Treatment of Attention-Deficit/Hyperactivity Disorder in U.S. Children Utilizing Complimentary Alternative Medicine Therapies: How Effective are They?

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Background

Attention-Deficit/Hyperactivity Disorder (ADHD) is the most frequently psychiatric disorder diagnosed in children. ADHD has a worldwide prevalence of 5.29% among school-aged children (Hodgkins, Shaw, Coghill, and Hechtman, 2012). An estimated 5-10% of children are diagnosed in the United States (Calarge, Farmer, DiSilvestro, & Arnold, 2010). According to the CDC, in Texas alone, 7.1% - 9% of children are currently diagnosed with ADHD.

The first-line treatment of choice, according to the American Academy of Pediatrics (AAP) is pharmaceutical, usually with methylphenidate, combined with behavior therapy (Hodgkins, et al, 2012). Largeely due to the unpleasantness of side effects from medication, parents are looking to complimentary and alternative medicine (CAM) for treatment of ADHD (Pellow, Solomon, & Barnard, 2011).

Methodology

A pilot study is proposed of local participants. The study planned will consist of a small, randomized selection of local children age 6 years to 10 years with a diagnosis of ADHD by a qualified pediatric provider. The study will be of an experimental design.

- Participants will include boys and girls
- Parents/Guardians of participants must be motivated to provide and follow a restricted elimination diet and provide supplementation of Omega 3 essential fatty acids (EFA)
- Participants will be randomly divided into three groupings:
  - Group A: No dietary alterations or supplements
  - Group B: A restricted diet program, consisting of whole grains, lean meats, vegetables, fruits, limited dairy products and water. White flour, sugar, processed meats, additives or dyes are eliminated.
  - Group C: The above restricted diet plus the addition of supplemental n-3 polyunsaturated fatty acids (PUFA).
- Each participant will be pre-evaluated by parent and teacher using the Conners’ Teacher/Parent Rating Scale-Revised S (used by permission). A post-evaluation will be conducted using the same instrument.
- Parents will be asked to keep a diary of dietary intake, supplementation if applicable and daily observed behaviors.
- Statistical analyses will be conducted utilizing SPSS Version 22.

Conceptual Framework

Nola Pender “The Health Promotional Model”
- Focus is on assisting people in achieving optimum levels of well-being.
- Health care professionals can use model as a guide in helping patients obtain behavior specific outcomes.
- Promotes accountability and responsibility in patients and families in controlling and improving their own circumstances and environment.
- The theory is that self-initiated interventions are paramount in achieving changes in behavior.
- Nurses can offer CAM interventions and provide support to families with ADHD children.
- When parents of children with ADHD realize they can take ownership and have a direct influence in improving behaviors of their children, they will be motivated to be compliant with dietary and supplement changes.

(www.healthpromotionmodel.org)

Question and Hypothesis

In children diagnosed with ADHD in the United States, is there a significant difference in behavior outcomes when utilizing complimentary alternative medicine therapies compared to pharmaceutical treatment?

Hypothesis: There is no significant difference behavior outcomes of children with ADHD when treated with CAM therapies as opposed to pharmaceutical treatment.

Literature Review

- An open pilot study conducted on Dutch children (diagnosed with ADHD) following a “few foods” diet revealed a 50% reduction in scores evaluating ADHD symptoms. This prompted a random-controlled trial study. Primary results showed a 62.6% to 70.3% improvement in scores (Pelsser, Frankenka, Toorman, Savelkoul, Pereira, & Buitelaar, 2009).
- A 16-week, double-blind, one-way, cross-over randomized study was conducted on French-Canadian school children, diagnosed with ADHD, supplementing with n-3 polyunsaturated fatty acids. Twenty-six participants completed the study. This study supported supplementation with n-3 PUFA based on parents’ desire for children to continue receiving supplement. The sample size, however, was too small to allow for statistical significance (Belanger, Vanasse, Spahis, Sylvestre,… & Levy, 2009).
- Results of a randomized control trial (Impact of Nutrition on Children with ADHD – INCA) on children in Belgium and The Netherlands led researchers to conclude that dietary intervention in the way of a restricted diet is reasonable in children diagnosed with ADHD (Pelsser, Frankenka, Toorman, Savelkoul,… & Buitelaar, 2011).
- Parents of children with ADHD are seeking options for treatment. Concern regarding the severe side effects associated with stimulant medications often results in non-compliance and lack of treatment. CAM may offer an alternative (Pellow, Solomon, & Barnard, 2011).

Conclusions

- CAM therapy may offer an alternative to families in place of and/or in addition to pharmaceutical treatment for children with ADHD (Pellow, Solomon, & Barnard, 2011).
- Research is limited in regards to the use of CAM therapies such as dietary adjustments and supplements, especially in the United States. More research is warranted.

References

Available upon Request