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## Effect of Exercise Intervention on Social Ability of ADHD Children

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### Abstract

The incidence rate of attention deficit hyperactivity disorder (ADHD) is 7.25% in China. The main symptoms are attention deficit laxation, behavior impulsivity, social disorder and so on. Children aged 3-6 are in the golden age of social ability development. Therefore, if ADHD children at this age do not get correct and effective interventions, it will have a far-reaching impact on their social ability. In order to explore new intervention measures for ADHD children and improve their social ability, this study will intervene ADHD children through sports intervention, so as to provide theoretical and experimental basis for improving their social ability. A total of 12 hyperactivity prone children aged 3-6 years were recruited in this study. The subjects were intervened through engaging in KDL sports game, parent-child homework and parent-child carnival for four months. We used Achenbach children's behavior scale (CBCL) to evaluate children's social ability from activity ability, social ability and learning. In order to reduce the experimental error, before using the CBCL scale, the researchers have been trained in learning and understanding the specific rules and scoring methods of the CBCL scale to ensure that evaluated data have good reliability and validity. After data collection, SPSS 23.0 was used to conduct statistical analysis on the data. The results showed that after the intervention, the ADHD children significantly improved their social ability from the baseline to the post-test ( $T_{\text{social}} = -1.39$ ,  $p_{\text{social}} = 0.01 < 0.05$ ). However, the results showed that there was no significant difference in children's activity ability and learning over time ( $T_{\text{activity}} = 0.42$ ,  $p_{\text{activity}} = 0.533 > 0.05$ ;  $T_{\text{learning}} = -0.12$ ,  $p_{\text{learning}} = 0.756 > 0.05$ ). Exercise intervention can effectively improve the social ability of ADHD children, which is more harmonious with their peers and more able to communicate with their families. We suggest to carry out exercise intervention for more children with ADHD and to integrate behavioral therapy with multi-directional intervention.

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### Abstract

The incidence rate of attention deficit hyperactivity disorder (ADHD) is 7.25% in China. The main symptoms are attention deficit laxation, behavior impulsivity, social disorder and so on. Children aged 3-6 are in the golden age of social ability development. Therefore, if ADHD children at this age do not get correct and effective interventions, it will have a far-reaching impact on their social ability. In order to explore new intervention measures for ADHD children and improve their social ability, this study will intervene ADHD children through sports intervention, so as to provide theoretical and experimental basis for improving their social ability. A total of 12 hyperactivity prone children aged 3-6 years were recruited in this study. The subjects were intervened through engaging in KDL sports game, parent-child homework and parent-child carnival for four months. We used Achenbach children's behavior scale (CBCL) to evaluate children's social ability from activity ability, social ability and learning. In order to reduce the experimental error, before using the CBCL scale, the researchers have been trained in learning and understanding the specific rules and scoring methods of the CBCL scale to ensure that evaluated data have good reliability and validity. After data collection, SPSS 23.0 was used to conduct statistical analysis on the data. The results showed that after the intervention, the ADHD children significantly improved their social ability from the baseline to the post-test ( $T_{\text{social}} = -1.39$ ,  $p_{\text{social}} = 0.01 < 0.05$ ). However, the results showed that there was no significant difference in children's activity ability and learning over time ( $T_{\text{activity}} = 0.42$ ,  $p_{\text{activity}} = 0.533 > 0.05$ ;  $T_{\text{learning}} = -0.12$ ,  $p_{\text{learning}} = 0.756 > 0.05$ ). Exercise intervention can effectively improve the social ability of ADHD children, which is more harmonious with their peers and more able to communicate with their families. We suggest to carry out exercise intervention for more children with ADHD and to integrate behavioral therapy with multi-directional intervention.

*Keywords:* ADHD, exercise, intervention