Pediatric traumatic brain injury (ped-TBI) results in long term challenges for families, including increased parental stress and behavioral problems in children. Compounding these difficulties is that many families live far from therapy centers or do not have local therapists experienced in ped-TBI. Web-based interventions may be able to help this situation. To test this, researchers recruited 6 families from an urban children’s hospital trauma register to participate in a home-based, web intervention called “Family Problem Solving” (FPS). Of the six ped-TBI, 2 were female, 4 were male, all between ages 5-16. Computers were installed in the families’ homes, and left as compensation for participation. Then, families each met with a therapist for an initial discussion and training on the FPS. Thereafter, families did regular web-based sessions together, and met with therapists every 1-2 weeks. Results showed significant decreases in parental stress on many scales including perception of burden and depression. Children showed significant improvement in social behavior, though not in meta-cognitive skills. Feasibility of this intervention is demonstrated by 100% adherence of all families. Though the sample is too small and specific to be widely generalized from, and compensation may have influenced outcome, it still provides sufficient evidence that a web-based family intervention can successfully address parental stress and child behavior problems following pediatric traumatic brain injury. More research is recommended for the impact of face-to-face meetings on developing therapeutic allianceand large, randomized trials for testing web-based interventions for families. (241 words)

Abstract

Objective To report preliminary efficacy data from a Web–based family problem–solving intervention to improve parent and child adaptation.

Method Eight parents and six children with moderate to severe traumatic brain injury (TBI) who were injured more than 15 months earlier (M = 16 months) participated in the intervention. Families were given computers, Web cameras, and high–speed Internet access. Weekly videoconferences with the therapist were conducted after they completed self–guided Web exercises on problem–solving, communication, and antecedent behavior management strategies. Results Paired t tests comparing pre– and post–intervention scores revealed significant improvements in injury–related burden, parental psychiatric symptoms, depression, and parenting stress. There were also significant reductions in antisocial behaviors in the injured child, but not in self–reported depressive symptoms. Conclusions These findings suggest that a computer–based intervention may successfully be used to improve both parent and child outcomes following TBI in children.

Key words telehealth ♦ acquired brain injury ♦ intervention ♦ problem–solving ♦ online