative acts (verbal and non-verbal) per person, per session: 35.16
| The majority of these acts were comments related to the performance of other group participants.

Table 2: Frequency of Communicative Acts

| Type of Communicative Acts | Frequency
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Verbal</td>
<td>34</td>
</tr>
<tr>
<td>Non-verbal</td>
<td>26</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
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Findings

Types of Communicative Acts (Figure 1):
- Reaction
- Celebration/Disappointment
- Assistance
- Support
- Anticipation
- Competition
- Question/comment response
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Psychosocial Benefits (Figure 2):
- 13 of 19 participants responded to a post-participation survey to identify the benefits they gained from participating in the aphasia Wii™ group.

Figure 2: Psychosocial Benefits of Aphasia Wii Group

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