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Student Research

# Riding the Waves: Therapeutic Surfing to Improve Social Skills for Children with Autism

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**Keywords:** *recreational therapy, surfingm, autism, social skills*

**Search Terms:** Children or Adolescents AND Autism AND Surf AND Social; Children or Adolescents AND Autism AND Therapeutic Surfing AND Social; Children or Adolescents AND Autism or Developmental Disorder AND Therapeutic Surfing AND Social

**Years:** 2009–2015

**Databases:** SPORTDiscus, Academic OneFile, EBSCOhost, ERIC, Hospitality & Tourism Complete, PsycARTICLES, PsycINFO, Psychology and Behavioral Sciences Collection, and Google Scholar

**Number of Articles Reviewed:** 6

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## Summary of Research Findings

Children with autism may have difficulties forming and maintaining meaningful relationships with their peers (Reichow & Volkmar, 2009). These difficulties can lead to social isolation (Delaney & Madigan, 2009 as cited in Clapham, Armitano, Lamont & Audette, 2014) and can impact their social, emotional and cognitive development; academic achievements (Stichter, Randolph, Gage, & Schmidt, 2007 as cited in Cavanaugh & Rademacher, 2014); and, self-esteem (Chamberlain, Kasari, & Rotheram-Fuller, 2007 as cited in Cavanaugh, Rademacher, S., Rademacher, J., & Simons, 2013). Thus, it is important to have children with autism involved in interventions that utilize the proper techniques to effectively teach social skills, such as therapeutic surfing camps.

The surfing camps highlighted in this literature review covered three different surfing programs that included participants ranging from 5 to 18 years old with varying levels of developmental disabilities and behavioral problems. These programs lasted two days, six or eight weeks, and the number of participants involved ranged from 11 to 121. The two-day surfing camp taught participants the physical skills necessary to surf then utilized group activities, socials, and self-reflection to promote interactions and build social skills with peers and staff (Cavanaugh & Rademacher, 2014; Cavanaugh et al., 2013). The two-day camps utilized video-modeling, a promising evidence-based practice; and social skills groups, an established evidence-based practice, in order to effectively teach the desired social behaviors (Reichow & Volkmar, 2010). The Wave Project, a six-week surfing intervention, utilized one-on-one surfing training within a group setting to develop confidence, self-reliance, self-

management, and social skills in children with ASD (Colpus & Taylor, 2014; Godfrey, Devine-Wright, & Taylor, 2015). The goals of the eight-week adapted surfing program were primarily centered on developing physical surfing skills (Clapham et al., 2014). Through learning these movements and interacting with volunteers and peers, the children were also able to improve across many domains, including the psychosocial domain.

Overall, the surfing camps resulted in significant outcomes for assertion and empathy on the Social Skills Improvement System-Parent Report (Cavanaugh & Rademacher, 2014); responsibility and engagement on the Social Skills Improvement-Student Report (Cavanaugh & Rademacher, 2014); and, positive functioning, emotional wellbeing, resilience, self-esteem, vitality, friendship, social trust, physical health, and enjoyment in the outside environment as measured via individual questions pulled from various standardized measures, along with author developed items, using paired sample t-tests (Godfrey, Devine-Wright, & Taylor, 2015). Although the results didn't reach the significant level, there were positive outcomes for social competence, social skills, and self-concept as measured by the Parent Perceptions of the Surf Camp Curriculum questionnaire designed by the researchers (Cavanaugh & Rademacher, 2014); communication, cooperation, responsibility, engagement, and self-control as measured by the Social Skills Improvement System-Student Report (Cavanaugh & Rademacher, 2014); self-confidence as measured via behavioral observation by program leaders (Clapham et al., 2014); confidence, self-esteem, and well-being from participant self-evaluations (Colpus & Taylor, 2014); and, motor skills, social skills, behavior, and re-engagement with school

from parental formal feedback (Colpus & Taylor, 2014). Improvements in these skills are integral to forming meaningful social supports, and act as a basis to form new skills to further these improvements (Cavanaugh & Rademacher, 2014). Long-term benefits from these programs were seen in peer relationships that extended past the camp (Cavanaugh et al., 2013) and participants' continuation in future camps (Godfrey et al., 2015), which indicates the longevity of the positive benefits of the surfing camps.

Despite the positive findings in the studies, research on this topic is scarce, and multiple limitations were identified including possible biases within self-reports, lack of control groups, limited evaluation sample, response-bias effects, and the locations of the camps (Cavanaugh & Rademacher, 2014; Colpus & Taylor, 2014; Godfrey et al., 2015;). Additionally, two of the articles in this review were more descriptive in nature (how to develop and implement a surfing program and its positive effects), rather than studying the effectiveness of the surfing program (Cavanaugh et al., 2013; Clapham et al., 2014). We however still included the information from these two studies as sources for programming with practitioners who are interested in implementing and/or researching the outcomes of a therapeutic surfing program for children with Autism.

### **Knowledge Translation Plan**

Certified Therapeutic Recreation Specialists (CTRS®) who are trying to improve the social functioning of children with Autism should consider utilizing therapeutic surfing as an evidence-based intervention, due to the positive outcomes that have been noted. In order to achieve optimum results, it is recommended that therapists consider utilizing

techniques found across the studies in this review including: 1) incorporate activities that build social and cooperative skills, surfing activities that work on motor skills, sensory experiences, and family involvement into the overall experience (Cavanaugh et al., 2013); 2) identify each participant's learning style and skill baselines beforehand, so that volunteers and staff can teach skills and communicate with them in the most effective way (Clapham et al., 2014); 3) provide each participant with at least one volunteer or staff member to assure proper surfing techniques are followed while offering the participant a constant social opportunity (Cavanaugh & Rademacher, 2014); 4) consider using a combination of video modeling and social skills groups within the therapeutic surfing camp, as they have been identified in the literature as effective evidence-based interventions for improving social skills (Reichow & Volkmar, 2010); 5) teach specific social skills prior to and during camp within surfing and non-surfing activities to ensure short-term and long-term maintenance of these skills (Cavanaugh et al., 2013); 6) incorporate the family of the participants in the social activities to foster a stronger sense of community (Cavanaugh et al., 2013); and, 7) focus on ways to integrate this social learning into the participant's school environment, encourage participants to return to future surfing camps, and allow them to act as mentors to future participants so participants can continue to be socially active outside of the camp (Cavanaugh et al., 2013; Godfrey, Devine-Wright, & Taylor, 2015). Lastly, therapeutic surfing camps have been noted to be a "camp without failure," and the therapist should assure that their camp holds the same meaning, as that allows for the participants to feel free to be creative and perform to their own abilities without the fear of failing (Cavanaugh et

al., 2013). Figure 1 illustrates the above recommendations, along with significant and positive findings from the reviewed studies. See Cavanaugh et al. (2013) and Clapham et al. (2014) for more details about planning and organizing a thera-

peutic surfing camp (e.g., inclusion criteria, consent forms, comfort level in the ocean, information gathering from caregivers, volunteer training, safety orientation, beach access, lifeguards, surf equipment, etc.).

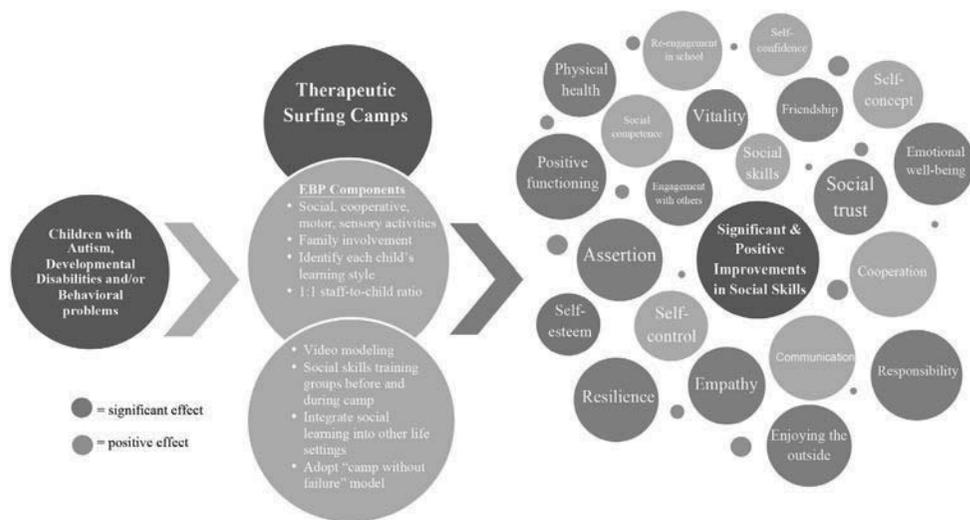


Figure 1. Knowledge Translation Plan

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