

## **The Empirical Basis of Treatment at Jasper Mountain**

There are several methods to insure that treatment services are producing the desired outcomes. Some of these methods include formative and summative evaluation, outcome and follow-up research, consumer satisfaction and outcome assessment. Evaluating the effectiveness of treatment is best accomplished by having a combination of objective empirical data as well as qualitative observational data. It is essential to be able to identify the strengths and weaknesses of therapeutic interventions based on science and not solely on "gut feeling." However, the starting point of any effective treatment is to ground the treatment's philosophical orientation to empirical science. The clinical philosophy that guides the treatment at Jasper Mountain is complex as well as comprehensive. This is necessary due to the agency's mission to impact the physical, intellectual and spiritual well being of the clients served. Enhancing health and development in the mind, body and spirit of children requires both complexity (figure) and a comprehensive "big picture" (ground). The following is a brief overview of the empirical basis for the treatment orientation of the agency. A more comprehensive treatment of this topic can be found in the publication Raising Children Who Refuse To Be Raised (Ziegler, 2000), and Neurological Reparative Therapy, a Roadmap to Healing, Resiliency and Well Being (Ziegler, 2011).

### **School Of Thought at Jasper Mountain**

The agency does not adhere to a single theoretical approach or orientation at the exclusion of other promising approaches. There has now been over sixty years of research that generally indicates that treatment effectiveness is less a function of technique than it is a function of core factors which have been consistently shown to enhance positive development (Hoagwood, 2003; Smith, Glass & Miller, 1980). These core factors include: supporting catharsis, establishing a supportive and productive therapeutic relationship, promoting increased thoughtfulness and insight in choices, teaching behavioral regulation, fostering cognitive learning, and practice in mastery (Lambert & Bergen, 1994). To develop the most comprehensive approach possible to address the agency's mission, multiple schools of thought are incorporated. The most effective treatment programs for challenging populations will combine an "integration of diverse techniques and concepts into a broad, comprehensive and pragmatic approach to treatment that avoids strong allegiances to narrow theories, techniques or schools of thought" (Lambert, Shapiro & Bergen, 1986). Early psychological treatment is both efficacious and cost effective as well as being in the best interests of children traumatized at young ages (Johnson, Knitzer & Kaufmann, 2002). For traumatized children, positive supportive environments have been found to moderate not only early effects of trauma but also genetic vulnerability (Shonkoff, Boyce, Cameron, Duncan, Fox, Gunnar, Levitt, McEwen, Nelson, Phillips & Thompson, 2009). It will also be essential to build into the treatment environment an understanding of brain research on the effects of child abuse on neurological processes (Ziegler, 2002).

## **Informed by Scientific Evidence**

There are multiple standards for scientific evidence. Some merely equate evidence with research. An often quoted standard is to have randomized trials with controlled variables and to have at least two replication studies. This “gold” standard loses some of its luster if the trials are not by an objective party trying to disprove the null hypothesis. Another standard is the often used term ‘evidence based practice.’ This term is often used when sufficient research has been conducted to support a therapeutic approach. But this standard of scientific evidence also needs a closer look. Like many areas of psychology, evidence based practice is a concept adopted from medical science. However, the concept lost essential components when adopted by psychology. Evidence based practice was envisioned as a process and not as a product. It was based on a three legged foundation of research/clinical experience/consumer factors (Sackett, Rosenberg, Gray, Haynes & Richardson, 1996). Two of the foundations were lost when exported to psychology and evidence based practice essentially became a ‘top down’ product cutting out the essential elements of clinical experience (or practice based evidence) as well as unique consumer factors. However this oversight is more recently being corrected (Richardson, 2001). This background helps explain some of the issues with EBP over the last decade. The question, “What evidence based practices do you use?” treats the concept as a discrete product, which misses the mark. Jasper Mountain incorporates science, research, approaches with evidence as well as clinical experience with our unique population and thus broadens the concept to its full meaning and intent.

## **General Research Related to Children**

Understanding the research on childhood treatment is an important foundation of a strong therapeutic program. The literature on effective therapy for childhood disorders is presently in the same position all therapy was twenty-five years ago--there is a lack of definitive empirical research, but there are strong implications coming from the research that we do have. Over the next decade, the amount of research in the treatment of children will go a long way to rectify the current lack of empirical support. At present we must have a good understanding of what we do know, while being good consumers of the existing research to watch for “marketing research,” which is meant to sell an approach or a system of thought rather than empirical research which is based on the principles of objective scientific inquiry. Objective scientific research is first of all objective with no investment in the outcome, and empirical research is based upon disproving the hypothesis or trying to show no effect and this cannot be done then there is evidence of efficacy. In psychology there is a great deal of research that does not meet this standard. Even with research that provides support for an approach this does not necessarily mean it will be effective in a new setting (generalizability), and the absence of research does not mean an approach does not work, only that it has not been fully tested. It is important when considering evidence based research to remember that all research is not necessarily good research, and because an approach worked for one population does not indicate effectiveness with a very different population. All specific therapeutic approaches have not been specifically tested with sound research. For example, as of 1996 there was only one research study concerning treating post traumatic stress in children (van der Kolk, 1996). A 2003 study of evidence based practices for traumatized children found no evidence based program (Hoagwood, 2003). However, despite

the absence of a complete program for the primary population served by Jasper Mountain, there are many excellent studies that can help build support for sound therapeutic approaches.

One of the challenges of empirical research is to isolate and control variables. Many of the better therapeutic approaches use multiple methods, making it difficult to determine what effect comes from specific components of the approach. This is particularly true for intensive mental health services that have a holistic and ecological approach for the child and family system. However, there is empirical research that points to components of treatment that are likely to be more effective than when the component is lacking.

The majority of specific approaches to childhood disorders do not meet criteria for the highest level of empirical support with well established criteria developed by the American Psychiatric Association Task Force. The standard used is two, well-designed and controlled group design studies by different authors with no association (Lonigan, Elbert & Johnson, 1998).

The big picture of research related to psychological services to children is good news. Overall, it has been repeatedly found in research studies that children who receive professional intervention statistically improve (treatment effect size of .8 or approximately 80% get better) in clinical symptoms when compared to no treatment cohorts, regardless of approach (Casey & Berman, 1985; Baer & Nietzel, 1991; Grossman & Hughes, 1992; Hazelrigg, Cooper & Borduin 1987; Kazdin et al. 1990; Shadish et al. 1993; Weisz et al. 1987; Weisz & Weiss, 1993; Weisz et al. 1995). Developmental research also indicates that all children benefit from positive and ongoing involvement with caring adults outside their family (Dodge, Dishion & Lansford, 2006).

There has been ample evidence that any effective childhood treatment will have a strong parent component. Over the last 30 years there have been 82 studies that have found the most effective interventions trained parents in strategies to work with their child (Bernal, Klinnert & Schultz, 1980; Spaccarelli, 1992).

Residential care is much more difficult to evaluate than other treatment settings due to the ecological components with multiple variables. However, when treatment interventions within a residential setting are the subject of research the results often show strong improvement (Landsman, Groza, Tyler & Malone, 2001; Hooper et. al., 2000; Weiner & Kupermintz, 2001; Burns et.al., 1999). Research has shown long-term maintenance of gains in clinical functioning, academic skills and peer relationships (Blackman, Eustace & Chowdhury, 1991; Joshi & Rosenberg, 1997; Wells, 1991).

In this discussion, empirical evidence will be separated first by type of intervention and then by type of service.

### **Behavioral Interventions**

The foundation of effective treatment for children will focus on behavior. At a primary level all interventions are in some way behavioral interventions. There are core therapeutic premises the agency has drawn from behavioral therapy:

- Focus on current behaviors while being aware of past experiences
- Maladaptive behaviors have been learned and can be modified
- Behaviors are a primary focus of treatment because they can be observed, measured and recorded (Wolpe & Lazarus, 1966)
- Effective behavioral treatment begins with a functional analysis while identifying saliency to the child.
- Behavioral treatment is most effective when based on applied behavioral analysis (Kazdin, 1994)
- Contingency reinforcement provides a proven effective intervention (Stuart & Lott, 1971)
- Positive behavioral change is enhanced by using prompts as discriminative stimuli
- Behavioral interventions must include the element of "fading" or removing the external reinforcement as behavior increases.
- All behavior change must be targeted to generalizability in the natural environment of the child
- Shaping or successive approximations of desired behaviors is an important component.
- Correcting behavior is a function of interventions that are immediate, consistent, and of moderate strength combined with verbal clarification
- Another effective intervention is restitution or overcorrecting a negative effect of undesirable behavior
- A key technique of behavior work particularly with children is repetitive positive practice
- An intervention that can be used sparingly is response cost or having the child learn that the cost to the child of continuing the behavior begins to be not worth it
- Cognitive Restructuring—Relax, Rethink, and Respond, is a process that is effective in removing positive reinforcement for the purpose of extinction of certain maladaptive behaviors and enhancing cognitive mediation and restructuring thoughts and feelings associated with environmental interactions.

All of the above behavioral premises and interventions are woven into the total environment of the treatment program. These concepts come from the behavioral literature and have shown clinical effectiveness over several decades. However, behavior may be the most obvious and observable dimension of maladaptive symptomology, but behavior is an effect not a cause. Behavior interventions are one aspect of the foundation of effective treatment, another is cognitive interventions.

### **Cognitive Behavioral Interventions**

From the roots of classical and operant conditioning of Watson and Skinner early in the twentieth century, the understanding of behavior has broadening in scope to include the fact that behaviors are mediated by cognitions. Children often act in ways that are based on their understanding the situation and the meaning they ascribe to it. Including cognitions in behavioral change has been shown in empirical research to be one of the most promising aspects of effective treatment to come forward in the last fifty years. There are a number of cognitive behavioral premises used in the agency's treatment approaches:

- Behavior has meaning to the individual, thus cognitive restructuring must be integrated (Ehlers & Clark, 2008)
- A key element of behavioral change is observational learning or modeling (Bandura, 1977)
- Impacting saliency and meaning can be done by self instructional training or replacing maladaptive cognitions with adaptive ones (Meichenbaum & Goodman, 1971)
- A promising approach with children is problem-solving skills training (Spivack, Platt & Shure, 1976)

Effective treatment approaches for children with psychiatric symptoms due to traumatic histories includes providing new meaning and better understanding of daily events. This approach must recognize that traumatized children operate from two distinct sources of past memory, neocortical and subcortical. Events and information are generally stored in the cerebrum of the child's brain, these are memories that are generally retrievable through volition or trying to remember. However, memories produced by traumatic stress are stored in the subcortical or limbic system and diencephalon of the brain (van der Kolk, 1996). Here memories are wired to affective and autonomic arousal systems of the body. These memories are not triggered by cognition but by approximations of past traumatic stress.

Therefore promoting cognitions with behavioral intervention requires an understanding that some cognitions are directly available to the child and therapist and other cognitions are only indirectly available and will be spontaneously triggered. This is one of the key reasons why residential treatment can get to the core symptoms of traumatized children much more effectively than outpatient treatment, many of the most essential elements of maladaptive responses of the child must be treated as they are triggered in real time and not generated or produced once a week in the outpatient office.

### **Adding Affective Integration To The Therapeutic Equation**

There is a strong link in research between early childhood emotional well-being and long-term social competence throughout life (Collins & Laursen, 1999; Dunn, 1993; Cassidy & Shaver, 1999). Children need to understand a broad range of emotions and learn to manage a variety of emotions in order to have good emotional health as they mature (Eisenberg, Fabes, Guthrie & Reiser, 2000). Another strong link in research has been shown between well regulated emotions and developing executive functions, as well as poorly regulated emotions and poorly developed executive functions (Shonkoff & Phillips, 2000; Damasio, 1999; Davis, 1992; LeDoux, 1996; Bush, Luu & Posner, 2000). Jasper Mountain places a strong emphasis on identifying emotions and learning to express and regulate emotional expression in direct and healthy ways.

Resolving the effects of early trauma are key to successful treatment of the children in our agency. A major aspect of addressing trauma is to understand and treat affective regulation. This sounds complex, but not all treatment necessarily looks clinical. For example the focus on fun and play in our treatment is based on research that learning to play addresses traumatic histories (Terr, 1988). This is why we believe that children are healing best when they are enjoying themselves. Our treatment has a primary focus on building the child's capacity to bond and attach to others. Research has found that attachments to adults are a primary way children learn to regulate internal states (Putnam, 1988). In the agency's trauma therapy, children are

assisted in verbalizing past and present stress. We do this in part because of research that indicates that when child attach words to traumatic experiences, the terror of the experience reduces resulting in improved affect regulation and measurably positive physiological improvement (Harber & Pennebaker, 1992). Stated briefly the goal of trauma therapy in the agency is to enhance the child's ability to attribute accurate meaning to present experiences through symbolic representations of past traumatic experiences, thereby reducing associated arousal and desomatize memories of traumatic stress (van der Kolk, 1996).

### **Research on Trauma Therapy Approaches**

As with other childhood therapies, trauma therapy generally has multiple components which makes it difficult to control for variables in research studies. Like other complex disorders the treatment of trauma presents significant complications for researchers. “Much of the treatment of victims of trauma is intuitive...despite the fact that the nature of the therapeutic relationship and the appropriate timing of interventions form the backbone of all treatment, these factors cannot be easily quantified, and probably can never be satisfactorily studied with acceptable scientific methodology” (Turner, McFarlane & van der Kolk, 1996)

One approach of research is to isolate a particular symptom of trauma and control for a specific intervention. The general goals of trauma therapy are to 1. Control over emotional responses/decondition anxiety; 2. Reframe thinking by putting the past in the past; and 3. Integrate trauma into one’s personal history and self-concept (van der Kolk, 1996).

A central component of most trauma therapy is re-exposure to the trauma. Multiple research supports the importance of this component of working with trauma (Blake, 1993; Boudewyns et al. 1990; Cooper & Clum, 1989; Foa, 1986; Foa, 1993; Foa, 1994; Foa, 1995; Keane, Fairbanks, Caddell & Lemering, 1989; Peniston, 1986). Re-exposure was found to reduce intrusive recall and anxiety (Sapolsky, 2003; Brom, Kleber & Defares, 1989). At the same time, re-exposure is not enough. There must be safety and a supportive therapeutic setting and relationship with the therapist (van der Kolk, 1996).

Re-exposure was found to be even more effective when combined with education and cognitive reprocessing (Resick & Schnicke, 1992). Cognitive interventions have shown evidence of effectiveness for trauma when they include these components: 1. Recognize feelings, 2. Clarify cognitions, 3. Teaching coping strategies, 4. Providing a component of parental support (Barrett, Dadds & Rapee 1996).

Dynamic psychotherapy was found to work best for mastering avoidance (Bram et al. 1989). However, working with trauma is complex. Safety and predictability are preconditions for treatment and timing is important. Stability must come first before going into the trauma, and failing to approach trauma connected issues in a gradual way in a safe surrounding is likely to lead to intensification of post traumatic stress symptoms (van der Kolk, 1996). This is one reason why many holding therapies do not meet the requirements of safely working with the trauma aspect of attachment disorders. Assertiveness training, stress inoculation and supportive psychotherapy with an educational component was found to be very effective (Resick, Jordan, Girelli, Hutter & Marhofer-Dvorak 1988).

Trauma specific therapy should address each of the areas research has identified as important: Post Traumatic Stress Disorder, cognitive distortions, altered emotionality such as depression and anxiety, disturbed relatedness, avoidance such as dissociation, self harm, compulsion, and impaired self-regulation (Briere, 1991). Sexual trauma in particular has been found in research to be helped by trauma-based cognitive behavioral therapy. In one study TB-CBT improved PTSD, depression, behavior problems, shame, and abuse related attributions (Cohen, Deblinger, Mannarino & Steer, 2004). In a one year follow up on TB-CBT another study found improvements over other therapy approaches with anxiety, depression, dissociation and sexual problems (Cohen, Mannarino & Knudsen, 2005). This approach was found superior to most other trauma interventions (Ponniah & Hollon, 2009).

### **Research Supporting Neurological Reparative Therapy**

An area on the cutting edge of mental health treatment is the inclusion of neurological approaches to mental health and behavioral disorders (Makinson & Young, 2012; Linden, 2006; Paquette, Vevesque, Mensour, Leroux, Beaudoin & Bourgouin, 2003). Excellent research support has been established for treatment strategies that encourage higher order thought processing to overcome emotional and thought patterns resulting in dysfunctional behaviors (David & Szentagotai, 2006; Paquette, et al., 2003; Ressler & Mayberg, 2007). The focus of Neurological Reparative Therapy is to positively impact the functioning of the brain. Research now supports the NRT premise that thoughts, emotions and experiences all produce physiological changes that alter the way the mind operates either to the detriment (trauma) or betterment (therapy) of the individual (Makinson & Young, 2012).

Due to an enormous amount of research support, current practice dictates an understanding of the biological and neurological underpinnings of mental health disorders (Makinson & Young, 2012). Neurological Reparative Therapy is one such theoretical approach to consideration of neurological functioning both as the cause of mental health problems as well as a path to consider effective treatments. NRT incorporates a broad range of brain based processes such as stimulating the Prefrontal Cortex to override the activity of the limbic region of the brain (Banks, Eddy Angstadt, Nathan & Phan, 2007; Davidson, 2004). Activation of the Prefrontal Cortex has been supported by findings that it as well as the Amygdala and the entire Limbic region are remarkably susceptible to neuro-transformation, often called neuro-plasticity (Katz, Liu, Schaer, Parker, Ottet & Epps 2009; McClung & Nestler, 2007). Appropriate brain based interventions at the right developmental time can transform the brain from dysfunction to positive functioning. An aspect of NRT is the practice of concentrated mental focus often referred to as mindfulness. Research has shown strong support for mindfulness interventions (Makinson & Young, 2012; Chiesa & Serretti, 2011; Evans, Ferrando, Findler, Stowell, Smart & Haglin, 2008; Wells & Sembl, 2006; Davidson, Kabat-Zinn, Schumacher, Rosenkranz, Muller, Santorelli, Urbanowski, Harrington, Bonus & Sheridan, 2003; Segal, Williams & Teasdale, 2002).

One goal of NRT is the improvement in neuro-processing brought about by repetitive practice of NRT interventions. Repeated activation of both emotional and cognitive regions of the brain combines stimulation and exposure of stressful memories in a safe environment and this process

improves the symptoms of PTSD (Katz et al. 2009; McClung & Nestler, 2007; Shin, Wright, Cannistraro, Wedig, McMullin & Martis, 2005).

Another goal of NRT is to improve the resiliency of children after traumatic experience. A great deal of research has been done on resiliency including significant work from the field of positive psychology. Resiliency has been the focus of attention in both education and mental health treatment. We use NRT to promote resiliency in both academic and clinical settings. Research has found that directly training children in methods to increase resiliency has shown excellent efficacy (Davidson & McEwen, 2012). Use of teaching mental skills to children in educational settings has strong support as well (Davidson, Dunne, Eccles, Engle, Greenberg, Jennings, Jha, Jinpa, Lantieri, Meyers, Rowser & Vago, 2012).

Self-efficacy is directly related to being able to use mental skills and training in control of thoughts and emotions. Research supports the concept of directly teaching individuals to be able to mentally control stress, particularly overwhelming stress such as trauma (Charney & Sussman, 2006). When children develop confidence in their ability to make brain changes not only do they make more positive brain change but it also lasts longer (Southwick, Brett, Charney & Friedman, 2011). Part of positive brain change in the NRT model is being able to manage emotions a self-regulate. For example traumatic events take place in the lives of nearly everyone and overall mental health is aided by the ability of the brain to feel emotions but at some point have the ability to turn off emotions or more accurately to move on and experience other emotions. It is getting stuck particularly in negative emotions that produces the long-term negative impacts of disorders such as PTSD and depression. Research supports training individuals to manage emotions and learning to move on from negative feeling states (Sancassiani, Pintus, Holte, Paulus, Moro, Cossu, Angermeyer, Carta & Lindert, 2015).

Neurological interventions, such as Neurological Reparative Therapy, improve brain functioning by stimulating direct executive brain functioning which influences physiological and psychological states and does so in a safer and more interpersonal manner than psychotropic medications (Makinson & Young, 2012).

### **Research on Attachment Therapy Interventions**

As one of the newest forms of childhood therapy, attachment specific therapy is largely unresearched. One exception comes from the “holding therapy” proponents and their research will be critiqued in the following pages. Other attachment therapy is built upon research related directly to the various symptoms of an attachment disorder. For example, multi-modal therapy that combines medication and psychotherapy was found to be effective in reducing anxiety (Kearney & Silverman, 1998). For attention deficit hyperactivity symptoms, the most researched of all childhood symptoms, the following components are supported by research: 1. Support and train the parents, 2. Appropriate school involvement, 3. Pharmacology (American Child and Adolescent Psychiatry Practice Parameters, 1991).



Although treatment approaches have received less attention, there is significant research that points to the connection between attachment problems and lifelong behavioral and mental health problems (Bates & Bayles, 1988; Belsky & Nezworski, 1988; Caspi, Elder, Bem, 1987; Crittenden, 1981; Erickson, Sroufe & Egeland, 1985; Lewis, Feiring, McGuggog & Jaskir, 1984; Matos, Arend, & Sroufe, 1978).

### **Building Effective Interventions for Attachment Disorders Based on Research**

Attachment specific therapy requires trauma specific therapy. Therefore, all the above research should be considered. The research has been used to build the foundation of approaching the symptoms as well as the root causes of attachment disorder using the steps described below.

The first step is to recognize the research on the components of therapeutic interventions that have been found to be fundamental to all effective therapy: 1. Support catharsis in the client, 2. A supportive/productive therapeutic relationship, 3. Promoting cognitive insight of choices, 4. Teaching behavioral regulation and 5. Practice in mastery (Lambert & Bergen, 1994). Each of these components deserve attention in attachment specific therapy. The catharsis often comes when the child resists connection to others and reacts as the interventions make the child more vulnerable and dependent on adults. The goal is to work toward a supportive/productive relationship while first recognizing that the therapist cannot act in ways to approximate previous traumatic events. A cognitive element is important depending on the developmental level of the child. Self-regulation and behavioral practice are specific steps to reduce the problematic symptoms of attachment disorders. Three components of therapy are supported by research: Behavioral, cognitive, and affective interventions.

The first area, behavioral interventions, are key to addressing the observable symptoms of attachment problems. Working with behavior is a primary component in all effective therapy (Wolpe & Lazarus, 1966). Interventions are most effective when based on applied behavioral analysis (Kazdin, 1994). Shaping or successive approximations of desired behaviors is an important component in attachment therapy (Terr, 1990). Contingency reinforcement provides a proven effective behavior intervention (Stuart & Lott, 1972). A key technique of behavior work, particularly with children, is repetitive positive practice (Lambert & Bergen, 1994). Finally, all behavioral change must be targeted to generalizability in the natural environment of the child (Stuart & Lott, 1971).

The second area is cognitive interventions. One way to combine behavioral and cognitive components is to use observational learning (Bandura, 1977). Cognitive approaches have been used to alter the meaning of situations through self-instructional training to move the child from maladaptive to adaptive cognitions (Meichenbaum & Goodman, 1971). To do this effectively, understanding how children with attachment disorders perceive and think about situations is critical. It is also critical to set up conditions where misinterpretations of the child are confronted and accurate perceptions are taught and reinforced. One of the most important cognitive interventions includes training the child in problem solving skills (Spivak, Platt & Shure, 1976).

The third area is affective intervention. As stated in the above trauma section, re-exposure to traumatic affect in the right way is an important part of the process. This can be done by the use of play therapy (Terr, 1988). Working to set up the conditions of the child relying on adults, helps to put into practice the research evidence that relationships with adults teach regulation of internal states to children (Putnam, 1988). It is also important to give the child verbal tools to discuss feelings while providing support to help improve affect regulation and positive overall physiological improvement (Harber & Pennebaker, 1992).

A variety of specific interventions can be developed using each of the above components that have come from research. Specific training of parents and adults who interact with the child is an essential aspect of any effective treatment of children according to research. Overall, the number of variables in multi-modal interventions for complex problems associated with trauma and attachment will continue to pose difficulties for researchers. However, there is sufficient research to point to both important components of therapy as well as components to avoid when treating these children.

### **Supportive Research by Program**

Significant gaps remain in research and evidence based programs for young children with mental health issues. The major EBP systems of interventions with significant research support all have gaps regarding young children with chronic or significant mental health concerns (Hoagwood, 2003). Functional Family Therapy (Alexander, Pugh, Parsons and Sexton, 2000) has evidence primarily for adolescents with juvenile crime issues, Multisystemic Therapy (Henggeler, 1996) has evidence principally with teens with offending or anti-social/substance abuse issues. In current research as yet unpublished, neither of these systems is showing long-term success with chronic mental health issues (Hoagwood, 2003). In a 2003 review by the State of New York, no evidence based program currently exists that has demonstrated effectiveness in working with young children with posttraumatic stress disorder, the primary population served by Jasper Mountain. More recent research has been done on this population. Due to the continuing scarcity of evidence based programs for young children with mental health and trauma issues, and because the current evidence based programs primarily focus on populations of juveniles with anti-social and criminal justice issues, the most current thinking is to integrate the core principles of EBP systems (Hoagwood, 2003). Jasper Mountain closely follows the mental health literature and incorporates interventions that show promise in helping young children with significant mental health symptomology.

### **Intensive Psychiatric Residential Treatment Program**

All of the above research and evidence has been used to pull together the most intensive treatment rich service provided by the agency – intensive psychiatric residential treatment. This service is based up a complex coordinated application of treatment interventions to meet the needs of the child and the family. It also is the focal point from which step up and step down services are referenced. This program includes individual and environmental interventions to produce an array of holistic interventions forming the treatment family at Jasper Mountain.

The agency's residential programs offer a comprehensive and ecological model (Stroul & Friedman, 1996; Wells, Wyatt & Hobfoll, 1991; Hooper, Murphy, Devaney & Hultman, 2000) of multi-model treatment interventions woven into an integrated whole, designed to meet the individual needs of a child and the child's family. These programs start with a commitment to national standards of excellence, a continuous commitment to quality improvement, and have an identifiable treatment philosophy and approach based upon research and empirical evidence. These programs emphasize the environment around the child, which necessitates family interventions, partnering with families to best meet the child's needs, and at times includes efforts to identify a family for children without one. Our programs know the target populations that we are most effective with and have evidence based approaches for these populations. We focus not solely on behavior but work to impact the child's positive thoughts and perceptions, emotional self-regulation, and pro-social skills and behaviors. Our programs are integrated into a community of stakeholders who have input into a continual unfolding of quality interventions in an overall environment of safety, respect and effectiveness.

Many therapeutic strategies are utilized within the program often depending upon the needs and interests of the individual child. Although the program offers an enriched environment of evidence based practices and other interventions with practice based evidence, the program strives to individualize treatment for every child. Therapeutic approaches include: therapeutic recreation, aerobic activity, animal assisted therapy, gardening, and arts and crafts all of which have research to support their efficacy. There is increase evidence that aerobic activity is the most effective approach to brain health. Exercise has been found in research to enhance resilience and bouncing back from traumatic situations (Southwick & Charney, 2012). The Jasper program also strives to teach children skill sets for the future in areas such as good decision making, self-love, a sense of being connected to something greater than self, cooperation and empathy. In addition children's internal perceptions are the target of interventions for positive change. For example, specific interventions are used to teach the children gratitude. Gratitude has strong research to support how it develops more maturity, inspiration, insight, greater awareness, fulfillment, openness, positive behaviors, positive emotions and altruism and helping others (Emmons, 2013). There is also research support for the effectiveness of teaching gratitude to children (Froh, Kashdan, Ozimkowski & Miller, 2009).

Two predictors of long-term positive outcomes of therapy in intensive residential settings deserve to be specifically mentioned because both relate uniquely to the treatment provided by Jasper Mountain. The quality of the therapeutic relationship in therapy has been found to be one of the most important predictors of long-term success (Pfeifer & Strzelecki, 1990; Scholte & Van der Ploeg, 2000). In a recent study on attachment representations, children in residential treatment improved in their forming secure attachments and decreasing their avoidance and hostile behavior. However this finding was true only for children with longer stays in residential treatment. The study reported, "When the duration of treatment is extended, the personal attachment backgrounds of clients and treatment staff increase in importance (Zegers, Schuengel, van IJzendoorn & Janssens, 2006). The other long-term predictor of success is positive outlook, life satisfaction and hopefulness. In a 2006 study children in residential treatment increased their hopeful thinking and general well-being, while decreasing psychopathology (McNeal, Handwerk, Field, Roberts, Soper, Huefner & Ringle, 2006). Attitudinal and cognitive variables such as hope have been found to predict outcomes above and beyond psychopathology (Hagen,

Myers & MacKintosh, 2005). This study on hope found the children with the highest levels of psychopathology made the most gains after 6 months of residential care.

### **Residential Assessment and Evaluation (SAFE)**

While children undergo an extensive assessment, treatment interventions include a variety of evidence based mental health interventions with children. Cognitive behavior interventions are a central component (Bandura, Meichenbaum, Goodman, and Spivack have all found CBT effective as have most of the hundreds of clinical trials). More specific to our target population is trauma based CBT which has research support for effectiveness (Deblinger, Steer & Lippman, 1999; Cohen & Mannarino, 1997). A strengths based approach is used (Webster-Stratton & Taylor, 2001). An integrated treatment environment is used to stabilize and treat children including psychiatry, multiple therapies, school, family interventions and skill building which has been found to be effective (Lambert, Shapiro & Bergen, 1986). Providing an intensive treatment array of mental health services has been shown to produce positive outcomes with children with mental health concerns (Casey & Berman, 1985; Baer & Nietzel, 1991; Grossman & Hughes, 1992; Shadish et.al., 1993; Weisz, Weiss, Han, Granger & Morton, 1995).

### **Residential Crisis Respite (SAFE)**

Crisis research has supported the fact that young children in crisis are at a very high risk for traumatic abuse (Finklehor, 1990). Respite is a component of all major family based EBP systems (Treatment Foster Care, Multisystemic Therapy, and Functional Family Therapy). Providing a family the opportunity to have respite has been shown to increase resilience, promote family stability and prevent further out-of-home placements, which is why a respite component is a part of all evidence based programs.

### **Day Treatment**

Although there is little research on day treatment as a specific mental health treatment for young children, our program integrates several evidence based practices including: Behavioral treatment (Kazdin, 1994), intensive family intervention (Webster-Stratton & Taylor, 2001; Kazdin & Weisz, 1998), home based services (Sexton & Alexander, 1999), Cognitive Behavioral Therapy to reframe past trauma (van der Kolk, 1996) and integration of schooling into the treatment environment (Gordon et.al., 1988).

### **Treatment Foster Care**

Treatment Foster Care is one of the more researched system interventions for adolescents. Although sufficient research has not been completed on young children with mental health issues, this approach is considered by the evidence based evaluators as a systems intervention showing promise for outcome effectiveness (Thomlinson, 2003; Surgeon's General's Report on Mental Health, Foster Family Treatment Association). Multiple components of this intervention

have shown successful outcomes such as: parenting interventions as a primary strategy (Dishion & Andrews, 1995), family based care (Mendel, 2000), therapeutic services that are home based (Gordon, Arbuthnot, Gustafson & Green, 1988), combining child-directed problem solving with parenting interventions (Kazdin, Siegel & Bass 1992), family based care to prevent the need for more intensive services (Aos, Barnoski & Lieb, 1998), and intensive family training, respite support and behavior management (Reid, 1993; Dishion & Patterson, 1992; Hawkins, Catalano, & Miller, 1992).

## **Outpatient Treatment Services**

There is significant research over many years to support specific therapeutic interventions with traumatized children with resulting mental health concerns (Thomlinson, 2003).

Individual Interventions - Behavioral (Kazdin, 1994) and cognitive behavior therapy (Bandura, Meichenbaum, Goodman, Spivack, and others) have demonstrate solid support for positive outcomes. Our individual therapy moves beyond typical CBT to include affective integration (van der Kolk, 1996; Harber & Pennebaker, 1992; Terr, 1988; Putnam, 1988). Additionally we use trauma based CBT, which has research support for effectiveness (Deblinger, Steer & Lippman, 1999; Cohen & Mannarino, 1997). Although there is no evidence based program for children with posttraumatic stress, a number of therapeutic practices have shown solid evidence of positive outcomes. Trauma therapy is provided for children with PTSD (Blake, 1993; Foa, 1995). Trauma therapy includes sensitive re-exposure with educational and cognitive reprocessing components (Resick & Schnicke, 1992). Our therapists identify feelings, clarify cognitions, teach coping strategies and provide a component of parental support (Barrett, Dadds & Rapee, 1996; Briere, 1991).

Group Interventions - Psycho-educational components are applied in our groups, which take advantage of a variety of interventions that have strong support in research. These interventions include alleviating psychological distress, reducing maladaptive behavior and enhancing adaptive behavior through skills training and mediated social interactions (Weisz, Weiss, Han, Granger & Morton, 1995; Smith Glass & Miller, 1980; Casey & Berman, 1985).

Family Interventions - Family based interventions such as the power of adult modeling, have received strong empirical support for effectiveness (Sexton & Alexander, 1999; Henggeler et.al., 1998). Family interventions are an essential aspect of impacting the environment of the child (Spaccarelli, 1992; Bernal, Klinnert & Schultz, 1980). Using an ecological model to assist families has been supported by research (Fraser & Galinsky, 1997).

## **What Else Does Research Says About Our Agency's Approach?**

Much of what has been addressed above has focused on interventions. However, what does research say about the target population of the agency and the length of treatment? In addition to forty years of consistent research indicating a positive effect from psychological therapy for

adults, children have also been found to be significantly helped in treatment. In a 1985 study children who underwent treatment showed beneficial results compared to peers with similar issues without the benefit of treatment with a .71 effect size (Casey and Berman, 1985). Another 1987 study supported not only the value of children's treatment but also the target population of our agency and long-term impact. This study found a .79 effect size of treatment for children with treatment compared to peers with similar issues without treatment. In addition the finding was that therapy for children between the ages of 4 and 12 (our agency's target population) was significantly more beneficial than for children over twelve. The study supported the importance of a strong focus on behavioral intervention and found that the effectiveness of treatment for young children had lasting long-term impact on the child (Weisz, 1987). Finally, consistent research studies have shown that in general longer duration treatment was associated with better outcomes than short duration (Howard, 1986). The national move to shorter stays in intensive treatment has mixed support in research, "It seems reasonable to conclude that deeper, longer, more intensive and expensive programs are necessary for high-risk children and youth (Moore, 2006)." Our agency continues to believe that for some children consistency of treatment for a year or more is essential to impact not only the behavior of children but also their thought processes and affective orientation to the world around them.

Grounding therapeutic interventions in empirical research is a starting point to developing effective approaches that can be evaluated for effectiveness. Empirical research is an essential component of measuring a program's approach and methods, but it is only one of many essential components. A good understanding of the limitations of empirical research will help prevent an over reliance on this one evaluative component. While research helps to answer the question "what happened and why?", it has significant limitations in real world settings such as a residential treatment program. Complete control of all variables is essential to determine causation, or what actually caused the measured change in the child or family. While theoretically interesting, determining causation is of much less interest to a treatment program than to monitor improvement. With the task of modifying very serious behavior, treatment program first are interested in producing positive outcomes and secondarily considering what had the greatest impact in the successful outcome.

Due to the primary mission of Jasper Mountain, the agency is more of a consumer rather than a producer of empirical research. The agency is in the business of solving complex problems rather than studying these problems. For this reason the agency embraces the approached called outcome assessment (Mordock, 2000). This approach to measuring effectiveness does not have the confining limitations of empirical research, but instead allows the program to use multiple measures to determine complex interrelated outcomes. While outcome assessment cannot prove that success was the result of any particular variable, treatment program are more interested in measuring success than proving any particular causal relationship producing the success.

## **Integrative Treatment**

Treating the body, mind and spirit of children requires a well-rounded approach. There is strong research that addresses the importance of promoting the develop of a healthy mind and body. There is now growing research to support promoting a healthy spirit (Oman, Hedberg & Thoresen, 2006). For example, a study demonstrated individuals with more developed

spirituality were found to demonstrate lower sympathetic nervous system arousal and better emotional coping when exposed to stress (Labbe & Fobes, 2010).

Jasper Mountain believes in integrating not only mind, body and spirit but also integrating schools of thought in treatment. The agency has drawn from several other clinical schools of thought including the following. From the Adlerian school we incorporate an understanding of the child as a function of the effects of social influences. From Rogers therapeutic concepts are used such as relationship based, alleviating perceptual distortions, congruence, support, and the development of personal worth. From the Gestalt school of therapy comes the concept of awareness of the surroundings and its meaning bringing choice and self-determination resulting in enhanced personal responsibility. From Reality Therapy come the concepts of failure and success identity, relying on life experiences to promote understanding of right and wrong, and the use problem solving and discrimination to reduce maladaptive social responses. From the school of group therapy comes the concept of the milieu as a "curative agency" (Yalom, 1985).

### **But Does It Work?**

Although a strong theoretical base with empirical science as support is a necessary first step for an effective therapeutic program, there are other key factors as well. The second element is clinical experience and we have more than three decades of clinical experience to draw upon. The third element is understanding the unique issues of the target population, in this case young traumatized children. All these components go into the decision to adopt an approach to help a child. Then implementation of the approach is critically important. An effective program is produced with hundreds and thousands of daily interventions consistent with the philosophy of the program. It is literally the case that the program is as good as every intervention on the part of the entire treatment team. The philosophical base must be put into practice with selected approach and then the results must be carefully and systematically measured. Jasper Mountain has a nationally recognized approach to program evaluation. This approach is based on two types of measurement--outcome and follow up. The outcome measures use psychometrically standardized tools as well as clinical observation to gain measures at the beginning of treatment and at the end for a pre and post assessment. The next important evaluation question is are positive outcomes generalized to other settings and maintained over time. For this purpose the agency tracks all graduates of the program on twenty success measures at time intervals of six, twelve, thirty-six, and sixty months following discharge. The most recent data on this ongoing research is available from the agency. Since inception of these measures in 1998, significant and lasting improvement in problem areas as well as growth in body, mind and spirit have been recorded. Over time the themes continue to reflect that the children are better coming out of the program than they were going in and the children are much better five years after discharge than they were when they left the treatment environment. For detailed information go to the website and view reports at [http://www.jaspermountain.org/outcomes\\_follow\\_ups.html](http://www.jaspermountain.org/outcomes_follow_ups.html).

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