130.095 116 Pilot Study of Mind Reading and in-Vivo Rehearsal for Children with HFASDs. M. L. Thomeer*[1], J. D. Rodgers[2], C. Lopata[1], M. A. Volker[2] and J. A. Toomey[3], (1)*Canisius College*, (2)*University at Buffalo, SUNY*, (3)*Summit Educational Resources*

Background: Research suggests that individuals with high-functioning ASDs (HFASDs) can exhibit a range of facial- and vocal-emotion decoding difficulties (Golan et al., 2006; Lindner & Rosén, 2006). Computer software interventions have been proposed to address this deficit, including *Mind Reading* (*MR;* Baron-Cohen et al., 2004). LaCava et al. (2007) evaluated *MR*'s effectiveness with 8 children with HFASDs ($M=10.5$ hours per person). Pre-post comparisons indicated significant improvements in emotion recognition; however facial improvements were limited to tasks from *MR*. Although promising, LaCava et al. noted the need for studies that include measures of broader social performance. Additional limitations included no reporting of effect sizes, IQ, or language data, and lack of diagnostic confirmation using a diagnostic instrument.

Objectives: This pilot evaluated a manualized administration of *Mind Reading* (*MR*) and in-vivo rehearsal for its: (1) effect on emotion recognition and social behaviors of children with HFASDs; and (2) overall feasibility.

Methods: *Participants.* Eleven participants, ages 7-12 with HFASDs were screened using a multiple-gate procedure. Inclusion criteria included a short-form IQ composite > 70; receptive or expressive language score ≥ 80; and score meeting ASD criteria on the ADI-R.

Outcome measures. Social Responsiveness Scale (SRS; 65-item rating scale assessing ASD features and social behaviors); *Emotion Recognition and Display Survey* (ERDS; 54-item researcher-developed rating scale assessing *decoding* and *encoding* of 27 *MR* emotions). Participant and parent satisfaction was assessed via eight-item satisfaction surveys. Feasibility was evaluated using the *MR* chronometer that tracked *MR* time and satisfaction surveys*.*

Procedures. The manualized *MR* and in-vivo rehearsal protocol was administered during 12 staff-supervised 90-minute sessions.

Children completed *MR* exercises (Emotions Library, Learning Center, etc.) and in-vivo rehearsal according to a pre-established schedule and protocol. Children earned *MR* generated computer-based rewards and earned points for following rules, identifying and displaying emotions, and exhibiting pro-social behaviors.

Results: Parent ratings indicated a significant pre-post decrease in SRS scores ($t(10)=4.073$, $p<.0167$, $d=.65$) and significant increases on the ERDS emotion recognition ($t(10)=3.004$, $p<.0167$, $d=.95$) and display of emotions scores ($t(10)=5.185$, $p<.0167$, $d=1.70$). Exploratory comparisons on the SRS indicated significant decreases for 3 of 5 subscales (*Social Awareness* ($t(10)=2.970$, $p<.01$, $d=.58$); *Social Communication* ($t(10)=2.972$, $p<.01$, $d=.70$); and *Social Motivation* ($t(10)=2.861$, $p<.01$, $d=.77$). Effect sizes (SRS and ERDS) were medium-to-large. *MR* usage time approximated the 16-hour projected time ($M=15.87$ hours). Average parent satisfaction rating was 55.33 out of 56 and child satisfaction was 43.89 out of 56.

Conclusions: Results indicated that completion of the manualized *MR* and in-vivo rehearsal protocol was associated with significantly higher post-intervention ratings of emotion decoding and encoding, and lower ratings of ASD-related social problems particularly in the areas of social awareness, communication, and motivation. The findings also suggest the children's newly-learned skills generalized to some extent and may have affected other social behaviors (collateral improvements as captured by the SRS). Support for feasibility was reflected in high satisfaction ratings and participant usage of *MR*. Limitations and implications will be described.

130.096 117 Role of Complementary & Alternative Medicine (CAM) Using Acupuncture (AC) for Autism Spectrum Disorder (ASD). V. C. N. Wong*, *The University of Hong Kong,*

Background:

Parents of children with ASD sought for CAM treatment. (1) The approach in TCM is "holistic" with a philosophical background of

balancing "Yin-and-Yang". The patho-physiological basis aimed to improve "energy" or "body-flow" or "de-Qi". Depending on the symptoms of ASD, clinical manifestations could be categorized into different TCM syndromes: "Delay in Development; Speech and Language problems; Hearing problems; or Emotion problems". The sites of the pathological changes had been postulated to be in the 'brain, heart, spleen, liver and kidney meridian". In our experience, TCM approach for autism is postulated to be related to lower intelligence due to "Heart-meridian and Kidney-meridian imbalance" resulting in communication problem and "Liver-meridian imbalance" leading to behavioral problem. (2, 10)

Objectives:

We adopted a different approach to assess the efficacy of AC in improving the functional status with organ and meridian concept of TCM model as a fundamental basis to improve behavior, cognition or communicative ability.
Methods: During 1998-2008, we had conducted case study (2) and Randomized control trials (RCT) of using of short 80-12 weeks courses of AC. (3-9).

Results:

Our pilot case studies had demonstrated efficacy of acupuncture for ASD. (2). Our RCT Trials had demonstrated improvement in various modalities including behavior, language, functional status and cortical cerebral metabolism using Positron Emission Tomography. (3-9).

RCT 1- A pilot study with 30 ASD using Tongue Acupuncture had demonstrated improvement in core (language, social communication, cognition) and secondary features (hyperactivity, attention, aggression, temper tantrum, sleep, functional independence).

RCT 2- A single-blind RCT conducted on 50 children using acupuncture versus sham acupuncture in ASD had demonstrated statistically significant improvement in the Treatment as compared to the Control group

in self care and cognition domains of the WeeFIM ®.

RCT 3 - RCT using Tongue Acupuncture in ASD with PET scan for clinical correlation was performed on 21 ASD and 9 Controls. The Treatment group had significant improvement on behavior (p=0.0211); language (p=0.0211); functional status (p=0.0011); Clinical Global Impression Scale (p=0.0003); and cortical cerebral metabolism using PET (p=0.0451).

RCT 4- This RCT studied short-term electro-acupuncture for ASD (n=30) versus Sham Electro-acupuncture (SEA) (n=25). There were significant improvement in language comprehension domain of WeeFIM® (p=0.02), self-care caregiver assistant domain of PEDI (p=0.028), and CGI-I (p=0.003) for the EA group.

RCT 5- A RCT was performed to study the sustainability of the acupuncture effect in Treatment (n=18) and Control groups (n=18 and showed that acupuncture could be useful in improving language, social skills, irritability and stereotypy in ASD. The effects could be sustained for at least two months after acupuncture.

Conclusions:

Short courses of AC can improve functional aspects in ASD. Acupuncture could be used as an adjunct therapy for early intervention program. Given the minimal side effects and potential usefulness, acupuncture could be recommended as an adjunctive treatment if available for children with ASD. We had submitted a protocol for Cochrane Review on Acupuncture in ASD. (9) Further research is needed to evaluate the optimal acupuncture protocol for different subtypes of ASD and the mechanism of acupuncture.

130.097 118 SENSE Theatre: a Promising Intervention for Children with Autism Spectrum Disorders. B. Corbett*[1], J. Gunther[1], D. Comins[2], J. Price[3], N. Ryan[1], D. Simon[1] and T. Rios[2], (1)*M.I.N.D. Institute, University of California at Davis*, (2)*M.I.N.D. Institute*, (3)*Davis Musical Theatre*

Background: Social behavior is complex; therefore, interventions developed to address the challenging needs of children with autism