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ABSTRACT

Information provided in five major dimensions of the field of normal child development can be useful in increasing the understanding and effectiveness of those who work with preschool children with special needs. The especially relevant dimensions of the child development field are : (1) child development theories, including the theories of Erikson, stimulus-response models such as Skinner's, and social learning and Piagetian theories; (2) child development norms, including critical norms for predicting developmental delays; (3) research knowledge in child development focusing on the antecedents and/or effects of secure attachment, child neglect, social class, physical and nutritional supports, parental teaching styles, severe physical punishment, parent roles, sex differences, family life stresses, and reading and language experiences; (4) effective models for intervention to prevent or remediate developmental problems; and (5) communication techniques that help children acquire social skills. In conclusion, guidelines for adults working with young children are offered. (RH)

Programming for Preschoolers with Special Needs: How Child Development Knowledge Can Help

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More than a quarter of a million infants are born each year with birth defects which may lead to mental retardation, physical handicaps, hearing or vision loss or lifelong handicapping conditions (Facts 1978). In order to increase early identification of infants at organic risk and to plan optimally for remediation, specialists need training. Such training often requires that special educators, physical or occupational therapists, and pediatricians focus their studies on specific disabilities, needs and assessments related to the children served. Yet, study of theory, research and clinical evidence related to normal child development can illuminate and vitalize work with handicapped youngsters. Five major dimensions of the field of normal child development can be useful in increasing understanding and effectiveness of those who work with special children.

1. Theorists, such as Piaget, Erikson, Sears, Bandura, Freud, and Skinner as well as language experts, offer principles about how all children grow and learn.

2. Normative child development milestones with respect to ages and stages are important to give an accurate framework within which the dimensions of a disability can be assessed and realistic goals can be set in therapeutic work with parents and teachers.

3. Research findings related to caregiver or teacher interactions with children can be applied to optimize developmental outcomes.

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4. Programmatic research on enrichment curricula for normal children who are at risk for sociocultural retardation can be useful in generating curricular ideas for children born at organic risk.

5. Communication techniques that work in clinical programs to enhance family or caregiver effectiveness in rearing normal children can increase chances for positive mental health for special children as well.

Child Development Theories

Ideas from a variety of theorists are useful in planning learning experiences with special children. Some theorists promise more insight into the process of developing emotional maturity and motivation to learn. Some theorists help us to understand more subtly the process of linguistic/cognitive learning and how to enter into that process as facilitators rather than frustrators of young children. From each theorist, educators must cull what helps enlighten and advance work with children.

Erik Erikson: Neo-Freudians, particularly Erikson, have set theoretical guideposts for optimizing socioemotional learning (1963). For the very young, harmonious mutual give and take in a family sets the secure foundation for early learning. Compassionate adult care and focussed attentiveness to infant signals nourishes small children's good sense of self. Picking up and soothing a crying baby adds to that fund of basic confidence in grown-ups as reliable trustworthy caregivers which fuels the young child's energy to wrestle with problems of growing up and learning.

The child who feels secure and worthy of love is able to generate coping strength from the positive regard and care offered by adults. Building such basic trust is critical for optimizing the learning of developmental tasks appropriate to each stage as children grow. Children so reared learn how to give back attention and persistence at learning tasks to adults who have given so much responsive attention to the children in daily care situations.

Special children, more than others, are required to give a great deal of energy and effort in order to master adult-devised learning games and tasks. Sometimes learning the most rudimentary self-help skills entails an arduous and serious struggle by a handicapped child. Eriksonian patterns that enhance the basic trust of children in the ministrations of their caregivers are crucial for encouraging the bravery to struggle at difficult developmental jobs. Children will struggle with the tasks set for them if adults have given generously of themselves in meeting early emotional and physical needs. Tender, nurturant care by perceptive and attentive adults is a prerequisite of peculiar urgency for disabled babies. Teachers and therapists will demand much of such children, who may have difficulty in learning to feed or clothe or toilet themselves, to walk or to talk. Building secure attachments strengthens young handicapped children's acceptance of therapeutic interventions and their will to try difficult but necessary exercises.

According to Erikson, the next accomplishments of the preschool years are related to the development of a sense of separate will and individuality and the ability to make personal choices for which the child can take increasing responsibility. In ordinary family living, these developments, of autonomy and of initiative, do not come easily. Witness the appellation "terrible two's". How much more difficult these great nuclear struggles can be for the handicapped child! Parents and teachers may tend to overprotect disabled youngsters. Slow learning children may have many actions done for them that normal children would be required to do for themselves.

Sometimes caregivers and teachers overly solicitous of a handicapping condition may detract from a child's motivation to try new activities. For example, language-delayed children need chances or opportunities that nudge them into asking, rather than just pointing for more juice, or cookies or any desired

food. Teacher enthusiasm for even initial word sounds should enhance the prospects for more such verbal attempts. Blind or motorically-delayed toddlers into whose hands toys are habitually placed may have little motivation to reach or stretch or crawl for a nearby toy. (Honig, 1981a, p. 6).

When parents and teachers expect too little, the disabled child may grow up feeling cheated. Rubenfeld has written that

> Special education made me feel like a "sick" person, not a disabled child... Nearly empty of any sense of varied activity or adventure, the education of the disabled child is frequently an inspiration toward only the slightest and often most meaningless achievement. Our teachers expected little from us; and we lived up to their expectations. A system that isolates children from the social mainstream, that protects disabled children from normal interaction with nondisabled children, and that provides an inferior education only encourages mediocrity at best and failure at worst. (1982, p. 8-9).

Eriksonian theory focuses on the gifts of caring adults during the preschool years in helping a child develop a keen sense of pride in a unique self with rights, responsibilities and opportunities for self expression and responsible choices.

La Maisonee, a live-in institution in Lyon, France, serves very young children with a variety of handicapping conditions. At first, the nurses and aides simply treated the children as sick or unable. Children were fed, dressed and not expected to become toilet trained. When Dr. M. Oudot implemented Eriksonian ideas, much work went into encouraging the children toward self-help, toward responsibility for trying to feed themselves and toward trying to creep up an incline despite locomotor difficulties.

Steadfast adult encouragement of independence can lead to much more pride in youngsters. Terry Haffner was born without arms and legs. Upon graduation from a college program he wrote: "The basic thing my parents did was just to let me experiment and to encourage me to go out and be Terry Haffner. They let me experience

all the normal triumphs and tragedies of everyday neighborhood life. I was never smothered or kept inside or away from the action. I got snow inside my special boots and mud and dirt and stones inside my artificial arms" (1976, p. 15). Adults need to challenge special children just as they challenge normal children. Adults need to help children use and sustain whatever competence and skills can be mustered. A climate that nourishes the child's sense of dignity will balance more harmoniously between those two psychological rocks so perilous in the life-stream of disabled children: either overprotection or impatient, unrealistic pushing that can result in frustration and failure.

Stimulus-Response Models. Some child development theorists, such as Bijou and Baer (1961) have followed a Skinnerian S-R model. S-R theory has long been applied by special educators. Rewards and tokens have been used particularly in work with mentally retarded children. Behaviors that approximate desired behaviors have been shaped. Then, gradually, more and more precise or appropriate behaviors are rewarded. Reinforcement schedules are then instituted that allow a struggling child to be rewarded at first every time a new, desirable response is emitted. Gradually, this continuous reinforcement schedule is replaced with fixed or variable ratio or interval schedules that permit reinforcement for a given number of correct responses or after a given period of time has elapsed. Adult contingent praise has been particularly useful as a tool for teachers of handicapped youngsters. Contingent praise or reward (that is provided right after a child does something desired) enhances the probability that desired responses will be repeated.

Social learning theorists. Social learning theorists emphasize the power of imitation and modelling in shaping behaviors of learners (Bandura, Ross & Ross, 1961). Children learn from watching an adult model the skills that they will be required to master. And social skills can increase the acceptance of young handicapped children into mainstreamed situations. Positive social experiences become

possible for youngsters who have learned, for example, how to greet people or make requests. Autistic non-verbal children have learned through hand modelling how to communicate with Ameslan (Offir, 1976). Modelling social proprieties or hand signals in sign language are adult techniques that can ensure positive classroom, home and community experiences for special children.

Sears' theory (1957) states that children whose early dependency needs have been well met by nurturing adults will begin the process of identification. Through identification, young children come to take on the roles, mannerisms and qualities of their nurturing caregivers. Thus, therapists and teachers who build caring relationships and model disciplined work habits and active mastery goals for themselves are more likely to stimulate a child to try to emulate them.

Jean Piaget. Piaget's theory of developmental stages posits that understandings and learnings arise and evolve in an orderly sequence. More and more complex new learnings are constructed by the child during the course of active, persistent involvement with objects, environments and persons.

Piagetian theory requires that the child have many and varied opportunities to engage in activities with objects, toys, people and circumstances. When these opportunities are neither too difficult nor bewildering for the children, nor too trivial or well-learned, then new learning is more likely to occur. The child struggles to make sense out of somewhat novel or difficult requirements of a task at hand. Piagetian theory is particularly relevant for teachers of learning disabled, retarded or handicapped children. Children will learn only as therapists and teachers program learning sessions that match the child's current level of attainment in any given developmental domain. It follows that each child will require individual attention in order to advance. And adults must be aware of strengths and difficulties in each area of development. Thus, Piagetian theory makes individual IEPs necessary not only for special children, but for all children! Children learn at their own pace and level. Adults must be alert to provide social, emotional, language, and motoric

interactions that will enable a particular child to move ahead in gaining competence. It may help to conceptualize each learning area as a developmental ladder. Some children require many extra rungs to climb a given ladder-of language production or of gross motor competence. Some children need a lot of experience with the first rungs of a given developmental ladder before they will venture to climb higher! Piagetian theory compels the perceptive adult to become a good noticer and an ever more effective matchmaker in order to boost a child's chances for learning. Honig has suggested how this theory applies to infant caregivers:

> Babies need encouragement to become problem-solvers. When providers sharpen their noticing skills they can boost the baby's problem solving efforts such as when they provide a steadying hand on a pegboard as baby pushes a peg onto a board that is sliding around too much to allow success. Good noticing gives the adult clues as to whether to make a game a bit easier or a bit more challenging. Matchmaking involves the ability to adjust the task difficulty to present level of child ability. The adult must lure the baby forward (on the developmental ladder) just a step at a time toward new and more difficult accomplishments. Matchmaking skills are a precious adult resource. They ensure that developmental tasks will not be too easy or too frustrating but mostly stimulating to baby's curiosity and need to gain competence (1982b, p.14-15).

Piagetian theory predicates all intellective learning on the sensorimotor roots of experience. Thus, adults will be more likely to arrange successful learning experiences for children if toys, excercises, foods, and peer interactions are provided in judicious doses and at appropriate levels where meaningful encounters can result in new learnings.

Child Development Norms

Adults are more likely to arrange appropriate learning experiences for a preschooler if they know intimately the tasks and gains associated with each substage

of the sensorimotor and preoperational periods of development. Students from the Special Education program at Syracuse University are sometimes shocked when they take my Observation and Assessment course. They were not aware that normal infants, toddlers, or preschoolers could say or do so many competent things. Knowledge of norms for normally developing children is important in two senses. It is likely that the special educator, tender and thoughtful about the need for patience and the need for repetition and small developmental steps in new teachings undertaken with slow-developing children, may forget how much more advanced the behaviors of a normally developing or bright child can be. When caregivers of developmentally at-risk infants are not aware of normative milestones, sometimes they have unrealistic expectations for their children. They may talk about normal grade placement for children who would experience severe difficulty in such placement or they may refuse mainstreaming for a multiply handicapped preschooler who desperately needs to have social experiences with normal peers and needs more realistic challenges in school work. Knowledge of norms helps keep educators reality oriented.

A combination of high expectations for each child, Piagetian sensitivity to the problem of matching tasks to ability levels, and knowledge of developmental milestones for normal children will reinforce this realistic orientation. Adults will not be as tempted either to overestimate or to underestimate the potential learning ability of each special child.

How can one become knowledgable about developmental norms? Infant assessment instruments such as the Griffiths, the Cattell, the Bayley or the Gesell scales provide clusters of comptencies and abilities at each month or year level during the early years. Language instruments such as the ITPA or the PPVT have national norms. In addition, screening instruments, such as the Denver Developmental Screening Test (Frankenburg et al., 1975) locate developmental accomplishments at chronological age ranges where from 25% to 95% of young children are likely to have accomplished any particular task. Many informational materials such as "Parent helper: Handicapped

children birth to five" (Maryland State Department of Education, 1981), provide lists of milestones appropriate at each preschool age in different domains, such as cognition, communication, fine and gross motor, self-help and social-emotional skills.

Some norms are more critical than others. What is needed is a more fine-tuned awareness of which developmental milestones are more crucial for prediction of serious difficulties rather than milder delays. For example, normally developing babies are able to engage in a game such as pat-a-cake at the body midline by 8 or 9 months. About then, too, normally developing babies begin to examine a toy and poke it and turn it before mouthing the toy. They also start to separate one gesture as a means from a consummatory gesture. Thus, year-old babies are able to pull a preferred toy to them by means of an attached string. Or, by means of a stick, they corral an out-of-reach toy. Or a baby can pull a support, such as a diaper on which a toy rests, so that she can reach the toy in order to wave, bang or taste it. If means-ends coordinations and midline hand play have not yet appeared by one year of age, serious developmental delays may be expected. If mindless mouthing of toys without any prior eye and hand examination of toys placed in hands is still present by 18 months, then very serious delays may well exist.

This narrow critical age range is not true for other behavioral items, such as age at walking. Infants may walk anywhere from about seven to 17 months and still be within the normal range of development. Thus, some behavioral age norms are more critical than others in alerting personnel to potential needs for intensive therapy. Other lacks in competence may be evident simply because an infant has never been given the opportunity to explore particular materials or may have been punished for playing with items, such as a cup and spoon, which are being presented.

Delays in expressive language may reflect a handicap or may reflect that the child has been reared in a bilingual household, where language production does indeed sometimes lag behind comprehension skills. When a child in such a family can carry out two-or-three-step commands at 24 months but is not speaking much at all, this

delay in language production may not reflect a developmental language lag, but, rather, family circumstances.

Careful reading of Piaget's Origins of Intelligence (1952) should help a worker understand the unfolding stages of the period of sensorimotor (S-M) development. Attention to the tasks and gains of each stage of the S-M and preoperational periods of development will help greatly in fine-tuning professional expertise. Purely motoric but nonpurposeful actions or single accomplishments may be the result of rote training. Therapists need to focus more on underlying abilities, such as adjustment of a baby's hand to anticipate closure on reaching for lures of varying shapes.

Too many lists of developmental milestones simply mention superficial single skills. What a professional helper of young at-risk children needs to know are the underlying competencies that may be implicated in skill learning. Some questions therapists might ask themselves are:

* How well does the baby understand and use means-ends relationships? If a toy is out of reach on a sweater, can baby pull the sweater to attain the desired toy?

* How well is this baby decoding the meaning of a familiar gesture and action as when papa puts his arms out in a "come-to-me" position?

* Does the baby actively search for a causal mechanism to make a friction car go or to work a jack-in-the-box?

* How well does the baby anticipate familiar events? Does she fuss if mama puts on a coat to leave? Does her hand open to an appropriate size in reaching for a ball as compared to a green pea when each is presented?

* What understanding of spatial detour problems does the toddler have? Can he turn his back on a ball that has rolled under the couch and go around the barrier of the couch to retrieve his ball?

* Does baby imitate only familiar visible gestures such as "Bye-bye" or can

she imitate an unfamiliar facial gesture such as touching her eyebrow?

* What kinds of two-or-three-word phrases does the toddler use? Do these phrases reflect knowledge of a variety of linguistic categories, such as recurrence ("More meat") negation ("No nighty-night"), agent-action ("Daddy fix"), or location ("Doggy dere") whose mastery is appropriate for a normally developing toddler?

* Does the preschooler sort objects in order, from tallest to shortest, or from darkest to lightest? Seriation skill learning is a major developmental achievement of normal preschoolers.

* Is the preschooler able to set a table or able to put away toys into the different places where blocks are stored or stuffed animals belong or toy vehicles go? Sorting and classification skills are typically learned in the preschool years.

* Can the older preschooler play for an hour independently if an attractive set of toys, such as plastic tracks and railroad cars, is available? A four year old who is well-developing should have a lengthened attention span and the ability to persist at attractive, difficult, yet soluble problems and games.

* Does the preschooler behave as if she can formulate if-then causal hypotheses, such as "If I help clear the table then daddy will have more time to read me a story"? The ability to look at consequences and to formulate probable outcomes begins in the preschool years.

* How well does the toddler play imaginary games, like pretending to catch a ball or to eat cake and ice cream at a birthday party when no real ball or foods are present? Role-playing skills develop normally into quite elaborate social games among children from two to six years old.

Research Knowledge in Child Development

In at least ten research areas over the past decade, studies in the field of normal child development have confirmed findings that are critical for solving the puzzle of how to provide optimal services to improve the quality of life for young

children. Many of these researchers have focussed on caregiver-child interactions in families and in home or center day care.

Responsive loving care fosters secure attachment

Loving and appropriate responsivity to infant distress early in the first year of life leads to more mutually satisfying mother-infant communication patterns and secure attachment relationships by the end of the first year of life. Ainsworth (1977) and her colleagues observed maternal-infant interaction patterns in homes over the course of the first year. Infants who had been held tenderly and carefully earlier tended later to respond positively to close bodily contact. When babies had been held ineptly in earlier quarters of the first year, they responded negatively to being held in later quarters. Their negative responses in the later quarters were strongly associated with later maternal ineptness at holding. Ainsworth concluded "It appears that by the second quarter a vicious spiral has built up, so that maternal ineptness and negative infant responses are reciprocally related from then on" (p. 14). Those mothers who ignored crying earlier, or who were slow to respond to infant distress, had babies who later cried more frequently in everyday separations. Their infants were also less likely to greet mother happily upon her return. Where responsive prompt nurturant care had been the rule, then the developmental attainments of infants were found to exceed those of infants reared by caregivers less attentive to distress and less apt to interpret infant signals correctly.

Child neglect. When infants are abused and/or neglected, then deviant communication patterns with adults, caregivers and peers become established (Honig, 1982a). Abused toddlers tend to avoid eye contact with their caregivers, respond negatively to or ignore friendly overtures by day care workers, and may use indirect approaches to sidle up to friendly adults. Significantly more than normal toddlers, abused toddlers aggress physically against peers and adults (George and Main, 1979).

Early secure attachment is related to later competence

Although secure attachment can be considered a major precursor of positive emotional mental health, longitudinal research by Sroufe (1981) and his colleagues has revealed that securely attached infants at one-year are better at solving tool-using problems in the third year of life. Securely attached youngsters faced with these difficult tasks responded by working more persistently, and by enlisting a parent as helper if the problem was too difficult to solve. On the contrary, children who had been insecurely attached in infancy tried less, threw more temper tantrums and tended to seek adult help less.

At preschool age, these children were found to differ in competence as well as emotional adaptation. Sroufe (1981) observed that:

> Children elicit reactions from teachers which are conguent with their history of maladaptation. Whenever a child so infuriated a teacher that he or she wanted to isolate the child in another room or in the corner, it was inevitable that this child had a history of chronic (parental) unavailability or rejection. It is not that teachers' feelings are wrong or inappropriate. On the contrary, their reactions generally may reflect the child's relational history. When it has been pathogenic, it is this history that must be countered. Our teachers understood this. And the school experience of our children was therapeutic. (p. 24)

When these children reached elementary school age, differences were still apparent. The securely attached infants grew into school age children who were more ego resilient and had more ego control. They got along better with peers and teachers and adjusted well to the classroom learning situation in comparison to the children who had earlier been insecurely attached (Arend, Gove & Sroufe, 1979).

Social Class can affect developmental outcomes

Children from different social classes begin to show clear-cut, increasingly marked differences in cognitive development by 36 months of age. Golden & Birns (1976) found a highly significant 23 IQ point difference at three years of age between children from fatherless welfare families and those from stable middle-incom black families. Significantly, more welfare children had to be seen several times in order to get an optimal test performance.

Honig & Mayne (1982) have demonstrated that optimal home stimulation differs for fathers too as a function of social class. Middle class black fathers of preschoolers scored about twice as high on the Caldwell HOME Inventory (which measures the stimulation potential of the home) in comparison to working or lower-lower class black fathers of preschoolers.

The consequences of social class differences in cognitive stimulation can be significant for preschoolers. Infants who were in the lowest quartile in IQ on the Bayley Scales at eight months were seven times more likely to obtain IQ's under 80 at four years of age if they came from the lower socioeconomic class than if they were reared in middle class homes by educated parents. Willerman, Broman & Fiedler concluded that poverty "will amplify the IQ deficit in poorly developed infants" (1970, p. 76).

Differences in home stimulation and in intelligence test performance during the preschool period may have increasingly serious consequences for school success as children grow older. Heber, Dever & Conry (1968) studied low-income mothers with infants and six year olds in a poverty area of Milwaukee. The neighborhood was characterized by the greatest rate of dilapadated housing and density per living unit. Mothers with IQ's below 80, who comprised less than half of the group of mothers studied, accounted for a remarkable four-fifths of the children with IQ's below 80. This relationship of child IQ to maternal intelligence among poverty families held even more strongly for older children than for younger.

That is, there was a progressive decline in intelligence as child age increased beyond the preschool years.

Preventive educational efforts with poverty families should be a national priority. And these efforts are particularly urgent if preschoolers in such families are already at risk for organically handicapping conditions.

Physical and nutritional supports enhance development

For infants born with disabilities that can lead to impaired locomotor or manipulative skills, the sooner physical therapies can begin, the greater the chances that muscular impairments or degenerations can be minimized. For some ocular conditions, for example, if the "lazy" eye is not made to "work" very early in the preschool period, then blindness in that eye may result.

But physical deficits are not the only ones that may increase developmental risks in infants. Nutritional lacks, too, can have marked developmental consequences. Low income infants with iron deficiency anemia were randomly assigned to treatment with intramuscular iron or placebo. They were tested before treatment and then retested with the Bayley Scales of Infant Development one week later (Honig & Oski, 1978). At this visit, the retested control group infants were administered intramuscular iron. Children treated with iron showed a significant increase in mean MDI (Mental Development Index) scores compared to the untreated controls after seven days.

The lower the hemoglobin score initially, the higher the mental score increase. The treated group was also found to be more alert and responsive, less irritable, and improved on tests of fine motor coordination.

More recently, Oski & Honig have been testing and then retesting infants with varying degress of iron depletion but with hemoglobin counts over 10. The more iron depleted the infants, the higher the gain in Bayley MDI scores one-week post iron therapy, which was given to all the babies after the pretest in this study (1982). Nutritional monitoring of children, particulary where feeding may be

difficult due to organic handicaps, is indicated as a safeguard against motivational or cognitive deficits that may develop due to dietary lacks.

Parental teaching styles affect child competence

Across social class there is great variability in parents' styles and ability to teach their own preschoolers effectively. Research into parent-child exchanges points up how much parent teaching styles vary, from limited reactive teaching with use of controls and commands, to effective use of suggestions and instructions (Honig, 1979). Olmstead & Jester (1972) analyzed dimensions along which such interactions differ. More middle class mothers provided advanced organizing information about a block-sorting task. They made clarifying statements that helped preschoolers to recognize the characteristics of the blocks that would have to be considered in solving the learning task. Low-income mothers in this study predominantly used such controls as threats and physical restraints in correcting children.

Hess & Shipman (1965) asked mothers at four socioeconomic levels to help their four year olds sort blocks by several dimensions. Videotape analysis of maternal teaching style differentiated those mothers who gave clear requests and specified the tasks for their children, compared to mothers who asked children vaguely to put the blocks correctly into different piles. Those preschoolers whose mothers had been specific and clear in their teaching techniques achieved higher scores on a block sorting task administered after the mothers and children had played together.

Carew, Chan & Halfar (1976) observed mothers and toddlers in interaction at home for several years. At 36 months the children's competence was assessed. Parents who had been facilitators, arrangers of experience, and verbally active teachers in their children's daily lives were far more likely to have competent youngsters at preschool ages. Curtailment of TV watching to educational programs only and ability to orchestrate daily living experiences to support children's at-home

learning were further characteristics of parents whose preschool children were competent.

Baumrind (1977) interviewed parents and observed their patterns of child rearing. She found three major styles of parenting. Authoritarian parents expected their children to obey their commands and were likely to use threats or punishments for disobedience. Permissive parents let children make decisions without much guidance. Authoritative parents set firm rules, gave reasons for rules, expressed love and interest in their children and had high expectations for their children. The children whose social adjustment at home and in school was optimal and whose academic achievements were highest were the children who had been raised by parents using the authoritative pattern.

Swan & Stavros in New Orleans (1973) interviewed low-income black families whose children were doing very well on entry to elementary school. These competent, resourceful and well-adjusted children had parents who were genuinely interested in them, read to them frequently, assigned chores, and felt very assured about being good parents.

Although lower socioeconomic status portends developmental risks for some children, outreach programs can work actively to help parents develop skills. Parent involvement programs can facilitate processes of interaction that promote and enhance the development of young children despite poverty. Strategies for working with parents should be a high priority in training personnel to enrich the lives of handicapped preschoolers.

Severe physical punishment is inimical to positive development

Physical punishment as a preferred and frequent method of discipline has been implicated in delays and deficits in child functioning.

In the naturalistic in-home observational study of Carew and her colleagues (1976), preschoolers who had been raised in homes where physical punishment was a

frequent mode of discipline were among the least competent children tested at 36 months.

Londerville & Main (1981) found that toddlers whose mothers had used physical punishment and who were insecurely attached, were less cooperative, not only with their mothers, but with friendly adult testers and caregivers as well.

Welsh (1976) counseled angry youngsters and explored the causes that had led to their conviction for juvenile delinquency. He found that severe parental punishment, utilizing objects capable of inflicting injury, was implicated in the child rearing practices of nearly all the delinquent children. Further, the higher the aggressive level of the male delinquents, the higher the severity of reported corporal punishment by the parents in rearing these boys. Thus, if families use physical punishment as their preferred discipline method, then developmental risks for antisocial and disturbed emotional behaviors will be magnified in young children. Project staff working with handicapped preschoolers needs to help parents find alternative positive discipline strategies to help socialize their children.

Fathers and mothers are important social role models

Aggression and prosocial behaviors are often learned through imitating parental models. Young children are particularly prone to learn social patterns of aggression toward peers through observing adult models of such behaviors. Parents who use severe physical punishment may have youngsters who behave more aggressively.

In contrast, parents who value altruism highly have been found to be good models for child considerateness. Hoffman (1975) used sociometric questionnaires to find out which same-sex classmates would be most likely to be nominated as children who cared about how other kids felt and least likely to hurt other kids' feelings. Parents of these children were asked to rank 18 values in order of importance to them. The mothers of the girls and the fathers of the boys nominated as most likely to be considerate and helpful ranked altruism high in their own

hierarchy of values.

Rutherford & Mussen (1968) gave each of 31 nursery school boys some candies after they had successfully played a game. The boys could either keep the candies or share their winning with two best friends. Afterwards, those who shared most and those who shared least participated in a projective, semi-structured doll play situation. In comparison to the boys who did not share candy, the most generous preschoolers much more frequently described their fathers as nurturant, warm parents who were generous and sympathetic.

Paternal nurturance is very important for healthy emotional development of preschoolers. Professionals who work with handicapped preschoolers need to be aware of how important fathers as well as mothers are in promoting positive social interactions of their young children.

Sex of preschooler may affect adult interactions

Professionals who work with preschoolers may not be aware of differences in the ways in which boys are being socialized compared to girls. Fagot (1974) observed toddlers in play situations at home. Girls played more often with soft toys and dolls. They asked for help and dressed up more often than male toddlers. Boys played more with blocks and with cars and trucks. Males were punished for feminine behaviors significantly more than girls were for masculine characteristics.

Martin (1981) observed 10-month-old infants in seminaturalistic interactions with their mothers. He assessed the balance of power and control and trust at 22 and 42 months. Maternal responsiveness that imparted a sense of control to the child was found to be critical to positive personality development for preschool boys, but not for girls.

In day care centers that serve low-income preschoolers, the bids of male and female toddlers to teachers differed significantly at two years of age (Honig & Wittmer, 1982). Instrumental bids requesting help were significantly more prevalent

among the boys. Expressive bids were equally frequent for boys and girls but the types of bids differed. Girls made more positive affectional approaches, such as hugging teacher. Boys made significantly more distressed or negative bids to adults. Although boys and girls were equally likely to be compliant to teachers' requests, the caregivers responded significantly more to non-compliance by boys (Honig, 1980b).

Teachers and therapists working with preschoolers need to become more aware of sex stereotypes they may hold which could interfere with fair treatment of misbehavior or noncompliance by males. A caregiver also needs to help young boys find more positive and appropriate ways to meet their needs for adult nurturance and responsiveness.

Family life stresses can interfere with learning

Being raised in a single parent home, where there are no other adults to buffer a child against parental anger or inappropriate handling may affect a child's learning. So can other stressful life situations, such as family disorganization, parental alcoholism or life-threatening parental illness. Divorce has been found to be particularly stressful for children within the first two years after the family break-up (Hetherington, Cox & Cox, 1976; Wallerstein & Kelly, 1976).

During the first two years after divorce, children are apt to act out emotionally and also to suffer disturbances in their learning. At the end of this period, many children will be well-adjusted and coping quite well with their altered family situation. Others will muddle through. About one-third of children will still be feeling severe effects of this family crisis. The children may be sorrowful and depressed or full of anger. Boys particularly have been found to act out in opposition to their mothers. The most optimal outcomes after divorce have been found when children have regular positive access to both parents, and when the parents do not use the children to express hatred or to try to take revenge on the absent spouse. Workers who serve handicapped preschoolers in enrichment programs need to be sensitive to the potentially hazardous effects of family break-up on the

children in program. Boys may have an especially difficult time after divorce. Wherever possible, frank, empathetic discussions with parents should be held so that the trauma of divorce can have lessened impact on a child. Since families with children born disabled are at higher risk for marital break-up, it is important to prepare staff to enter into supportive and frank discussions with parents.

Reading and language experiences enhance child cognition

Speech patterns and communicative climate vary widely in families. The speech of mothers with toddlers has been found to differ markedly as a function of social class but not of race. Middle class mothers, whether black or white, gave significantly fewer negative prohibitions and significantly more verbal responsiveness to their children's communicative acts than did low-income mothers (Schachter, 1979).

What are the later consequences of differential language environments in the preschool years? A variety of researches points to the conclusion that early language environments have a strong impact on later cognitive competence.

Perhaps the earliest evidence was provided by Milner (1951), who interviewed mothers and children about their interactions. Children who achived higher language scores on the California Test of Mental Maturity had been read to more and had had more mealtime conversations with parents.

Linnan & Arassian (1974) analyzed family home interviews and observational data on two different ethnic groups. Ratings based on maternal language styles with children had the highest multiple correlation ($R = .61$) with child's verbal ability. Mother's language was rated by complexity of words, use of abstract rather than concrete speech, conversational context, and amount and regularity of reading to the child.

The kinds of language experiences that even young babies receive are powerful predictors of their competence. As early as twelve weeks, mother-infant vocalizing and communication patterns have been found to be predictive of later language competence (Lewis & Freedle, 1972).

Clarke-Stewart (1973) observed mothers and babies and correlated their interaction patterns with later child development. She noted that the amount of maternal verbal stimulation was related to the infant's social use of language in vocalizing to the mother. Most important, she reported that the "single maternal variable which was most highly related to the factor of children's competence was verbal stimulation" (p. 60).

The HOME Inventory (Bradley & Caldwell, 1976) has been useful for denoting particular aspects of the home environment that predict later language and IQ scores. When clusters of variables were examined for their predictive power, the factors "emotional and verbal responsivity of mother", "provision of appropriate play materials", and "maternal involvement with child" (measured at 12 and at 24 months) were found to be consistently high predictors of IQ and of language scores on the Illinois Test of Psycholinguistic Ability for children examined at 36 and at 54 months of age.

A careful look at the importance of language interactions for young children reared by caregivers other than parents reveals the same importance of early language experiences. Regardless of whether infants were cared for in day care homes or in day care centers, the intellectual experience that most powerfully predicted IQ and intellective competence by three years of age was the situation where a caregiver taught the toddler new words and created language mastery experiences for the child (Carew, 1980).

Rich language interactions and reading to preschoolers seem to be decisive variables in boosting intellective and language scores of young children. The significance of these findings should increase the resolve of therapeutic workers with handicapped preschoolers to reach parents with the message of the power of early language transactions in children's lives. Encouraging family conversations at mealtimes may seem a homely task for a therapist. It may indeed be a most important therapeutic intervention in the learning career of that child.

Intervention Models: What works

The kinds of intervention models and enrichment programs that have been created to prevent or remediate developmental problems in children are a testament to the ingenuity of teachers, researchers and therapists who have devised ways to optimize children's chances for successful living.

> Some programs seek to educate and support parents in their efforts to enrich the lives of their children. Some programs focus on only one strategy. Some combine a wide array of services and strategies for optimizing development. Some programs "piggy back" one strategy onto another. For example, in the Houston Parent Child Development Center, the Home Visitation Model was chosen initially to serve Mexican-American families and their babies. In the second year of the program, another service delivery model became possible. The older toddlers then entered a group care setting where mothers were invited to participate as aides in classroom activities... Some programs are theoretically based and conceptually consistent. Some are empiric attempts to provide supports for child development while using a variety of pragmatic approaches... The primary purpose of most of these models has been to increase the chances for families to nurture mentally and emotionally healthy children. (Honig, 1983a, p. 1-2)

Surveys of the major models can be found in Honig (1979; 1983a) and in Day & Parker (1977). What are the kinds of ways in which enrichment has been offered? What are some of the important insights gained from these various efforts? Models can be categorized as providing:

1. Group care for children with strong curricular goals either pragmatically or theoretically based.

The Children's Center, founded by Dr. Bettye Caldwell in Syracuse, New York in the early 1960's, was a pioneer quality group care program. Children were served from six months to five years of age.

The Abecedarian Project in Chapel Hill, North Carolina and Heber's program in Milwaukee were other projects providing enriched group care for infants to prevent possible mental retardation. Heber and colleagues reported remarkable gains by program preschoolers of about 30 IQ points over the scores of control children. Since all children came from families where mothers' IQ scores were below 80, this preventive program showed impressively what effective group care programming can accomplish.

2. Group meetings with parents to teach them parenting skills and curricular activities for their children.

Glen Nimnicht's Far West Toy-lending Library program invited groups of parents to meet weekly. Parents learned new skills to enhance their children's school achievement and functioning.

Earladeen Badger worked with groups of low-income, teen-age parents in pediatric settings in the evening to help them learn Piagetian games and optimal care practices with their infants.

3. Home tutorial program with children.

Earl Schaeffer carried out a well planned program with low-income black male toddlers in Washinton, D.C. Although significant IQ gains appeared by 36 months when experimental toddlers were compared with controls, these differences washed out when the children were tested three years after the end of the program.

4. Home visitation with parent(s).

Ira Gordon pioneered this model in Gainesville, Florida. Paraprofessional home visitors brought Piagetian and language games to the home and taught mothers how to enhance the sensorimotor development of their infants. Levenstein has replicated in several sites a home model in which toys and books brought to the home are used as verbal interaction stimulus materials.

5. Interactive therapy with mother and child.

Rose Bromwich and colleagues in Los Angeles and Selma Fraibergs and her colleagues in Michigan have carried out intensive home-based therapeutic intervention with both mother and infant in cases where failure to thrive and at-risk factors were seriously predictive of later developmental delays.

6. Television models.

Some of these models have provided a daily program that parent and child can watch together as well as materials that ennable a parent at home to build on the concepts taught via the TV educational program.

7. Omnibus model.

The Family Development Research Program in Syracuse, New York (Lally & Honig, 1977) is an example of a model that provided a wide spectrum of services including home visitation, quality group care, and nutritional help to low-income mothers none of whom had a high-school diploma at time of birth of child. Services to families were begun prior to the birth of the baby. The children served scored ten points higher than their controls after several years in program.

Training and preparation of staff and dedication to the goals of preventive programming are a very strong component in most of the models described above. Many of these programs were not able to continue to serve families beyond a limited time period. Thus, if and when there have been wash-out effects it is difficult to decide whether a program "failed" or whether society has failed families at risk by not providing sustaining services long enough to ensure the continued enhancement of functioning which was the purpose of the program.

Program curricular guides available from some of these models (such as Honig & Lally's Infant Caregiving: A design for training, 1981) are resources which can aid therapists working in agencies with handicapped or delayed preschoolers. Whether or not any of the programmatic models sketched above were able to sustain

gains once program funds were withdrawn, positive knowledge has been gained. The ideas, methods and techniques created by these different pioneer programs provide a rich resource for professionals currently serving handicapped preschoolers and their families.

Helping children learn positive social interactions

Child development knowledge can be critically helpful in assisting special educators to increase social skills and satisfying peer interactions for handicapped preschoolers. Disabled children are often kept separate from other children. This pattern of isolation fails to prepare the special child for life in a normal social world. As Rubenfeld (1982) has ruefully commented on her experience: "Education is essentially a social process. Since most children are naturally friendly, they will usually turn their schoolroom into a social enterprise in which all can share. Special education...interferes with the natural development of the social personality because it isolates disabled children...and so it encouraged loneliness" (p. 8).

Some programs have attempted to devise methods to mainstream youngsters to provide a more normalized social atmosphere for youngsters. Some researchers have role-played using naturalistic staged situations or diorama models to teach children the rudiments of altruistic responses to others' difficulties and pains (Yarrow, Scott & Waxler, 1973). Several programs have been designed to aid parents to communicate better with their children in order to enhance social functioning (Honig, 1982b).

Intervention models for enhancing prosocial curricula should be useful whether handicapped children are in special programs or are mainstreamed with normal children.

Interpersonal Cognitive Problem Solving (ICPS)

Shure & Spivack (1970) have trained mothers and teachers in preschools and kindergartens to use ICPS techniques. Adults are taught to:

enhance the child's ability to think through and solve problems and decide for himself what and what not to do. When, for example, a child hits another child or grabs a toy, he is asked why he did that, what the other child did or said, and whether or not his action was a good idea. On the basis of his response, the child may be reminded that hitting is one thing he can do and then be asked if he can think of something different he can do to solve the problem. (p. 6)

This training program for generating prosocial rather than forceful solutions to interpersonal problems has been quite successful. After three months, overly impulsive and overly inhibited inner city preschoolers and kindergartners showed more awareness of others' feelings and more socially outgoing and well adjusted social responses. The two abilities that seem to boost young children's social skills most are the ability to conceptualize and generate miltiple solutions to interpersonal problems and, secondly, the ability to anticipate the consequences of actions.

Parent Effectiveness Training (PET)

Thomas Gordon's PET (1970) program has helped parents to decide who owns a problem in the family and how to arrive at solutions to family problems that are acceptable to all members involved in the problem. PET helps an adult listen actively to reflect the feelings of a child. When an adult accurately interprets the frustration or anger or pleasure of a child, that child feels understood. That child is more likely to manage his or her own behaviors in the classroom. The child whose teacher cannot empathize with distressed feelings may feel far less inclined to be a sociable, cooperative member of the group.

Systematic Training for Effective Parenting (STEP)

The STEP program (Dinkmeyer & McKay, 1976) is designed to teach parents, meeting in groups, how to analyze the goals of children's behaviors: In order to understand how to help a child toward more appropriate communication patterns,

parents need to look at the possible goals of misbehaviors, such as a desire for attention, for power, for revenge, or for inadequacy so that the child will not be forced to compete with others and perhaps fail. Teachers and parents of handicapped youngsters need to be alert to the different meanings of inadequate functioning or misbehaviors that children carry out. The STEP program suggests that adults furnish children with acceptance and with strong messages that children are loved and will be helped to set and to accomplish reasonable goals for themselves.

Each of these programs provides clues to how to manage socially inappropriate behavior of young children. Each program gives many suggestions for enhancing communication modes so that loneliness or fear of failure or strong resentment of teachers or peers need not permeate the feelings and actions of young children. Access to these resources should encourage therapists and parents together to work with renewed confidence toward establishing positive communicative competencies and prosocial skills for the children they teach and care for.

Conclusions

Major ideas from normal child development theory and research that are useful for specialists who work with handicapped preschoolers are also ideas that would be helpful to any teacher or parent or specialist seeking to prevent deficits and to enhance successful growth and development. A half-dozen principles or precepts can sharpen our awareness of ideas that will work as adults work with young children.

First, loving care and attention to needs for cuddling, cooing, and responsiveness to infant signals is the touchtone, the magic first formula for assuring a good growth base. All young children need a generous body-start. This primary gift allows a child more chances for emotional mental health and intellective competence later in life. Thus children can acquire the courage and motivation to grow to the best of their ability despite disabilities with which they may have been born.

Second, adults need an armamentorium of positive techniques to encourage early learning. Contingent praise, giving specific task information, modelling, priming the child by initially giving the correct answer, luring a child forward physically, use of incongruous materials to incite curiosity, attractive arrangements of learning activities, use of active listening to help a child express feelings more - these are but a few of the skills a knowledgable adult will learn to use appropriately.

Third, building therapeutic exercises into larger units of purposeful games motivates children and encourages their will to try. Also, understanding the reasons behind therapeutic prescriptions enlightens the helping adult and invigorates the presentation or carrying out of special activities. The adult who understands the "reasons why" can find better ways to offer an activity or to program a required task. Purposeful activities add more meaning to a child's learning experience. They integrate sensory and muscular exercises into the life - learning of the child.

Fourth, "dance the developmental ladders" with each child. Intimate knowledge of strengths and difficulties each child has in each area of functioning permits a teacher to move ahead or to drop back as a child's responses reflect progress or too much difficulty in a given area of functioning. Increasingly, perceptive matchmakers will be careful to help their children climb learning ladders steadily but with surety and courage, even when the steps are close together and the rests on each step are long.

Fifth, use assessments as intervention procedures. When a child is being tested, try to arrange that parents and other teachers are present. Involve them and motivate them to become better observers of a child's tentative or tiny steps forward on a developmental task. Show them any small steps forward that the child has made since last assessment. Model your patience and persistence at working with a handicapped youngsters. Prime interested adults to shape and to reward behaviors that you are invested in as you assess or work therapeutically with a child.

Lastly, both a borrower and a lender be. Borrow good ideas and techniques from others, particularly those who work with young children, whether normal or disabled. Build on these techniques. Share your secrets with others. For example, language and love are fantastic and fundamental tools in ensuring optimal child rearing. Materials are also important, as props for the adult artist - the arranger of effective learning opportunities in the drama of a child's life. Share ideas with others in order to help each child understand and perform as well as possible. Use the concept of the "magic triangle" (Honig, 1983b) of yourself, the child and the materials. The "magic triangle" works by helping the child to focus attention on materials and task requirements together. The child is heightened in motivation to deal appropriately with the task requirements. Even a child with short attention span, becomes aroused to refocus on the task at hand as you enhance the desirability of the game procedures and materials.

Choose and share written and audiovisual materials with colleagues and family members. Many publications such as "The Exceptional Parent" and many compilations of resources (such as Caldwell & Stedman, 1977 or Garland et al., 1981) are available to help you develop a more powerful knowledge base from which to work. Parents, teachers and therapists need to be allies in the struggle to minimize effects of handicapping conditions.

As you grow in knowledge of development of all children and how to support them in their growth, you can share with the children you serve your <u>own</u> pride in climbing ladders of knowledge and capability in work with handicapped preschoolers.

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