

67 THE EFFECT OF STRESS ON CHILDREN'S DRAWINGS, Raymond A. Sturmer, Fred Rothbaum, John Wolfer, Madaline Visintainer, (Spon. by Samuel L. Katz), Duke U. Med. Ctr., Dept. of Ped., Durham, N.C.; Yale U. Med. Ctr., New Haven.

Attempts at validating certain "emotional indicators" (or EI's such as teeth, tiny figure, no hands) have met with some success (ie more common in drawings of "chronically disturbed" children). While results remain controversial, human figure drawing tests are very popular and are used by pediatricians.

The stress effect of a health procedure (venipuncture) was evaluated on the drawings of 64 children, aged 4-12 yrs., hospitalized for elective minor surgery. All children were asked to draw a human figure on 2 occasions—shortly after admission and a brief period of free play and again approximately 30 mins. later. In the interim children received stress (routine venipuncture) or no stress (venipuncture delayed until after 2nd drawing) and either preparation (information and rehearsal) or no preparation (free play). Measures of upset and cooperation behavior and pulse were assessed at the time of the stress and pulse was taken again shortly thereafter.

EI's increased only for the group that was stressed and unprepared (p<0.001). This effect remained when adjusted for M.A. scoring of drawing. EI's seem then to be a valid measure of stress, but any interpretation of drawings must be mindful of current stress and the child's understanding of stress.

Although there was significant correlation between EI's and pulse at the time of stress, correlations of EI's with subsequent pulse (prior to drawing) and EI's with behavior measures were not present indicating that EI's are a dissimilar index of stress.

68 REORGANIZATION OF REGIONAL NEWBORN TRANSPORT TO ALLOW REALLOCATION OF MEDICAL PERSONNEL TIME. J. Sumners, H. B. Harris, B. Jones, G. Cassady and D. D. Wirtschafter. Dept. of Pediatrics, Univ. of Ala., B'Ham.

During the latter half of 1974, changes in the neonatal transport system serving mid- and northern Alabama were made in response to increasing demands of transport on NICU personnel and equipment. One major change was from NICU-based ground transport to a combination of NICU-based and community-based transport. Committant with the change in mode of transport was a change in accompanying personnel. In Period I (1/74-6/74) 99+% of 232 ground transports were NICU-based compared to Period II (1/75-12/75) during which 44% of 488 ground transports were community-based. Ninety-five percent of ground transports in Period I were physician accompanied compared to 15% in Period II (20% of NICU-based and 8% of community-based transports).

Overall survival was not different between transports accompanied and not accompanied by a physician nor was it different between community-based and NICU-based transports.

In Period II, although skin temperatures at origin of transport were no different, temperatures on NICU arrival were more frequently hypothermic in NICU-based (23%) than community-based (13% P < .025) regional (> 10 miles) transports.

This program, utilizing continuing regional management, evaluation, and personnel education, has relieved NICU personnel, especially physicians, of substantial time previously committed to transport without a detrimental effect on survival or temperature-related morbidity.

69 DAY CARE CENTER CHILDREN IN PEKING, CHINA: THEIR RESPONSE TO OUR DEVELOPMENTAL EVALUATION. Rosalind Y. Ting (Spon. by Jean A. Cortner). The Children's Hospital of Philadelphia.

In 1973 Chinese children attending a Day Care Center in Peking, People's Republic of China, were evaluated at their developmental pattern.

The age of the group selected at random ranges from 18 to 44 months. There were 13 boys and 10 girls. Gesell Developmental Schedule was administered in the Chinese language by the author. Height and head circumferences were taken. Additional information on age, vocation and education of parents was also obtained.

Developmental data were compared with a larger sample similar in age from a Day Care Center and a Nursery School in Phila. The impressions were:

1. When the evaluation was performed in the Chinese language by an experienced bilingual examiner it showed that the Gesell Developmental Schedule can be applied to these children with equal validity, regardless of vastly different social and cultural backgrounds.
2. While gross motor behavior was comparable between the two groups of children, the Chinese children scored higher on fine motor dexterity as well as language and personal-social behavior.
3. The height of the Peking children falls between 3rd and 50th percentile on Boston Anthropometric chart. Head circumference scattered between + 2 SD on the Wellhous graph with none nearing + 2 SD.

In spite of the difference in child rearing, behavior in general is quite similar.

70 A BIRTH IN THE HOSPITAL: THE EFFECT ON THE SIBLING. Mary Anne Trause, Michelle Boslett, Diana Voos, Carolyn Rudd, John Kennell, Marshall Klaus. Case Western Reserve University, Dept. of Peds., Cleveland, Ohio.

To determine how young children respond to separation from their mothers hospitalized for the birth of a second child, 19 mothers and their first born children (age 1-3 years) were observed 14 days before and 8 days after the mother's confinement. Data included two 90 minute naturalistic observations in the home, detailed questionnaires and filmed analyses of a standardized reunion at discharge. 8 days after discharge, the children showed many problems not present before maternal hospitalization. Changes occurred in both eating (p<.001) and sleeping (p<.005) patterns. Thumb sucking and temper tantrums increased (p<.001) and girls remained closer to their mothers (p<.05). The mothers' behavior also changed; they issued more angry commands to their first borns (p<.001). During reunions, children were interested in the newborns but clearly avoided or ignored their mothers. Thus, behavior changes may have been due to the separation rather than the arrival of a new baby. Mothers commented sadly that their children did not miss them; their requests for hugs were repeatedly rebuffed. Yet, many mothers had not taken advantage of the opportunity to have their first child visit, fearing it would be too upsetting. These observations challenge the folklore that jealousy is the primary cause of disturbances following a sibling's birth. It is possible that the older child's distress can be diminished by increasing awareness of the impact of separation and developing maternity policies which decrease it.

71 INCONSISTANCY IN THE ESTIMATION OF GESTATIONAL AGE (GA) OF THE VERY LOW BIRTH WEIGHT (VLBW) INFANT. Christina Ukrainski, Jeffrey Pomerance, Rosa Sanchez, Ricardo Liberman, Cedars-Sinai Medical Center, Dept. Ped. and UCLA Sch. Med., Los Angeles (Spon. by B. M. Kagan)

Many authorities believe that neurological maturation occurs at an unalterable rate. Gould et al have suggested, however, that intrauterine factors may accelerate neurological maturation. Others have suggested that eyelids which are still sealed are a reliable time marker for 26 weeks GA or less.

Four infants whose eyes were sealed at birth had greatly disparate estimates of their GA by the 3 most commonly used dating methods: maternal history (Hx), physical examination (P.E.), and neurological examination by modification of the method of Dubowitz (MOD. DUB.). In the surviving infants the eyes opened between 10 and 24 days after birth.

Birth Weight 560-660 gms.	GESTATIONAL AGE (WKS)			Outcome 1 died, 3 living
	Hx.	P.E.	MOD. DUB.	
	23-27	26.5-29	30-34	

Interpretation of these findings is difficult. The following possible explanations, alone or in combination, are offered: 1) Hx may be inaccurate; 2) either the P.E. or the MOD. DUB. employed in assessment of GA in the VLBW infant, or both, may need revision; 3) intrauterine factors may differentially alter the maturation rate of various systems; or 4) eyelid reopening may not be an unalterable time marker. Completely accurate knowledge of the date of conception would be most helpful in resolving this dilemma.

72 EARLY HOME INTERVENTION TO IMPROVE MOTHERING OF PREMATURES. Richard Umansky and Rosamund Gardner, Children's Hospital Med. Ctr., Oakland, Ca. (Spon. by Bertram Lubin).

Prematurity predisposes to mothering disorders expressed in poorer care of infants at risk for developmental disability. Most efforts have been focused on mothers prior to nursery discharge. To improve the quality of nurture after discharge, weekly home visits were made in the first half year by PHNs specially trained in therapeutic and supportive techniques for mothers. Close back-up was provided by a team of pediatrician, psychologist and social worker. Specific aims were to enhance maternal: attachment bonds to infants (AB), independent coping with developmental aberrations (IC) and collaboration with professional care. 53 intervention cases and 47 matched controls were assessed by video measures of home infant care (feeding, bathing, clothing and playing) following intervention at 6 mos. and again at 12.

Intervention appeared to benefit mothers of high but not low socioeconomic status (SES). Thus, at both ages, higher SES was associated with higher AB scores (p<.005) in the intervention group but not in controls (p<.60). Regardless of SES, intervention benefited mothers of infants born 2 or more mos. early (AB p<.10), especially when primiparous and beyond high school age (AB p<.02), (IC p<.10), but effects at 6 mos were not sustained at 12.

In summary, the intervention did not benefit mothers of low SES and led to only transient benefits in mothers of very premature infants. Both are groups where infants are known to be at particular risk from later disability.