

GOOGLE CALENDAR: USING TECHNOLOGY TO INCREASE INDEPENDENCE IN TRAUMATIC BRAIN INJURY SURVIVORS



SUMMARY OF RESEARCH FINDINGS

This research summary provides an overview of a research project completed through the Institute for Safety, Compensation and Recovery Research (ISCR). For more information, visit the ISCR website at www.iscr.com.au

This study investigated the use of Google Calendar to improve independence for clients who have sustained a traumatic brain injury and exhibit prospective memory loss whereby they have trouble recalling planned activities and tasks that they need to complete. Traditional compensatory approaches to improve independence have included encouraging clients to keep diaries/calendars and task notebooks. These strategies are passive in nature and require the client to remember to look at them. The introduction of new technologies including smart phones allows a more active approach to remind clients of scheduled tasks and activities. This study sought to determine whether Google Calendar, a free, worldwide product could be used as a compensatory strategy to increase independence for clients with traumatic brain injury.

WHAT WAS DONE IN THIS STUDY?

The pilot intervention was undertaken with 12 participants who had sustained a traumatic brain injury and exhibited prospective memory loss. The intervention was run by participants' occupational therapists, who were given training modules and a manual to work with their clients to use Google Calendar as a compensatory strategy for memory. Prior to commencing the intervention, participating clients and their carers identified the activities and goals that they wanted to use Google Calendar for.

Over the eight-week intervention period, occupational therapists trained their clients (and where available, their carers) on the use of Google Calendar, including how to download the app, how to enter information and sync the calendar, as well as how to respond to calendar alerts and reminders.

To measure the success of the intervention, the Goal Attainment Scale was used. This scale measures and assesses the achievement of specific goals, specifically in this case, those related to the client's ability to remember tasks and activities without support. Baseline data was recorded for two weeks with participants using existing strategies. This was compared to the same measures collected during the intervention.

Following the intervention, focus groups with the treating occupational therapists were also undertaken to better understand the therapists' perspectives on using the intervention and whether they believed it was useful and effective at increasing independence in their clients.

WHAT WAS FOUND?

The study found that using Google Calendar improved participants' ability to independently undertake planned tasks and activities. This was not a result of improved memory, but rather a result of the use of the tool to compensate for memory loss.

All of the participants have continued to use Google Calendar following the study. The use of Google Calendar varied among participants, with five participants completely independent in its use after the intervention and a further five participants able to use Google Calendar with assistance through being prompted to enter information into it. The other two participants were unable to use it independently, but the strategy is still being used by carers and support workers to assist them to plan their week and check their daily activities.

A joint initiative of

As a secondary impact of the use of the strategy, a reduction of attendant care hours was also observed. The average reduction in attendant carer hours was 6.5 hours, however one client reduced attendant care by 16.5 hours per week because of the introduction of Google Calendar. A second client reduced attendant hours by 15.5 hours, partly as a result of the introduction of Google Calendar and other strategies.

Feedback from occupational therapists involved in the study found that Google Calendar was used most consistently by clients who were able to identify how Google Calendar could benefit them and who received active training and support from their occupational therapists.

WHAT ARE THE IMPLICATIONS OF THE RESEARCH?

- This research provides further evidence that active strategies that provide an automated alert are much more likely to increase a client's ability to independently undertake tasks and activities than passive strategies that require the client to look for prompts.
- When implemented effectively, Google Calendar has the potential to increase independence for clients in their day-to-day activities and subsequently reduce attendant hours required by the client.
- The effective use of Google Calendar requires a hands-on approach by occupational therapists. Occupational therapists need training and support in the delivery and roll out of the use of Google Calendar for their clients.
- Involvement of families and carers in implementing the use of the calendar should be encouraged to maximise outcomes.
- Support may be needed following the intervention to maintain the effective use of Google Calendar.

PROJECT OVERVIEW

Project title The use of Google Calendar to increase independence in target activities in survivors of traumatic brain injury (ISCRR Project 100)

Themes Traumatic brain injury, independence, client outcomes, technology

Researchers Associate Professor Natasha Lannin, Alfred Health/La Trobe University)
Susan Petrie, Independent Rehabilitation Services
Kate Phillips, Independent Rehabilitation Services

Relevant outputs Google Calendar: Using Technology to increase independence in TBI survivors