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## Introduction

Brain injury survivors experience difficulties with setting, managing, and achieving goals due to various neurological and psychological conditions (e.g., dementia, depression, intellectual disabilities, multiple sclerosis, Parkinson's disease, and schizophrenia).<sup>7</sup> The attainment of personal goals provides the individual with an opportunity for positive mental health outcomes. There is a need for interventions that provide effective goal setting and goal achievement strategies. The ReachMyGoals (RMG) App is designed to assist individuals in the setting, management, and achievement of personally meaningful goals. Specifically, the RMG App helps individuals establish SMART goals and incorporate principles of self-regulation to assist them in monitoring their progress and identifying goal-related successes and challenges.

## Problem

It is challenging for people living with acquired brain injury (ABI) to successfully achieve daily goals.<sup>1,12</sup> Goal setting and goal achievement are an important part of brain injury rehabilitation programs as goals are a means to measure progress and motivate individuals to participate in daily activities.<sup>5,9</sup> This allows individuals to optimize successful completion of daily life tasks at home, school, and work. Smartphone apps are commonly used as assistive technology for individuals living with an ABI as they are useful memory and organizational aids.<sup>14</sup> However, there are certain barriers that inhibit individuals from using these apps, such as difficulty with learning to use an app.<sup>14</sup>

## Purpose

The purpose of the study was to evaluate whether or not differing levels of brain injury survivors have the functional and cognitive ability to learn how to use the ReachMyGoals (RMG) App. Specifically, the research investigators aimed to measure participants' procedural accuracy in following instructions to perform specific functions on the app.

## Research Question & Hypothesis

- Can individuals living with an ABI learn to use the RMG App?
- If individuals have an ABI, they can learn how to use the RMG App.

## Methods

The current study took place over 2 days, with a 4 day break between sessions. Nine students (four males and five females) were selected from the Coastline Acquired Brain Injury (ABI) Program in Newport Beach, CA. The program consists of four levels (tiers) of post-brain injury level of functioning. However, none of the participants in Tier 1 desired to participate in the study. All students had no previous exposure to the RMG App. Once selected and participant consent was obtained, students attended a 60 minute training session on the first day of the study. During this training session, the purpose of the research study was explained and students were assisted with downloading the app onto their devices. Students were introduced to the RMG App and were shown how to access 12 video tutorials on the RMG website. Students viewed the first video at the training session. They were instructed to watch the remaining 11 videos before the group met again, 4 days later. They were also informed that a posttest would be administered to evaluate if they had learned to use the app. On the second day of the study, a 41-item posttest was uploaded on the RMG website. The posttest required students to follow a set of instructions in order to perform specific functions on the app. Students' responses on the posttest were recorded on a report generated from the RMG App and emailed to the research investigators for subsequent evaluation. Based on the information generated from the reports, research investigators were only able to evaluate 19 of the original 41 items presented on the posttest. Each task was evaluated as accurate (1 point) or not accurate (0 point). Students were determined to have reached a level of proficiency in learning to use the app if they scored 70% or higher on the posttest. A copy of the revised posttest is included at the right

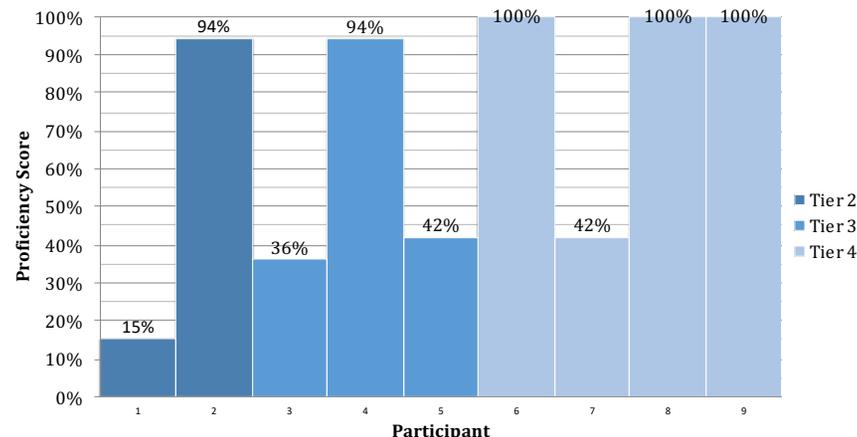


Figure 1. Proficiency scores grouped by Tier level. Proficiency scores of 70% or higher were considered successful learning of the RMG app.

## Results & Discussion

The results suggest that individuals living with an acquired brain injury will vary in their ability to learn how to use the RMG App. Limitations of the current study include a small sample size. Future research should comprise a larger selection of participants and include a control group to evaluate the effectiveness of video tutorial training on participants' learning of the RMG App. The posttest is yet another limitation as it is not an accurate assessment of participants' learning. In future studies, reports generated from the app should be revised to include all information assessed for in the posttest. Findings yielded from the current pilot study are intended to inform future studies that assess learning, utilization, and implementation of the RMG App in the daily lives of individuals with brain injury.

### POST ASSESSMENT CHECKLIST

- ❖ Create a new goal using the "Regular Exercise" goal template using the following information:
  - 1. Short title: Walk Daily.
  - 2. Attainable: I can find 20 minutes each morning to walk.
  - 3. Relevant: My doctor told me walking is good for my health.
  - 4. Set the "Choose Exercise" task as completed, since the goal is to walk.
    - Open the "Get Equipment" task
    - 5. Enter November 11th as the due date.
- 6. Create a new goal called "Complete Homework" using the Step-by-Step Guide.
  - 7. Attainable: I have time after school to work on homework.
  - 8. Relevant: I want to graduate from the ABI Program.
    - Enter the following tasks:
      - 9. Short Title: Schedule Time
        - 10. Due Date: Today
        - 11. Progress: 100%
      - 12. Short Title: Check Google Classroom
        - 13. Due Date: Dec. 14th
  - 14. Complete a Weekly Check-in for the Walk Daily goal.
    - 15. Goal's Successes: I decided what exercise to do and checked with my doctor on how long I should walk.
    - 16. Goal's Challenges: I struggled deciding on the right water bottle to use.
- ❖ Generate the following:
  - 17. Success Journal for the last week. Email it to [abiresearch@gapps.coastline.edu](mailto:abiresearch@gapps.coastline.edu).
  - 18. Challenges Journal for the last week. Email it to [abiresearch@gapps.coastline.edu](mailto:abiresearch@gapps.coastline.edu).
  - 19. A report of non-completed goals. Email it to [abiresearch@gapps.coastline.edu](mailto:abiresearch@gapps.coastline.edu)