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**Enabling face-name recognition after brain injury using mobile  
technology**

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## ABSTRACT

Acquired brain injury (ABI) is a term that encompasses a wide range of mechanisms that cause damage to the brain, however in New Zealand the most common causes of ABI are traumatic brain injury (TBI) and stroke. One of the most commonly reported and enduring difficulties from TBI and stroke is in memory function, however research also indicates that these brain injuries also negatively impact affective functioning, as well as social and interpersonal relationships. Although recovery from brain injury can to some degree be predicted from measures of injury severity, the course of recovery can be aided by cognitive rehabilitation. One of the most effective types of cognitive rehabilitation for prospective memory difficulties is the use of external compensatory strategies using electronic devices such as mobile phones. However, no studies could be found which have investigated the use of mobile phones in supporting those who have face-name memory difficulties following ABI. These face-naming difficulties have been associated with increased social isolation and reduced wellbeing in survivors; therefore finding an effective intervention is an important goal.

The present study included the development of an iPhone application to act as an external compensatory device to support face-naming. Three hypotheses were tested through a single-case research design: (1) that the device would be effective in improving participants' face-naming, (2) that improved face-naming ability would result in improved social interactions, and (3) improved face-naming would result in improved wellbeing. The results clearly indicated that the face-name application produced improvement in functional face naming across all participants, and participants also reported that they found the application helpful. Approximately half of the participants showed improvement in aspects of social interaction thought due to the intervention, but fewer than half showed improvements on measures of wellbeing. A significant correlation was found between how often the application was used, and changes in wellbeing. Recommendations for future research are discussed, as are implications for practice.

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