

## REIKI BRIEF REPORT: USING REIKI TO REDUCE STRESS LEVELS IN A NINE-YEAR-OLD CHILD

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A nine-year-old female with a history of perinatal stroke, seizures, and type-I diabetes was seen for six weeks of Reiki to determine the effects of Reiki on relaxation, and in turn, the prevention of future seizures. The secondary and tertiary aims were to determine the effects of Reiki on sleep patterns and the stress levels of the mother. There was a decrease in stress in both the child and the mother, as measured by a modified Perceived Stress Scale and a Perceived Stress Scale, respectively. There was no change in the child's overall sense of well-being, as measured by a global questionnaire. There was a positive change in sleep patterns on 33.3% of the nights during which the study occurred, as reported on a sleep log kept by the mother. The child and the Reiki Master (a Reiki practitioner who has completed all three levels of Reiki certification training and trains and certifies individuals in the practice of Reiki as

well as provides Reiki to individuals) experienced warmth and tingling sensations on the same area of the child during the Reiki sessions. The child relaxed within the first five to seven minutes of each session as reported by the Reiki Master. There were no reports of seizures during this study. Reiki may be a useful adjunct for children with increased stress levels and sleep disturbances secondary to their medical condition. Further research is warranted to evaluate the use of Reiki in children, particularly with a large sample size, and to evaluate the long-term use of Reiki and its effects on adequate sleep.

**Key words:** Reiki, stress levels, children

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### INTRODUCTION

The overall goal for diabetes in Healthy People 2020 is to "reduce the disease and economic burden of diabetes mellitus and improve the quality of life for all persons who have, or are at risk, for diabetes mellitus."<sup>1</sup> Adequate sleep is necessary to support the metabolism of sugar to prevent diabetes. Sleep timing and duration affect a number of endocrine, metabolic, and neurological functions that are critical to the maintenance of individual health. If left untreated, sleep disorders and chronic short sleep are associated with an increased risk of diabetes.<sup>2</sup> Healthy People 2020 also addresses sleep health as a concern for individuals with chronic disabilities and other disorders such as epilepsy.<sup>1</sup>

Complementary and alternative therapies (CAM) are increasingly being used by Americans of all major socio-demographic groups to address fatigue, insomnia, and stress-related problems.<sup>3</sup> There is need for studies to specifically address the effects of different forms of CAM on various diabetic populations.<sup>4</sup> Ricotti and Delanty<sup>5</sup> reviewed the principles of the major CAM therapies in epilepsy. They discussed factors such as negativity on social life, feelings of

discrimination at work, and poor compliance with medications as reasons why patients diagnosed with epilepsy use CAM. Rates of CAM usage among children vary, with approximately more than 50% of children with chronic, recurrent, or incurable conditions using CAM, most often in conjunction with conventional care.<sup>6</sup> CAM use in primary care pediatric patients has been shown to be best predicted by the use of CAM by the parent or caregiver.<sup>7</sup> Gross-Tsur et al.<sup>8</sup> interviewed parents of children with epilepsy and hyperactivity disorder seen in the emergency room during an acute illness about past and present use of CAM. Of 115 children with epilepsy, 37 had used CAM in the past. Current use was significantly less. The most significant predictor for current use of CAM was past use. There was a trend for more children with epilepsy to be currently receiving CAM.

There are many therapies that fall under the CAM umbrella. One of them is Reiki, a Japanese technique used to promote relaxation, alleviate stress, and promote a feeling of well-being.<sup>9</sup> It originated in the Tibetan Sutras with a rediscovery in Japan in the 19th century. The technique is a gentle laying on of hands to affect a positive change in the flow of energy throughout the body. Kumar and Kurup<sup>10</sup> investigated the effects of Reiki on patients with epilepsy. After three months of Reiki, 15 patients had reduced seizure frequency and significantly increased serum magnesium. Reiki has been used for children for such things as decreased excitability and enhanced relaxation and sleep. A hospital-based Reiki training program for caregivers of hospitalized pediatric patients demonstrated that 65% of

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families who attended the training reported that Reiki benefited their child by improving their comfort, providing relaxation, and pain relief.<sup>11</sup>

R.R. is a nine-year-old female with a history of perinatal stroke with minimal sequelae (partial visual field cut and mild neurocognitive problems that impact her school performance) who was evaluated for recurrent unprovoked seizures. Her events occurred at long intervals (two in a six-month interval with the first in August 2012 and the second in February 2013) and both were brief and self-limited. Treatment options included a wait-and-watch approach for the seizures. Additional medical problems include type- I diabetes (diagnosed in 2011) and asthma most active during allergy season. Her medications include loratadine 10 mg oral tablet once a day, albuterol (2.5 mg/3 ml) 0.083% inhalation nebulizer solution, one vial by nebulizer route, and insulin aspart (NOVOLOG) 100 units/ml via insulin pump. Her parents describe disrupted sleep habits since her diagnosis and treatment for diabetes due to the necessity of closely monitoring her nocturnal glucose levels. She received an indwelling glucometer synchronized with her insulin pump in April 2013, which achieved the purpose of not needing to awaken her every night for glucose checks. However, the child continued to have disturbed sleep patterns. As might be expected, the mother has episodes of increased stress related to the care of her daughter.

## PURPOSE

Although there are pharmacological aspects associated with diabetic care, the primary aim of this study was to determine if relaxation could be achieved by Reiki sessions in this female child, and in turn, stave off future seizures. A secondary aim was to determine if better sleep patterns could be achieved with the use of Reiki. A tertiary aim was to determine if the stress levels of the mother could be decreased by increasing relaxation in the child. It was hypothesized that Reiki would promote relaxation and better sleep patterns.

## METHODOLOGY

The child's mother was familiar with the use of Reiki, being a Reiki practitioner herself. She had already cleared the use of Reiki with the child's pediatric neurologist. Informed consents [approved by this institution's institutional review board (IRB)] were discussed and signed by both. Relaxation in the child was measured by a modified Perceived Stress Scale (mPSS) and in the mother by the Perceived Stress Scale (PSS) (Appendix). The mPSS was developed for this study because a suitable valid and reliable stress scale for children in this age range could not be found in the scientific literature. To facilitate completion of the scale, the mother clarified any items on the scale for which the child needed help. The PSS is a valid and reliable (coefficient alpha of 0.85) 10-item self-reported questionnaire that measures a person's evaluation of the stressfulness of the situations in the past month of their life.<sup>12</sup> The items are easy to understand, and the response alternatives are simple to grasp. The questions are quite general in nature and hence relatively free of content

specific to any sub-population group. Scores are obtained by reversing the scores on the four positive items (items 4, 5, 7, and 8) and then summing across all 10 items. Scores can range from 0 to 40, with higher scores indicating greater stress. There are no cutoffs as the PSS is not a diagnostic instrument.

Sleep patterns were recorded by the mother in a sleep log. The Reiki Master kept a log to record subjective comments of the daughter and the Reiki Master's comments following each Reiki session. A Reiki Master is a Reiki practitioner who has completed all three levels of Reiki certification training and trains and certifies individuals in the practice of Reiki as well as provides Reiki to individuals. Both the child and mother were asked to maintain their normal activities throughout the duration of the study.

The Reiki sessions were conducted by a Reiki Master in a private quiet room. The Reiki Master involved in this study was a female with eight years of experience in the practice of Reiki. She has worked with both males and females of all ages. She volunteered her services for this study. Each session lasted 20 minutes twice a week for a period of six weeks. (See the Appendix for the protocol.) The mother remained in the room during each session for the first four weeks. At the end of the six weeks of intervention, the mPSS was completed by the child and the PSS by the mother. A global assessment questionnaire (Appendix) was also administered to the child at this time to gauge her overall experience of the Reiki sessions. Although there are valid and reliable tools that are designed to measure quality of life (QOL), they may not be sensitive to measure changes in QOL over time or assess changes in perceptions of QOL. A global evaluation of an intervention effect is a reasonable assessment of the participant's perspective of change and has been used to assess a clinically important change over time in other measures by a comparison of the calculated change to the measured transition value.<sup>13</sup> Global evaluations of the effects of an intervention reflect not only the magnitude of the changes in these outcomes and feelings about intervention delivery but also the personal importance that these outcomes have for participants.

Pre- and post-stress levels were compared to assess changes in stress levels. The sleep log was analyzed to assess changes in sleep patterns throughout the study. The Reiki Master's log was analyzed to assess subjective comments and determine if there were any correlations between the comments of the child and the Reiki Master. The mother was queried to see if there had been any further incidents of seizures over the course of the study.

## RESULTS/CONCLUSIONS/FUTURE RESEARCH

The child completed 11 of the 12 Reiki sessions. One session was missed due to illness (ear infection). The stress scale scores decreased from pre- to post-study for both the child and the mother. The child demonstrated a five-point decrease (from 30 to 25); the mother demonstrated an eight-point decrease (from 27 to 19). The mother and child maintained their normal activities throughout the study period. The PSS and mPSS were not completed after each Reiki session as the scale measures the person's evaluation of their stress over the past

month and is not intended as a measure for a shorter period of time. The decrease noted in both the mother's and the child's stress levels reflects a change over the course of the entire study and not from Reiki session to session as per the intended use of the scale. The child indicated that she felt no change in her quality of life when completing the global questionnaire. There was a positive change in sleep patterns on 33.3% of the nights (14/44 nights) based on the entries in the sleep log. The child slept through the night without her usual awakening at 2 or 3 AM in the morning. Five of the nights (33.3%) for which a change was recorded occurred on the days that Reiki sessions were given. The Reiki Master reported that the child relaxed within the first five to seven minutes and remained so throughout the remainder of each session. The child reported warmth and tingling sensations in the low back, knees, and feet during four of the 11 sessions. The Reiki Master reported similar sensations on the same days. The child was car sick on one day when a Reiki session was scheduled. The child reported feeling better after the session.

On the day the child was sick, the mother reported that the child asked her to do Reiki on her. The mother did the Reiki. The daughter continued to ask for Reiki on subsequent days which the mother declined. The mother explained to the child that she would do Reiki on her once the study was completed. Although the child did not indicate a change in her quality of life when completing the global questionnaire, the mother and the Reiki Master believed the child was benefitting based on the child's request for Reiki. Perhaps the child did not fully understand what was being asked on the global questionnaire.

When queried about any seizure activity during the study, the mother reported no seizures since the last one that occurred in February 2013. The mother indicated that this study fell in the six-month follow up period to the last seizure. The mother appeared relieved and this feeling of relief might partially explain the decrease in her stress scores.

Reiki did result in a reduction in stress levels in this child and her mother. Although there were no consistent changes in sleep patterns, there was a 33.3% positive change with the child sleeping through the night instead of usual awakening at 2 or 3 AM in the morning. Reiki may be a useful adjunct for children with increased stress levels and disturbances in sleep pattern. Since the end of this case study, the mother had offered Reiki to her daughter but her daughter declined. Not wanting this to become a bad experience, the mother stopped offering. The mother reported that the child has returned to her previous disturbed sleep pattern and is only rarely sleeping through the night. However, the results of this study are limited because no comparison was made to other interventions. The observed improvements may have been

due to other conditions rather than to the Reiki sessions. Further research is warranted to evaluate the use of Reiki in children particularly with a large sample size and comparisons to other CAM techniques. There is need to develop a stress scale for children that is easy for them to understand and complete. Future research should examine the long-term use of Reiki and its effects on adequate sleep.

## APPENDIX SUPPLEMENTARY MATERIAL

Supplementary material cited in this article is available online at <http://dx.doi.org/10.1016/j.explore.2014.02.007>.

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