

# Research

## Behavior Change, Proved: HANDLE<sup>®</sup> with Foster-Adopt Children: an Outcome Study

By Marlene Suliteanu, OTR/L

No one could name all the variables that influence a child's development – but neglect, abuse, malnutrition, emotional distress, and unreliable support show up on any list that tries to account for behavioral problems. Any of those would be enough; any combination would be expected to increase the likelihood of problems. Few ask why. This study started from the premise that those detrimental influences cause behavioral problems by causing neurodevelopmental changes.

It is a premise basic to the Holistic Approach to NeuroDevelopment and Learning Efficiency (HANDLE). Stated differently: behaviors convey our brain-body's needs and capabilities, which our neurodevelopmental integration – or lack thereof – determines.

Sound complicated? This article will try to de-complicate it, by reporting on a study conducted in a Mexican orphanage. The particular orphanage uniquely parallels a (very large) foster home, and the children represented all those detrimental influences.

### **The children, and the orphanage – before the study**

Some impoverished parents place children in Mexican "orphanages" when they can no longer afford to keep them at home. The DIF – the equivalent of Children's Protective Services in the US – places others because of abuse and neglect. Few Mexican children are adopted. Mexican courts rarely terminate parental rights, so parents have to willingly sign their children over for adoption. Few mothers do. It would shame them in their culture. Therefore, most orphanages (hogars) amount to foster group homes, with parents visiting their children on weekends. Most children leave permanently, to go out on their own, when they are old enough.

Our study took place at Rays of Hope (Vislumbres de Esperanza) Children's Home (Casa Hogar) in Saltillo, Mexico. A Certified HANDLE Screener, Beth Powell, LCSW, had a prior relationship with the home as a psychotherapy consultant, so she established the staff's willingness to participate. This hogar was exceptional as a Mexican orphanage in that the population was small – 38 children at

the time of this study – and the caregiver to child ratio was only 3 children per caregiver. Since the caregivers resided on-site, that ratio contributed to a family-style atmosphere.

In addition to staffing factors, the food distinguished this facility among Mexican orphanages. The diet consisted of beans, rice, and a serving of meat or fish each day. Some of the protein came from US donations to augment what the staff obtained. The children had at least one daily serving of fruit and/or vegetables. They had water, milk, home-made fruit juices, and Kool-aid to drink. They had sugar snacks sometimes.

## **Behavior Change, Proved**

About 75% of the children came into the orphanage malnourished, with brittle hair, dry skin, and they were either severely thin or had distended bellies. Since water from the faucets in Mexico is unsafe, water must be bought; most of the families of these children bought soft drinks instead – so most of the children never drank water. Their home diet basically consisted of rice, beans and junk food such as chips, cookies and soft drinks. Meals rarely included vegetables. Children had fruit only in season and hardly ever ate any meat. This nutritional history applied to essentially all the children at the hogar.

## **The study outline: protocol and program**

Ms. Powell initiated the study in July of 2004 by screening each resident at the hogar five years old and older. (The HANDLE Screening Tool is inapplicable with younger children.) The oldest of the twenty study participants was 14. This hogar kept no boys past sixth grade, approximately age 12, so the three oldest participants were all female. Of the seventeen children aged 5 through 11, ten were male.

With no correlation to those screenings so as to ensure objectivity and confidentiality, a hogar caregiver assessed how much sixteen behaviors interfered with each child's function. The behaviors included physical (e.g. urinary incontinence, balance problems) and psychological or emotional behaviors (e.g. aggressiveness, poor anger management) as well as several related to sensory-motor functions (e.g. distractibility, hyperactivity, hyper-vigilance re touch).

The rating scale required no special training, only the kind of observational skills inherent in "parenting" within daily routines. The scale ranged from 0 (never a problem, does not apply) to 8

(so severe that it “prevents social or academic functions”) – so the higher the “score” the bigger the problem.

Then Powell instructed the children and staff in a program intended to address issues she had identified as findings of The HANDLE Screening Tool. Again confidentiality and objectivity were assured: the Screener did not see the staff assessments beforehand.

The therapeutic program, like all HANDLE programs, included (1) participation in the specific HANDLE activities the Screener assigned, and (2) a nutritional component – water as a consistent beverage, and Omega 3 essential fatty acids.

The principle of Gentle Enhancement® guides all HANDLE therapy. Only the amount and nature of stimulation the individual’s systems will accept is allowed. Any state change – which may involve breathing, circulation, inattention, pain, or other signs – warns that the input occurring at the time is being rejected. Stressed systems do not get stronger; they shut down. Respecting the child’s response as self-descriptive rather than judging it as “stubbornness” or “defiance” achieves progress toward neurodevelopmental integration: the so-called defiance says that child is not ready for (unable to use) that stimulation at that time.

All our systems interrelate. The digestive system relies on the motor system for how we chew (or don’t) our food; our sense of smell conveys messages directly to our brain, exactly where our emotions register; eyes tell ears where to focus; fear depletes resources our immune system needs. Neurodevelopmental integration requires smooth multi- directional communication – so HANDLE targets such communication among each child’s interrelated systems.

The activities included gentle stimulation of Cranial Nerves (such as “Face Tapping” along the distribution of the Trigeminal Nerve); controlled rolling while cocooned in a natural-fiber blanket, to reinforce the Vestibular System; climbing through a hula hoop without touching it, to develop an internal sense of boundaries – and others; there were twenty-four possibilities. All are simple to do, and complicated neurologically.

Because a major contributor to effective neurodevelopmental organization is nutrition, and among nutritional factors a key one is the omega 3 essential fatty acids that help myelinate neurons, Zoere Wilcoxon, CCN (Certified Clinical Nutritionist) of Well- Being Associates arranged with Nordic Naturals, of Watsonville, California, to donate their product. During the 5+ months of this project, everything about the hogar’s meals remained the same except for (1) adding Nordic Naturals

“complete Omega” omega 3 fatty acid, and (2) eliminating Kool-aid; water became the primary beverage. 90% of the brain is water.

## **Results**

All but three of the twenty children demonstrated a decrease in the degree to which the behaviors interfered with function, and in some cases the changes were profound. Taking one behavior as an example: Of the nine children for whom being “distractible or unfocused” adversely affected their function initially, all (100%) improved. In fact, for three of the nine the behavior no longer interfered with function; was ranked 0, and in one of those examples the child initially was given an 8.

## **Nutritional aspect**

As with any statistical analysis, interpretations need more depth than mere use of numbers. But numbers can lead us to conclusions in a general way. For example, the greatest – dramatic – degree of improved function was seen in the two children with the most significant problems. One of these went from an initial total “score” of 59 to a follow-up score of 12. The other went from 36 to 6. Another piece of statistically- provided information these children gave me: For each of the sixteen named behaviors, I had designated what I considered to be commonly-held opinions about whether the problem was viewed as physical, psycho-social, emotional, or academic. The discovery: this program’s positive effects spanned all four categories, with more in the psycho-social and emotional columns than in the physical and academic.

## **Conclusions**

Although countless variables affect the function of all children, and especially those whose beginnings include poverty, malnutrition, abuse, neglect and other deprivations, generally speaking the variables preceded and follow the brief period of this study. The primary change in the lives of the participants of this study, therefore the primary determinant of the functional change the children experienced, was the HANDLE program. Anyone responds to his and her life challenges according to the neurodevelopmental integration that determines capability to function, whether the life challenge is considered emotional, physical, academic or social. Since HANDLE programs address neurodevelopmental integration, they affect all areas of function.

Each HANDLE program includes several key elements, the combination of which is what causes its outcomes. That interactive dynamism, given the principle of Gentle Enhancement, accounts for and distinguishes the nature of functional change achieved by HANDLE. The key elements are: movement-based activities, sensory-motor integration, nutritional support, and the nonjudgmental attitude that respects each child's behaviors as communication of needs and skills.

This outcome study implies that, for children disabled by the effects of malnutrition, abuse, neglect, and other social deprivations, a HANDLE program offers hope of productive adulthood. Although conducted in a Mexican orphanage, I believe this study conveys implications for all foster-adopt children: neurodevelopmental effects of early detrimental influences can be reversed, gently, with behavioral change to prove it.

**About the author:**

*Marlene Suliteanu, a Certified Practitioner of HANDLE, created a therapy practice based in southern California in June, 2001; and became a Certified HANDLE Instructor in November, 2003. See [www.GetAbleTherapy.com](http://www.GetAbleTherapy.com). As an occupational therapist since 1963 she has worked with all ages and diagnostic categories, in a wide variety of settings (hospitals, rehabilitation centers, home health agencies, nursing homes, adolescent residential psychiatric facility). Publications include: "Outcomes Are in the Eye of the Beholder," in August 2001 ADVANCE for OT, and (same article, re-titled) "Applied Neuroscience," in August 2001 ADVANCE for Speech Therapy; and "Autism Turned Inside Out," in July 2002 Autism/Asperger's Digest.*

[NOTE: For interested professionals, the data of this study are tabulated into charts and The author has written a more technically-focused version of this article. To see that article, contact the author via email: [marlene@getabletherapy.com](mailto:marlene@getabletherapy.com)[This e-mail address has been cloaked using javascript, to prevent spam. Please enable javascript in your browser, or contact by phone. Thank you.] .]

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