THE USE OF MASSAGE TO REDUCE STRESS IN CHILDREN:
AN EDUCATIONAL PROPOSAL

By
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A project submitted in partial fulfillment of
The requirements for the degree of
Master of Nursing

WASHINGTON STATE UNIVERSITY
College of Nursing

May 2004
To the Faculty of Washington State University:

The members of the Committee appointed to examine the project of Trishelle Tate find it satisfactory and recommend that it be accepted.

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ACKNOWLEDGMENTS

I give to thank my Father in heaven who gives me the strength to persevere in all circumstances, guided me to this path and saw me through.

I would like to thank my parents who have always expected the best but are full of unconditional love no matter the outcome. Thank you mom for being my sounding board and dad for always being so proud of me. Without your help and believing in me I would not have even dreamed of entering the program. Jim, my husband, I started graduate school at the same time we met, you have been my rock and foundation through all the changes we endured over the last six years. Sebastian, my baby, looking forward to our future together has been a major incentive in completing this major project and completing the graduate program.

I wish to thank all my friends for listening to me, believing in me and praying for me as I complete this journey. A special thank-you to Jason for helping me with the grammar and giving up so much of your time over these last few months. Sandy, thank-you for helping me translate my handout into Spanish.

Pat Aamodt, my chair thank-you for pushing me to complete a project that I can be proud of and for sharing my passion for the use of alternative therapies.

Dr. Michael Rice, you have been my advisor and have believed in me as I traveled this journey. I thank-you and Dr. Ruth Bindler for putting so much time into reading my rough drafts and giving me suggestions on how to improve my paper. I thank my entire committee for all of your hard work and believing that I could pull it together in time.
The use of massage to reduce stress in children:

An educational proposal

Abstract

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May 2004

Chair: Pat Aamodt

Touch, through massage, is essential in the development of infant and young children. As children grow, their minds and bodies do as well. Touch can provide a child a feeling of self worth and help them cope with the stress their bodies endure. The purpose of this paper is to capture the ideas that have been researched and taught, by implementing a massage technique policy. Massage has been proven to be effective in helping children with special needs such as ADHD and asthma. Massage has and will benefit children through a detailed and outlined program. Nurses and parents alike can perform the program, once implemented. The goal of the proposed program is to instill the importance of touch through massage. It can give a parent a way to express comfort without introducing any sort of medication for stress causing problems in their children.
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Dedication

This project is dedicated to my husband Jim Herreid who provided me with love and support since we met.

Without your help I could not have finished.
Introduction

Touch is a vital requirement for normal human development. The act of touching someone gives a purpose for interaction and shows individuals the need for that interaction. From the time children are born, they require positive physical affection to develop into healthy individuals. Evidence from childrearing in the post World War II era, and more recently in Romanian orphanages, indicates the importance of touch in child development. The evidence from these situations revealed that children who received little or no touch were either underdeveloped or died (Field, 2003). Research reports note that the lack of touch can lead to increase levels of aggression and violence in children. In addition, it has been found that American children are touched less frequently than children raised in many other industrial countries, and have higher levels of aggression and violence (Field, 2002).

Touch in the form of massage has been shown to be helpful in lowering the levels of aggression and violence in children and adolescents (Diego et al., 2002). Consistently applying massage techniques results in lower levels of the stress hormone, cortisol. Results from many studies suggest that massage therapy could also be a useful intervention for children with certain medical diagnoses (Field, 2000). Stress can exacerbate the child’s physical condition and or mental health problems. Even children, who do not have problems with violence and aggression or medical problems, experience stress in their everyday lives. One measurement of stress often used by researchers is the hormone cortisol, which is elevated by immediate and chronic stress. Researchers have used changes in cortisol levels to objectively judge whether or not an intervention has
been helpful in reducing stress. The primary intervention explored in this paper is the use of massage to reduce levels of stress in children.

Purpose

The purpose of this clinical project is to discuss sources of stress in children's lives and the relationship between touch and relief from stress. An educational model will be proposed showing how primary care providers and other health professionals could teach parents touch techniques that may help lower their children's level of stress.

Theoretical Framework

According to the cognitive-relational theory model, stress is defined as a "particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well being" (Lazarus & Folkman, 1984, p.19). The amount of stress that an individual feels in a particular situation is determined through cognitive appraisals and coping. Cognitive appraisals are determined by evaluating the environmental demands and personal resources. Appraisals can change over time due to changes in coping effectiveness, altered requirements or improvements in personal abilities.

Cognitive appraisals include both primary and secondary appraisals. In a primary appraisal, a situation is perceived as being irrelevant, benign-positive or stressful. The events that are considered stressful are further divided into four categories: benefit, challenge, threat and harm/loss. In the appraisal of challenge, a person may see the situation as an opportunity for growth and it can be experienced as pleasant, exciting and interesting. Threat appraisal occurs when the individual perceives him or herself as being
in danger, anticipating future harm or loss. Though the perception of the situation is in a negative light, the person seeks ways to overcome the situation. In the experience of harm/loss, some damage to the person has already happened. Damage can come in a variety of forms: physical, emotional, mental or social harm. Instead of trying to master the situation, the person surrenders and is overwhelmed by feelings of helplessness.

According to the cognitive-relational theory, coping is defined as “constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person” (Lazarus & Folkman, 1984, p. 141). Secondary appraisals, like primary appraisals, are constantly changing as the individual reviews the resources available to them that will assist them in coping with the perceived stress. The individual evaluates his or her competence, social support, material and other resources to adapt to the circumstances and reestablish a balance between themselves and their environment.

Individuals vary in their appraisal of the amount of stress they feel to a particular situation and ability to cope varies as well. Nevertheless, most persons routinely encounter situations that tax or exceed their resources. Even those situations that are seen as challenges can often tax an individual’s resources. Children at all ages encounter stress as defined by Lazarus and Folkman and their ability to cope with stress is more limited.

Touch has been noted to decrease the physiological responses to stress. Touch in the form of massage will be a tool that will increase the child’s ability to cope with stress. One study reports that, massage techniques performed by the parent’s also lowered the
parent's anxiety suggesting that massage also increased the parent's ability to cope with their child's illness (Field et. al, 1998).

Sources of Stress

Children today are under large amounts of stress that are often underestimated by their parent or health care provider. Children affected by poverty and inner city children are among those most at risk for an excessive amount of stress. Schuler and Nair (2001) studied the levels of violence witnessed by inner-city children, to determine if children who witnessed violence had more behavioral problems and higher stress scores. They found that of eighty children, age six, over half had witnessed some form of violence “38% had seen someone beaten up, 9% had seen someone threatened with a knife, and 7% had seen someone stabbed or shot” (Schuler & Nair, 2001, Comment section, para.1). Using maternal ratings, the reports indicated that, witnessing violence was positively related to more behavioral problems and higher stress scores. Schuler and Nair concluded that subsequent research should examine the long-term effects of exposure to violence in young children. A situation where a child witnesses violence would be viewed in the light of a threat appraisal, where the child seeks to overcome the situation. In many cases, however, that situation could be viewed as a harm/loss appraisal. The child is harmed by the violence on an emotional or mental level, if not physically, and the child does not have the resources to overcome the situation, thus, becoming overwhelmed by feelings of helplessness.

According to a report of the task force on the family appointed by the American Academy of Pediatrics Board of Directors, one source of stress for children is the diversity of American family structure. “Between 1970 and 2000, the proportion of
children in two parent families decreased from 85% to 69% and more than one quarter of all children now live with a single parent” (Task Force, 2003, Abstract section, para. 3).

“Children raised in single parent households have three to five times higher poverty rates and there is an increased strain on the emotional and psychological resources of the parent.” (Task Force, 2003, Family Structure and its Limitations section, para. 3).

Though there are no guarantees, the report states “the evidence is overwhelming that, in general, children do best when they are living with two mutually committed parents who respect and support one another, who have adequate social and financial resources.”(Task Force, 2003, Family Structure and its Limitations section, para. 1). The report also states “there is no question that children who are reared in single-parent households are at greater risk of a variety of problems.” (Task Force, 2003, Family Structure and its Limitations section, para. 2). The report further adds that though children’s biological health is better today than ever before, other measurements of health are not as promising and positive. “The social strains on families ... have spawned a growing epidemic of new morbidities that are evidence of children’s inability to cope without the social support of their families.” (Task Force, 2003, Family Circumstances and Child Outcomes, para. 1).

The change in family structure has not affected children emotionally and socially through a lack of social support, but single parent households are more likely to be living under the poverty line. Poverty is a crucial factor in the social and emotional health of children as well as their physical health. Poverty can be appraised as a challenge but often it is appraised as a threat where persons perceive themselves as being in danger or anticipate future harm or loss. Even worse poverty can be appraised as harm/loss where
individuals stop trying to master the situation and surrenders, feeling overwhelmed and helpless. Children of poor families are often affected by the stress that comes when poverty is appraised by the parents, or later by the children themselves as being taxing and exceeding their resources and endangering their well being. Children raised in homes where the stress of poverty has overcome the parent’s and or the child’s resources, are more often premature, having low birth weight, but also at a high risk for depression, low self-confidence, peer conflict and conduct disorders. As teenagers, poverty is associated with higher rates of chronic health problems and injuries, adolescent school failure, dropout, teen pregnancy, substance use and abuse. (Task Force, 2003).

Reports indicate that childhood stress can come from several sources. Two major causes of stress are physical and psychological factors. According to the American Institute of Stress, stress levels have escalated in children and teenagers for several reasons including increased crime, violence and other threats to personal safety. Persistent peer pressures can also lead to substance abuse and other unhealthy life style habits. Social isolation and loneliness, the erosion of family and religious values and its ties, and the loss of other strong sources of social support can all be sources of stress for children.

Biologically, stress increases sympathetic nervous system activity and causes the release of increased levels of adrenaline, cortisol and other stress-related hormones. Over time, elevated stress levels caused by chronic stress can initiate a host of deleterious effects on the body such as weight gain, depression, obesity and a loss of brain tissue. The American Institute of Stress concludes that stress-related illnesses make up 75% to
90% of all visits to primary care physicians. Chronic illnesses can be a source of stress, as well as, exacerbated by stress.

The effects and symptoms of stress are experienced throughout life. Variables that can influence the amount of the stress response include age, temperament, nutrition and exercise. Anxiety, mood swings, acting out, changes in sleep patterns or bedwetting are indicators of stress. Other physical effects can include stomachaches, headaches and trouble concentrating in school. One objective measurement of the body’s reaction to stress is through measuring salivary cortisol levels. In one study, preschool children introduced to a stressful environment, such as a research setting, had elevated cortisol levels (Luby, Heffelfinger, Mrakotsky, & Brown, 2003). The children’s cortisol levels were checked three times, once after they were separated from their parents, another after performing a frustrating play task and at the conclusion of the visit. The researchers observed that the cortisol levels in children with clinical depression continued to rise during the study. In those children who were not depressed, there was a decrease in cortisol, as they became more comfortable in the unfamiliar environment. The findings validate the use of salivary cortisol in diagnosing depression in preschoolers (Luby, Heffelfinger, Mrakotsky, & Brown, 2003).

There are several ways that the human body copes with stress. In a study conducted by the University of California, San Francisco, researchers identified a biochemical feedback system in rats that might explain why some people crave comfort foods when they are under chronic stress. The data suggests that comfort foods apply the brakes on a key element of chronic stress, explaining why people with stress, anxiety or depression, often seek solace in such foods (Dallman et al., 2003). One way of coping
with stress is to follow behaviors that lower stress hormones and in doing so, those behaviors, help the individual manage the demands that are viewed as taxing their resources. Eating comfort food is a behavior that physiologically reduces the levels of stress hormones in the body. Unfortunately, indulging in this behavior often creates other sources of stress such as obesity that can lead to health problems.

However, there are several other ways to lower the level of stress hormones in the body, specifically cortisol levels. One way to decrease cortisol levels is through touch, using massage. Massage therapy has been in use since the days of Hippocrates and has been an important part of traditional Chinese and Indian medicine. In the United States, massage therapy has regained popularity as the complementary health movement grows. Massage therapy, in addition to many positive physical benefits, appears to have psychological benefits as well and is believed to contribute to a decrease in anxiety, pain, and improved relaxation (Bower, Rubik, Weiss, & Starr, 1997).

Review of Literature

Tiffany Field, director of the Touch Research Institute, a leading authority on touch therapy, has spearheaded much of the current research on the effect of massage in lowering stress hormones in the body. In her book Touch, Field (2003) emphasizes the need for touch across the age spectrum. In children the need for touch is critical to their growth, development and general health. Massage therapy is one form of touch that may be a viable tool in not only decreasing problems with violence and aggression in children and adolescents but as a complementary therapy to be used in conjunction with more traditional therapies in children with common medical and mental health diagnosis.
According to the National Center for Health Statistics (CDC) currently 12% of American children less than 18 years of age, or nine million children have been diagnosed with asthma. Field and her staff conducted a study on the effect massage would have on children with asthma (Field, et al., 1998). Thirty-two children with asthma, half between the ages of four and eight years and the other half between the ages of nine to 14 years, were randomly assigned to an experimental group for massage therapy or a control group for relaxation therapy. Up to 79% of the children had been hospitalized at least once and 21% had been hospitalized twice in the year before this study. The children were taking an average of 2.5 medications regularly. The children’s parents were either taught to give a 20-minute session of massage therapy or to facilitate a 20-minute session of progressive muscle relaxation before bed, for 30 days. Data was collected by both self-report and independent observations, before and after, the first and last massage, of the 30-day study, as well as the parent’s self-report.

No statistical differences were noted in either group that received the relaxation therapy. The four to eight year old group receiving massage therapy showed the most changes. They had a statistically significant decrease in anxiety level after the first day (p<.05). The participants’ salivary cortisol levels decreased significantly on both the first (p<.005) and last (p<.05) days after massage therapy. Their attitudes towards asthma improved and all the pulmonary function measures improved significantly (p<.01) particularly the change in the peak expiratory flow (p<.005).

The older group of participants receiving the massage therapy reported a decrease in anxiety per the State Anxiety Scale for children after the first session (p<.05). The parents in both the massage and the relaxation group reported, using the State Anxiety
Scale for the parents, a decrease in anxiety after the first session (p<.05). Fewer pulmonary function changes were found in the research group of older children. The group receiving massage therapy reported a change in attitude towards asthma and had a statistically significant improvement in forced expiratory flow (p<.005). There were however, no changes in salivary cortisol levels in the older children.

The decrease in the levels of anxiety in the older children and their parents, and the decrease in the salivary cortisol levels in the younger children, indicated a therapeutic benefit of massage in children with asthma. As the number of children affected by asthma increases, and the cost of healthcare increases, massage therapy may be a cost-effective adjunctive therapy in the treatment of childhood asthma.

Another very common diagnosis among the pediatric population is Attention Deficit Hyperactive Disorder (ADHD). An estimated 3.3 million children (six percent) have ADHD (National Center for Health Statistics, 2003). Field, along with colleagues Quintino, Hernandez-Reig, and Koslovsky (1998), used an experimental design, to study the effects of massage on adolescents with ADHD. The researchers’ hypothesis was that massage therapy would reduce the activity level of adolescents diagnosed with ADHD. They randomly assigned 28 male adolescents diagnosed with ADHD to two groups. Fourteen subjects received a 15-minute massage after school for 10 days while the other fourteen subjects participated in a 15-minute relaxation session after school for 10 days.

Several scales were used to evaluate the effectiveness of the therapies. In addition to self-report tools, researchers used an independent observer, as well as a teacher reports, from teachers not involved in the project. The data showed no statistically significant changes on any of the measures for the relaxation group. However, the massage group
participants on self-report, were happier and more relaxed by self-report and were observed demonstrating less fidgeting behaviors.

The only statistically significant change noted on the massage group was a lower score on the Conners Rating Scales. There were no significant changes noted on the depression or empathy scales. Teachers reported that they spent more time on task in class and had less behavioral problems. These findings indicate that massage can be a useful intervention if used in conjunction with current therapies for adolescents diagnosed with ADHD.

For pediatric psychiatric care providers, depression in children continues to be a source of concern. Field et al. (1992) studied the effects of massage therapy on the behaviors of children and adolescents who were hospitalized with depression or an adjustment disorder. Seventy-two children and adolescents, ages seven to eighteen, were chosen to participate. The sample included 36 subjects diagnosed with an adjustment disorder, and 36 participants diagnosed with depression or a dysthymic disorder. The sample was assigned to either a massage therapy group (26 adjustment disorder and 26 depression), or to a relaxation therapy group (10 adjustment disorder and 10 depression), through a randomized stratification process that took into account sex, age and medication. The subjects had to have been taking medication no more than one week before entering the study. The massage group subjects received a 30-minute back massage, administered by a psychology student of the same sex, at the same time of day, for five days. Control group subjects watched a 30-minute relaxing video at the same time of day, for five days, with a psychology student supervising. Data collection was carried out on both the first and the last day of the treatment through self-reports,
independent observation, reports from nurses blind to the treatment being received and urinary cortisol and catecholamine levels.

The subjects in the massage group reported a decrease in anxiety as noted by a decrease of State Anxiety Inventory for Children scores (p<.001) on the first day of the study and (p<.01) on the last day. The observations of their behavior showed a statistically significant decrease in anxiety (p<.005) and fidgeting behaviors (p<.001) observed during the massage session and was maintained through the follow up measure 30 minutes after the massage session on both the first and last day of the treatment. The salivary cortisol levels decreased in the massage group during the massage (p<.05) and remained low 30 minutes posttest (p<.01). Five days later salivary cortisol levels decreased both post massage (p<.001) and continued low 30 minutes post massage (p<.001). There was a statistically significant decreased level of urine cortisol (p<.01) and over the 5-day period of time, but only for the depressed group receiving the massage therapy and not for the participants diagnosed with adjustment disorders. Data also indicated an increase in sleep (p<.01) and a decrease in nighttime wakefulness (p<.05) in the group receiving massage. The nurses also noted significant decreases in anxiety (p<.05) and fidgeting (p<.05) between day one and five and an increase in affect (p<.05) and cooperation (p<.05).

The potential long-term benefits of massage therapy were not only noted by those conducting the study, but also through the independent observations made by the nurses. In this study, massage therapy appeared to have more long-term benefits for those with depression, than those with adjustment disorders. The depressed group had a greater decrease in urine cortisol (p<.005) and norepinephrine (p<.05) than the adjustment
disorder group. This would indicate that the effects of the massage therapy go beyond the immediate benefits and may be beneficial over a longer period of time.

Another common problem for pediatric providers in both psychiatry and pediatrics is children diagnosed with posttraumatic stress disorder (PTSD). Sixty grade-school children suffering from posttraumatic stress in the aftermath of Hurricane Andrew, were enrolled in a study on the effect of massage therapy, to decrease their level of depression and anxiety (Field, Seligman, Scafidi & Schanberg, 1996). The sample included 60 grade-school-age children (mean ages = 7.5 years, mean grade = 2.2). The children were randomly selected from a sample of approximately 120 children referred by classroom teachers to school counselors, for counseling after Hurricane Andrew. The 60 children were then randomly assigned to either a massage therapy or video attention control group. The two groups were compared and found to be equivalent on background characteristics, hurricane impact and the PTSD Reaction Index. Twelve psychology graduate students, blind to group assignment, read the self-report scales to the children. Several measures were used at the beginning and end of the study to evaluate anxiety, depression and relaxation including salivary cortisol levels taken before and after the first and last session of the study.

The intervention was a 30-minute back massage, two sessions a week for four weeks. Different volunteer massage therapy students administered the massage therapy for each session. The video attention control group was seen at the same time of day, for a videotape viewing session, for the same period of time as the massage group. The graduate student that supervised the video attention group maintained physical contact
with the child by having the child sit on her lap, to decrease the chance that the changes noted were related to increased attention or increased physical contact.

There were no significant changes noted in the video control group. In the massage therapy group, there were statistically significant changes in measures that indicated a decrease in anxiety on the State Anxiety Inventory for Children test after massage on the first day (p<.01) and the last day (p<.001). Using the Children’s Manifest anxiety scale researchers found that the children’s anxiety decreased on the last day (p<.005) and using the CESD depression scale depression decreased significantly (p<.001). An increase in relaxation levels (p<.01) and a decrease in salivary cortisol levels were present both pre and post massage therapy on both the first (p< .005) and last day (p<.05).

Aggression and conduct disorder problems account for approximately one-third to one-half of clinic referrals among children and adolescents (Vitiello & Stoff, 1997). One of the most common risk factors for violence in youth is early neglect and abuse. Researchers reported that physically abused children had higher incidence of physical aggression (Scerbo & Kolko, 1995). In a study by Dodge, Bates, & Pettit (1990), harmed or abused children had 100% higher aggression ratings by their peers, 23% higher ratings by their teachers, and 30% higher ratings by observers. In addition, adolescents who had been abused or neglected during childhood were 42% more likely to have a criminal record as adults (Widom, 1989).

In another study (Diego et al., 2002), violent children and adolescents received either 20-minute massage or relaxation therapy twice a week for five weeks. Only the massaged adolescents had lower anxiety using the State Anxiety Inventory for Children
after the first session, (p< .001) and last session, (p< .05). They also had lower Child Behavior Checklist scores, (p< .05), and decreased hostility scores on the SCL-90R, (p< .05) and were rated as being less aggressive by the Overt Aggression Scale, (p< .05).

A large study of 49 cultures highlighted the critical need for physical affection (Prescott, 1990). In that study, the cultures that had significantly higher rates of adult violence, were the same cultures that exhibited minimal physical affection towards their young children. The cultures that had very little adult violence were the cultures that demonstrated significant amounts of physical affection towards their young children.

Many American infants may not be receiving the touch they need during mother-infant interaction. Many infants are cared for in substitute, care-giving situations, such as childcare. American infants have been noted to be touched from 33 to 61% of the time during brief interactions with their mothers (Stack & Muir, 1990). Whereas, mothers in other cultures spend upwards to 75% or more of their time in contact with their infants (Konner, 1976).

In an observational study, infants and toddlers in nursery schools received much less frequent touch, 15% of the time for infant and 5% of the time for toddlers (Cigales, Field, Hossain, Pelaez-Nogueras, & Gewirtz, 1996). One reason that there is a lack of touch in American society is pervasive “no touch” policies in schools and childcare centers that are in place to both protect the children as well as the institution (Field, 2003). Even parents have become wary of touching their children, this aloofness and behavior reminds us more formal times. This formality can be harmful to children as they require touch to survive (Field, 2003). This lack of touch may also be a factor in increased levels of aggression and violence among both preschoolers and adolescents.
A study conducted by Field compared France and the United States on physical affection with both preschoolers (1999a) and adolescents (1999b). She found that both preschoolers and adolescents in America were touched less, touched their peers less, and were more aggressive than preschoolers and adolescents observed in France.

In contrast research on massage therapy with preschoolers has demonstrated some positive results. Field, Kilmer, Hernandez-Rief and Burman (1996) conducted a project studying the effect of massage therapy on healthy, normal preschool age children. Twenty-eight children ages two to four received 20-minute massages before naptime two days a week for five weeks for a total of ten massages. They found statistically significant changes post massage on both the first and the last day of the project on the Behavior Observation Scale, in the areas of state (p<.001) and vocalization (p<.001) on the first day and on the last day (p<.005) of the study. The researchers also found significant changes the last day of the project on each of the other scales used for evaluation, the Behavior rating scale, Touch inventory, Extraversion/introversion scale and latency to sleep (p<.05). Massage therapy can have a beneficial effect on not only children affected by physical and mental problems but also on normal and healthy children.

Among one of the research documents found, was an educational model that showed a public health nurse, who after becoming a Certified Infant Massage Instructor, received funding to run three baby massage courses per week, for five weeks (Hart, Davidson, Clark & Gibb, 2003). These groups were taught the education of touch through massage infant techniques, giving the parents a chance to interact with their children. In addition to teaching parents infant massage techniques, parents were
provided with the opportunity to ask health-related questions. After five weeks, the parents evaluated the usefulness of the group. Many of them stated that the massage techniques strengthened bonding and emotional attachment. The parents also mentioned that feeling an increased level of self-esteem and confidence. Though this education model is very different from the one proposed in this paper, one of the similarities is that the parents had the opportunity to learn about the benefits of touch, for their children, along with an increased bonding with their children.

Touch, in the form of massage therapy has been shown to not only benefit children with varying illness it is also beneficial for healthy children. Massage therapy is a tool, a behavior that can be used to by parents to assist their children in coping with the stress in their lives. Researchers demonstrated that physiologically massage reduces the amount of the stress hormone, cortisol, in the body. Psychologically massage was helpful in reducing the anxiety, not only in children, but also in the parent performing the massage techniques. Through the routine increase in touch, via massage therapy, it is hoped that situations that were perceived as overwhelming the child’s resources, creating stress will have less effect. Parents who felt overwhelmed and helpless to cope with their child’s illness will feel more empowered and less stressed.

Educational Proposal

The objectives of this educational program are:

1) The overall objective of this proposal is to encourage parents to touch their children in appropriate ways.
2) To provide health care providers and parents with a cost effective intervention with which to reduce the effect of stress, subsequent illnesses and maladaptive behaviors in their children’s lives.

3) To provide children and families a tool to effectively cope with the demands of their environment, behaviorally.

4) To increase the awareness of health care providers on the importance of appropriate and therapeutic touch in children’s lives.

5) To reduce the number of clinic visits related to aggression and conduct disorder problems.

I. Target audience: The parents or caregivers of children who would benefit from the stress relief that massage therapy provide their children, will be taught the massage techniques. However, an agency or provider could start by targeting children with specific diagnosis such as asthma, ADHD, PTSD, and depression, as well as, children with behavioral problems, where massage has been shown to be particularly effective.

II. Massage technique trainers: Any health care provider that has been trained in the massage techniques could initiate teaching and the follow up with reminders at subsequent visits. Health care providers could include primary care providers, nurses, certified nurse’s aids and health educators. Each individual agency would choose the health care providers they wish to have trained. The agency would pay for a licensed massage therapist to do an in-service where the selected health care provider’s, would see a demonstration of the techniques outlined in the
handout. The provider’s would be expected to do a return demonstration of the
techniques under the supervision of a licensed massage therapist.

III. What would be taught to parents? As part of this educational proposal, I have
included handouts in English and Spanish on massage techniques that target
massaging children’s hands, back and feet.

IV. Location: Teaching the massage techniques could easily take place in an office
setting or in some circumstances in the family’s home.

V. Implementation: To begin this project, the medical provider or agency would
decide which health care providers would participate. The health care provider’s
chosen would be taught the techniques and would practice in pairs. Medical
providers would need to identify the children they wish to target. If the parents
agree to participate, they would be taught the benefit of massage. The trained
health care provider would model for the parents the massage techniques, and
would request a return demonstration on the child. The parents would be
equipped to provide massage to the child daily.

VI. Evaluation Procedure: The health care provider would follow up with the parents
on subsequent clinic visits for reinforcement and feedback on how often the
parents are using the techniques and what changes have been noticed in the child.
If the parents felt further teaching would be of benefit them and their child, they
would be provided with an opportunity for a refresher course. One evaluative
method would be through qualitative measures, such as mood, behavioral changes
and coping via a parent report. In addition to evaluating how massage is
benefiting children, the evaluator could ask the parents how massage has
decreased their stress level and how they are coping with their child’s illness.

Other changes that could be evaluated are a decrease in symptoms and episodes of illness, as well as, decreased clinic and or hospital visits. A decrease in clinic and or hospital visit would make this project cost effective.

VII. One example of how this education proposal could work is using this project with the target group of children suffering from asthma. At the Yakima Valley Farm Workers Clinic, a pilot project has been implemented, targeting the children who have been diagnosed with asthma and who have consented to receive educational services through the Asthma Project. With the consent of the Asthma Project Supervisor, I would hire a licensed massage therapist to teach the asthma project home educators the techniques. After the home educators showed competency through consistency, they would recruit from their client’s parents, who are interested in learning the massage techniques. While in the parent’s home, the home educator would educate the parent regarding the benefits of massage and have the parent sign a consent. The home educator would provide the parent with a copy of the massage handouts, demonstrate the massage techniques and the parent would return the demonstration on the child. Providing support to the parent and reinforcing the techniques would occur during the asthma home educator’s monthly visits. Evaluation of the benefits of massage for asthmatic children would include a report from the parents, noting changes in behavior and mood, as well as, the frequency of medication used, along with the frequency of clinic and hospital visits, in addition to well child visits. With asthmatic children,
the parents could seek solace in coping with the decease, giving the children a comfort, through massage.

Conclusion

Massage therapy is not only an effective technique to decrease depression, anxiety and aggressive behavior, but it can also be useful in lowering rates of violence and aggressive behavior seen in adolescents. As mentioned earlier, American infants may not be receiving the touch required during infancy and early childhood, due to the fact that they are in childcare facilities that may have “no touch” policies. Research indicates that infants respond more positively when they receive positive forms of touch. Increased and consistent levels of touch are critical to a child’s growth and emotional development.

Often as children grow, parents become less and less comfortable touching their children. Society has created no-touch policies in schools and day care centers, to point at which adults have become increasingly concerned about the risk of being accused of impropriety. If touch is so important to health, how can providers teach parents appropriate ways to continue to touch their children as their children get older?

The above outlined educational proposal is one way to implement a system that will provide an opportunity to educate health care providers and parents on the importance of touch. Stress exists in every day life and by teaching parents the technique of massage, we can reduce their perception of stress, by providing them a tool to help them better cope with stress. Implementing this educational proposal will also keep use of touch and the alternative therapies to reduce stress in the forefront of health care provider’s minds, as they do their routine health education.
References


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Appendix

Educational Handout

One of the most important things to remember about doing massage is that massage is a rhythm. A rhythmic massage will send waves of relaxation through your child’s body.

Ask your child to tell you if any of the massage is unpleasant or painful.

It is important that you be totally relaxed during the massage. Don’t worry about doing it perfectly. Practice and communication will help perfect your skills.

If your child is ticklish applying a little additional pressure and continuing may help them overcome their discomfort. Also try to flatten your hand and slow the rhythm down. If these techniques do not help, try massaging the surrounding areas and when your child is more relaxed your can return to the ticklish area, which should be less sensitive at that time.

**Younger children:**

Younger children may be more ticklish and you may want to eliminate some of the techniques and individualize the sequence of techniques to meet the need of your child. Younger children also are very active and may become restless quickly so those would be good times to keep the massage shorter.

**Older children:**

Older children might be more shy about getting a massage and resistive. It is important to respect their wishes. Any child can be effectively massaged through their clothing and they may wish to remain fully clothed during their massage.

**HANDS:**

Massage strokes for fingers:

Hold your child’s hand palm down in one of your hands, and use your other hand to work on each of the fingers separately, starting with the little finger. Stroke firmly from the tip to the knuckle, then squeeze all over the finger.
Make circular pressures with your thumb around each joint, including the knuckle, then rotate the finger twice in each direction. Finally, take each finger between two of your fingers and stretch the finger gently but do not jerk.

Turn the hand over to make firm circular pressures all over the muscular area at the base of the thumb. Firmly stroke your thumb over your child’s palm.

The final touch: With your child’s palm facing down sandwich it between your palms, press your hands together firmly. Release the pressure and slide your hands slowly off your child’s fingers. Their hand should now be completely relaxed. Repeat this movement a couple of times.

Repeat the sequence of strokes with the other hand.

**FEET:**

Massage strokes for feet:

Sandwich your child’s foot firmly both between both hands one on top and the other on the bottom of their foot. This is a warming movement and can be an excellent beginning movement for anyone with cold feet.

Support the foot with your fingers underneath it, and place your thumbs on the top of the foot at the base of the toes. Stroke up the foot with your thumbs, fanning out to the sides and gliding back to the toes, ready to start again. Repeat three or four times as your child tolerates it.
The Hacking technique can be a particularly effective technique when used on a child, as it does not tickle. Hold the foot firmly with one hand, and hack the sole with the side of your other hand. Keep your wrist loose and flexible.

Toe massage:

Loosen and warm the whole area by wiggling the toes. Sandwich the foot just above the toes, cupping the sides of the toes as well as the top and bottom, and rotate your hands.

Massage your child’s toes individually. Squeeze and roll each one, rotate it in both directions, then pull it gently toward yourself.

Change hands when you reach the big toe and massage it thoroughly all over. Then squeeze all around the base of the toe.

Final touch:

Stroke the foot with both hands, up toward the ankle as you did at the beginning, then glide lightly back down. Hold the foot for a few seconds, then slowly and gently slide your hands off the end of the toes.

Take both your hands and gently stretch your child’s foot towards you without lifting it. Release the stretch and hold the foot lightly between your hands for about 5 seconds.
Slide your hands towards the toes and then very slowly, slide your hands of the end of the toes. Repeat two or three times. Repeat the foot massage with the other foot.

**BACK**

Start with your hands on your child’s lower back, placing your thumbs on either side of the spine and your fingers pointed toward the head. Stroke firmly up the back applying some pressure that will vary based on the size and sensitivity of your child. Glide your hands lightly back down their side. When you reach the waist, pull inward and start the sequence again. Repeat up to ten times.

Gently knead the shoulders with firm pressure to avoid the stroke from feeling ticklish at the same time ask your child to gage if the pressure is too much.

Stroke out over the topes of the arms lifting up at the elbows. Repeat this stroke three to four times.
Folleto Educativo

Una de las cosas más importantes que se debe recordar del dar masajes es que el masaje es un ritmo. Un masaje ritmico le relajara todo el cuerpo a su nino.

Preguntele a su nino si alguna parte del masaje es desagradable o si le lastima.

Es importante que Ud. este totalmente tranquilo durante los masajes. No se preocupe por hacerlo perfectamente. La practica y la comunicacion le ayudaran a perfeccionar su tecnica.

Si su nino es cosquilloso, si Ud. usa un poco de fuerza adicional mientras que sigue con el masaje, esto le puede ayudar a su nino a superar la molestia. Tambien, Ud. puede hacerse mas plana la mano y aminorar el ritmo del masaje. Si estas tecnicas no le quitan lo cosquilloso a su nino, dele masajes alrededor de las partes sensibles, y cuando se relaje mas Ud. puede regresar a las partes cosquillosas, las cuales deben ser entonces menos sensibles.

Ninos pequenos:
Los ninos pequenos pueden ser mas cosquillosos y Ud. puede querer evitar algunas de las tecnicas e individualizar el orden de las tecnicas segun las necesidades de su nino. Los ninos pequenos tambien son muy vivos y pueden ponerse inquietos pronto, asi que en estos casos seria mejor acortar los masajes.

Ninos grandes:
Los ninos grandes pueden ser mas vergonzosos y pueden resistir los masajes. Es importante respetar sus deseos. A cualquier nino se le puede dar masajes por medio de la ropa, y pueden querer tener toda la ropa puesta durante los masajes.

LAS MANOS:
Toques de masaje para los dedos:
Tomele la mano a su nino en la mano suya con la palma del nino hacia abajo, y use la otra mano de Ud. para trabajar con cada dedo de su nino individualmente, empezando con el dedo menique. Roze todo el dedo desde la punta hasta el nudillo, y entonces apriete todo el dedo con la mano de Ud.

Ponga presion con el pulgar de Ud. mientras que hace circulos con ello alrededor de cada nudillo de cada dedo, y luego de vueltas a cada dedo dos veces en cada direccion. Finalmente, tomele cada dedo a su nino entre dos dedos de Ud. y estireselo suavemente sin darlo un tiron.

Volteele la mano a su nino y pongale presion con el pulgar de Ud. mientras que hace circulos con ello en el tejido muscular de la base del pulgar de su nino. Rozele firmemente la palma de su nino con el pulgar de Ud.
El toque final: Tome una mano de su niño entre las dos manos de Ud., con la palma de su niño hacia abajo, y aprietele Ud. la mano de su niño firmemente. 
Discontinue la presión y deslizese las manos de Ud. lentamente por los dedos de su niño. 
Las manos de su niño deben estar totalmente relajadas. Repita este movimiento unas dos veces.

Repita la serie de toques en la otra mano de su niño.

LOS PIES:

Toques de masaje para los pies:

Tome el pie de su niño entre las dos manos de Ud. con una mano de Ud. en la parte superior del pie y la otra en la planta del pie, y aprietele el pie a su niño firmemente.
Este en un movimiento que le calienta el pie y puede ser un comienzo excelente para los que tienen los pies fríos.

Sostengale el pie a su niño con los dedos de las dos manos de Ud. debajo de ello, y coloquele los pulgares de Ud. en la parte superior del pie en la base de los dedos. Rozele el pie a su niño hacia el tobillo con los pulgares de Ud., moviendo los pulgares a los lados del pie a la misma vez. Luego deslizese las manos de Ud. de nuevo a los dedos de su niño para volver a empezar. Repita el movimiento tres o cuatro veces, según le guste a su niño.

La técnica de dar golpecitos con el lado de la mano de Ud., como no hace cosquillas, puede ser muy eficaz cuando se usa con un niño. Tomele el pie a su niño firmemente y dele golpecitos a la planta con el lado de la otra mano de usted.

Mantengase la muneca relajada y flexible.

El masaje de los dedos del pie:
Relaje y caliente toda la área por medio de moverle a su niño los dedos del pie.

Tomele el pie a su niño entre las dos manos de Ud. un poco arriba de los dedos, con las manos de Ud. tocando los lados de los dedos igual que la parte superior y la parte inferior del pie. Volteese Ud. las manos.

Dele masajes a los dedos de su niño individualmente. Apriete y muevalo cada uno entre las manos de Ud., deselo vueltas en cada dirección, y luego estirelo hacia usted suavemente.

Cambie Ud. de mano cuando llegue al dedo grande y dele a su niño un masaje completo a todo el dedo grande. Entonces apiêtele toda la área de la base del pulgar grande.

El toque final:
Rozele el pie a su niño hacia el tobillo con las dos manos de Ud., como hizo al principio, y deslizele las manos de Ud. suavemente hasta los dedos de su niño.

Sostengale el pie a su niño unos segundos, y entonces deslizele las manos de Ud. hasta la punta de los dedos y quiteselas de manera suave y lenta.

Estirele el pie a su niño suavemente hacia Ud. sin levantarlo. Suelteselo y tomeselo ligeramente entre las dos manos de Ud. durante unos cinco segundos.

Deslizele las manos de Ud. hacia los dedos de su niño y luego, muy lentamente, deslizaselas hasta la punta de los dedos y quiteselas. Repita dos o tres veces.

Repita el masaje del pie con el otro pie.

LA ESPALDA

Empiece con las manos de Ud. en la parte inferior de la espalda de su niño, colocando los pulgares de Ud. uno a cada lado de la espina dorsal de su niño, con los dedos hacia la cabeza. Rozele firmemente la espalda hacia arriba con algo de presión, la cual variara según el tamaño y lo sensible de su niño.
Deslízle las manos de Ud. ligeramente hacia abajo por los lados de su niño.

Cuando llegue Ud. a la cintura, muevase las manos al centro y empiece la serie de nuevo.

Repítala hasta diez veces.

Sobele suavemente los hombros a su niño con presión firme para no hacerle cosquillas, y a la vez pregúntele si la presión que Ud. usa es demasiada.

Rozele a su niño la parte superior de cada brazo mientras que lo levanta al codo.

Repita este toque tres o cuatro veces.