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ABSTRACT

Four brief papers in this symposium examine clinical research, community mental health services, and policy issues of young children's mental health problems. First, "Risk Factors for Poor Mental Health Outcomes in Young Children Entering School" (Lynne C. Huffman, Sarah L. Mehlinger, and Amy S. Kerivan Marks) reviews the research and identifies major risk factors (e.g., cognitive deficits, early behavior problems, parental psychological problems) and protective factors (e.g., higher child cognitive functioning, easier child temperament and child self-confidence, emotional support from alternative caregiver). Second, "Analysis of Federal Policies Affecting Young Children's Mental Health and School Readiness" (Doreen A. Cavanaugh, John Lippitt, and Otrude Moyo) finds that overall, federal programs (such as the Early Periodic Screening, Diagnosis and Treatment Program, are making a major contribution to the mental health of young children and their families but many policies overlap and affect efficiency and effectiveness. A seamless, multidisciplinary system of early childhood mental health care that transcends traditional federal policy boundaries is urged. Third, "Accessing Mental Health Services for Young Children: Referral Sources and Parental Stress" (Amy S. Kerivan Marks, Christine Blasey, Mary Nichols, and Lynne Huffman) finds that, compared to children referred by mental health specialists and social service workers, children referred by pediatricians and teachers generally are rated by parents as having less severe behavioral problems and higher functioning. Fourth, "The Special Curriculum Opportunity Rating Scale: A Measure of Educational and Therapeutic Effectiveness" (Jennifer Dyer-Friedman, David Hessl, Bronwyn Glaser, Akhila Kosaraju, and Allan L. Reiss) examines the psychometric qualities of this measure and finds it has reasonably high test-retest reliability and has potential in evaluating a child's educational and therapeutic services. Finally, the symposium discussion summary (Louisa B. Tarullo) notes the increasing awareness of the importance of "social-emotional school readiness" and relates this to Head Start programs. (Individual summaries contain references.)(DB)

Children's Mental Health Problems and Early School: Research, Service, and Policy Issues

14th Annual Conference Proceedings
A System of Care for Children's Mental Health:
Expanding the Research Base

Symposium:

Children's Mental Health Problems and Early School: Research, Service, and Policy Issues

Chair
Lynne C. Huffman

Discussants
Louisa B. Tarullo
Kathryn Taafe McLearn

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Symposium Introduction

Novel social experiences, such as children's interaction with unfamiliar adults or peers, and social transitions, such as starting school, represent important developmental challenges. These challenges become even more significant when children are either at-risk for or have been diagnosed with social-emotional problems. Children who do not manage the first years of elementary school smoothly have greater problems with later behavioral, emotional, academic, and social adaptation. Research clearly documents the predictive power of cognitive impairment and neurodevelopmental disabilities for later academic failure. However, other behavioral and social factors appear to be important predictors of early school outcome as well. Educational, medical, child protection, and behavioral health systems play important roles in the identification, referral, evaluation, and treatment of children with problems that emerge during the early school years. Ideally, a shared goal for these systems should be to intervene when a child is identified as being "at risk," thereby eliminating or reducing academic and behavioral difficulties during the beginning of school.

For this symposium, four presenters and a discussant examined the arenas of clinical research, community mental health, and health care policy, and discussed the interrelated facets of this important educational and mental health issue. The presentations addressed risk and protective factors, innovative measurement methodologies, child and family access to mental health and educational services, intervention effectiveness, and the implementation of relevant federal policies.

Risk Factors for Poor Mental Health Outcomes in Young Children Entering School

Lynne C. Huffman, Sarah L. Mehlinger & Amy S. Kerivan Marks

Introduction

Young children with *significant risk for* or *already established* emotional and behavioral problems frequently are not identified or may receive inadequate treatment by systems of health care. These children often do not manage school entry smoothly and then have greater problems with later behavioral, emotional, academic, and social adaptation. Medical and mental health systems play important roles in the identification, evaluation, and treatment of young children (ages 0-6 years) with problems that emerge during the early school years. Ideally, a shared goal for these systems should be to intervene when a child is identified as being "at risk," thereby eliminating or reducing behavioral difficulties during later childhood.

Method

Utilizing OVID Medline, we reviewed the scientific literature in order to identify risk factors associated with emotional, behavioral and social problems that emerge by age 6-7 years (Huffman, Mehlinger & Kerivan, 2000). The search yielded articles published between 1980-1998, and was limited by age (0-17 years), document (peer-reviewed journal articles only), and language (English). Within this set of articles, we paid particular attention to behavioral and social risk factors examined via longitudinal designs. A longitudinal approach allowed the consideration of causal risk factors for a defined set of outcomes in kindergarten and first grade (approximate ages 5-7 years). We described risk factors as well as protective factors at individual, family and peer, neighborhood and community, and sociocultural levels. Salient outcomes included emotional and behavioral health problems and impaired language, motor, and social capacities.

Results

Risk Factors

Overall, we found that both basic and intervention studies indicate that risk for children's difficulties during early elementary school is associated with several identified factors. At the individual level, low birth weight, and poor cognitive functioning are predictive of early school problems. Additional problems in the domains of peers, daycare and school environments, community neighborhoods, and economic status also are contributory. Recent studies have begun to define and identify some of the *causal* risk factors for early school failure. These include (a) cognitive deficits, (b) early behavior problems, (c) parental psychological problems, (d) problematic parenting practices, and (e) difficulties with peers and teachers. Strikingly, several of the risk factors for early school problems appear to be related to a child's difficulties in establishing and maintaining early, important relationships with parents, peers, and teachers.

Protective Factors

Research on protective factors—those factors that guard against early school failure in groups of children at risk for such problems—is less well developed. Researchers have proposed a continuum model to better describe the strength of protection that some of these factors offer. Some factors provide powerful protection against poor outcomes (*protective-stabilizing*); others are not as potent, and afford some protection (*protective-enhancing*), or little protection under high-stress conditions (*protective but reactive*). While there is limited research in this area, it has been suggested that the following are protective factors: (a) higher child cognitive functioning; (b) easier child temperament and child self-confidence; (c) emotional support from alternative caregiver and warm and open relationships with kindergarten teachers; (d) higher maternal education; (e) stable, organized, and predictable home environment; and (f) larger number of classroom friends.

Discussion

In conclusion, we suggest that both research and policy arenas can benefit from the utilization of rigorous scientific criteria in the identification of causal risk factors for emotional, behavioral, and social problems at the time of school entry. Increased awareness of these social and behavioral risk factors, in conjunction with an accelerated understanding of developmental neural plasticity, brings critical information to the national discussion of the behavioral health needs of young children.

Risk factor research indicates that several of the causal risk factors for children's poor early school outcomes are related to the failure of early important relationships with their parents, peers, and teachers. These early relationships are the foundation for later relationships, and are vital to the development of their mental health as young children. However, additional risk and protective factors need to be identified and their relative significance established in order to shape and reshape evidence-based service programs. In some cases, the basic research to back up our intuition about what causes poor early school outcomes has not been carried out. In addition, large longitudinal studies are needed—while a number of longitudinal studies already have been conducted, their focus has largely been on older children. Studies that examine younger children (pre-kindergarten) are needed to understand the developing child within the context of the child's family, community, and school setting. Longitudinal studies assess children and families before children's school entry, and over the course of the school years. Such studies help determine whether risk factors truly are causal in nature and are necessary for developing effective prevention and treatment programs. Additional research is needed in other areas as well, including (1) establishing how multiple risk factors interact to produce poor early school outcomes (including cumulative risk or causal chains of risk); and (2) understanding how protective factors can prevent or lessen early school failure.

An adequate understanding of the scientific literature on risk for emotional and behavioral problems is critical for building and implementing more evidence-based policies that affect health care delivery systems. Mental health services, and the policies that support them, need to address multiple levels of vulnerability, since risk factors can occur at various levels (e.g., the individual, family, and community levels). Further, interventions should be targeted to address the causal and malleable risk factors for early school failure (e.g., problematic relationships with parents, teachers, and peers). By better defining protective factors and determining which ones may safeguard children, interventions that are more effective can be developed to prevent difficulties in the early school years.

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Analysis of Federal Policies Affecting Young Children's Mental Health and School Readiness

Doreen A. Cavanaugh, John Lippitt & Otrude Moyo

Introduction

Both in scientific reports such as the newly released *From Neurons to Neighborhoods: The Science of Early Childhood Development* (Cavanaugh, Lippitt, & Moyo, 2000) and in the popular press, the mental health of young children from birth to six years of age is receiving increased attention. The importance of early emotional and social development in the transition to school has been validated. This paper presents the results of an analysis of twenty-nine federal policies and addresses factors identified in peer-reviewed research as placing a young child at-risk for mental health problems. Objectives of this study included: assessing the degree to which the legislative intent and implementation of federal policies impacts identified risk factors; analyzing the direction of the impact; and developing recommendations for change.

Method

Federal policies representative of five domains (i.e., health, early childhood care and education, family support and child welfare, nutrition, and socioeconomic status) were selected for review. Selection was based on the relevance to risk factors for mental health problems in young children identified in peer reviewed research, the amount of the policy's budget appropriation, and the number of young children eligible for services. Authors reviewed federal legislation and regulations, government documents, scientific papers, and reports. Twenty-five telephone interviews were conducted with key informants.

Results

Overall, we found that the federal government is making a major contribution to the mental health of young children and their families. For example, the Early and Periodic Screening, Diagnosis and Treatment Program (EPSDT) may assure the identification of mental health problems early on. Medicaid expansions and the State Child Health Insurance Program have increased the potential for children to access health insurance benefits and federally supported demonstration programs, such as the Starting Early, Starting Smart program. This program places mental health workers in natural settings such as child care centers and physicians' offices. However, major gaps in policies addressing the mental health of the youngest members of our society remain.

While some federal policies in this area are complementary, many overlap, illustrating not only the complexity of collaborative efforts on the part of the federal agencies but also the diversity of partnerships supporting the mental health of young children. Changes in the organization and financing of health care delivery coupled with the complex interaction of federal policies that address this population impact on the efficiency and effectiveness of federal policy responses to identified risk factors. Complex issues such as Medicaid's relationship to the delivery of health care services, which are required under the Individuals with Disabilities Education Act (Parts B and C), highlight this point. Furthermore, mental health care for young children cuts across a number of disciplines. The multiplicity of agencies addressing similar concerns creates fragmentation and difficulty in coordinating efforts to ensure that all young children's mental health needs are met. Equally important are the gaps in federal policy and the inadequacy of federal programs to reach all young children.

Conclusion

A seamless, multidisciplinary system of early childhood mental health care that transcends traditional federal policy boundaries must be designed and implemented. Research is needed on new models for organizing and financing mental health care for young children across a number of federal programs.

Further, rigorous studies of the organization and financing of early childhood mental health care coupled with an analysis of outcomes and quality measures are needed. Demonstration programs should test new designs and implementation strategies that build on coordination mechanisms already existing in many federal policies. Lessons from federal government and foundation-sponsored research need to be distilled to inform the development of best practices.

Devolution of policy making to the state level also presents challenges. Long established roles are changing and new relationships among levels of government must be negotiated. Increasingly, states have greater flexibility in designing programs and delivering services. Changing arrangements for the allocation and administration of federal resources require further study. Research should address how states are implementing federal policy and using federal funds to address the mental health needs of young children, how federal programs are coordinated at the state level, and the purposes and amounts of state funding for these programs. This research should, in turn, inform the development of new, more efficient and effective systems of mental health care for young children.

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Accessing Mental Health Services for Young Children: Referral Sources and Parental Stress

Amy S. Kerivan Marks, Christine Blasey, Mary Nichols & Lynne Huffman

Introduction

The pathway into mental health services for young children is unique in that they receive services only through the intercession of adults who perceive them to be in need. In addition to parents, pediatric health care providers and preschool teachers play a significant role in the determination that a child has problems requiring mental health services. Accordingly, these professionals can act as important catalysts in parents' perceptions that their children need services (Poduska, 2000). A parent's perception of their child's needs, in turn, may have direct or indirect impacts on their ability to obtain appropriate health care for their child. Once a child has obtained access to mental health services, the success of his or her outcome not only depends upon the services utilized, but on the success of the identification and referral processes that enabled that child to begin services in the first place. A better understanding of existing referral pathways for children into specialty mental health services will not only increase our ability to serve children who underutilize mental health services, but will also to enable child mental health policy and intervention improvements. Further, investigation into the mechanisms by which children, particularly those with elevated risk, are referred for mental health services may inform the development of more accurate early identification techniques and early intervention strategies.

Method

In order to begin to examine a referral source's influence on child health and services utilized, we launched an outcomes evaluation program to describe new clients as they are referred to a community behavioral health care agency. Data collected through this program addressed two aims: (1) To examine the relations between referral source and the behavioral problems and functional impairment of children presenting for assessment and treatment at our agency, and (2) to begin to investigate one aspect of the unique pathway many children take to access mental health care by studying parenting stress.

Approximately 400 new clients were served during the 1999-2000 year, with 251 (63%) families responding to our outcomes research efforts (average child age 7.6 years, *SD* = 4 years; 68% male). Participants were predominantly Caucasian (68%), Asian-American (8%) and Latino/Hispanic (7%) and most were from local middle- and upper-level income communities. Sixty-three percent of client parents were married, 11% were divorced and 8% were single mothers. Almost half of new clients (46%) sought services from psychologists, while the remaining 54% of clients pursued varied services with neuropsychologists, educational specialists, speech and language specialists, psychiatrists, clinical social workers and occupational therapists. These participants were grouped and examined according to their referral sources: schools, pediatricians, mental health specialists, and social service workers. Mother and father ratings on the Child Behavior Checklist (CBCL; Achenbach, 1991), the Columbia Impairment Scale (CIS; Bird et al., 1993), and the Parenting Stress Index (PSI; Abidin, 1995) were calculated and used in ANOVA and regression modeling.

Results

Using analysis of variance, significant differences between social Services-referred and School-referred children's scores for all major Problem Scales on the CBCL were observed (see Figure 1). Differences between Social Services-referred and Pediatrician- or Mental Health Specialist-referred scores for Total and Externalizing Problems also were found. In Figure 2, significant differences were found between Social Services-referred and School-referred, as well as between Mental Health-referred and School- or Pediatrician-referred children's impairment scores.

Figure 1
CBCL T-Scores by Referral Type

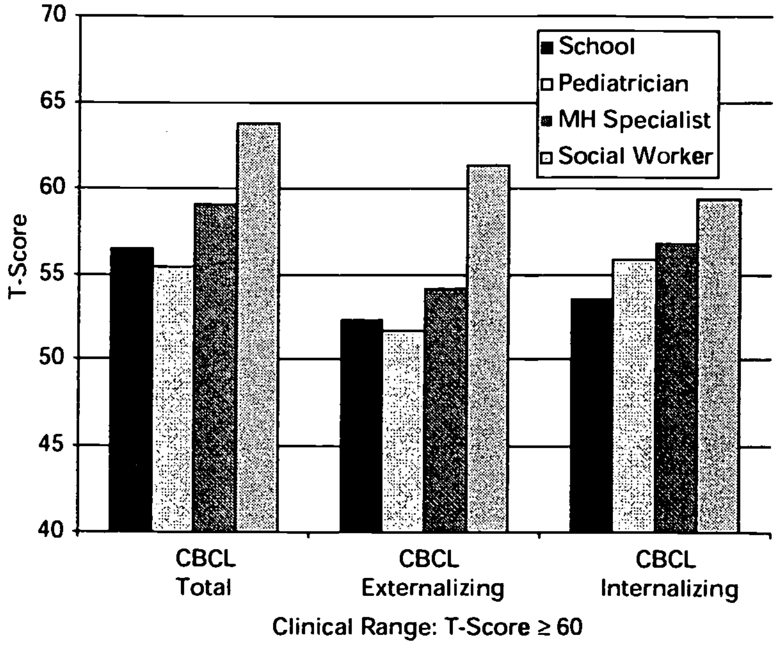
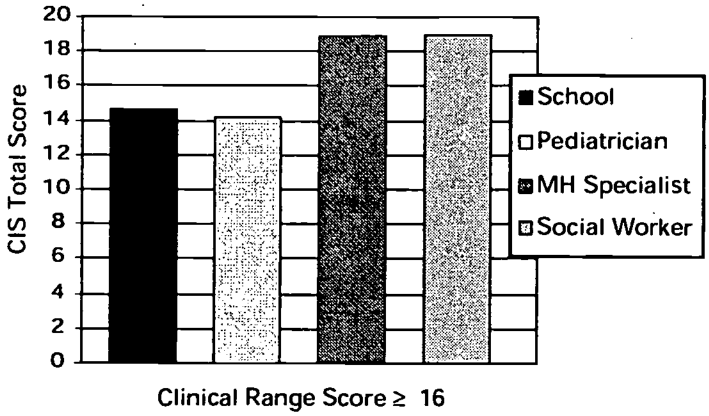


Figure 2
CIS Scores by Referral Type



Subsequently, linear modeling procedures tested the prediction of child behavior ratings by child gender, age and parenting stress dimensions. For both mothers and fathers, higher CBCL scores were predicted by elevated over-all parenting stress. No significant contributions from child age or gender were found. Additionally, fathers' (and not mothers') CBCL ratings of their children also were predicted by a stressful parent-child relationship.

Discussion

These data suggest that, compared to children referred for assessment/treatment by mental health specialists and social service workers, children referred by pediatricians and teachers were rated by their parents as having less severe behavioral problems and higher functioning. Further, our linear modeling procedures demonstrated that a parent's level of parenting stress can have an impact on their reporting of child behavior problems. This finding holds important implications for child mental health care access and success, as many parents serve as front-line ambassadors to their child's care. These findings demonstrate that the avenue by which children are referred for subspecialty mental health care does relate to the severity and type of their behavioral problems and their degree of functional impairment, and should be considered in designing intervention programs and studies. Future research of child mental health referral pathways should utilize longitudinal designs and aim to understand (1) referral patterns and avenues for pre-school and early school aged children, (2) the mechanisms (including barriers and facilitators) by which children are referred to specialty mental health services, and (3) whether a child's "risk" status (i.e., whether a child experiences behavioral problems during the school-age period by virtue of sociocultural, family, and psychological factors) influences or predetermines how they are referred for mental health services.

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The Special Curriculum Opportunity Rating Scale: A Measure of Educational and Therapeutic Effectiveness

Jennifer Dyer-Friedman, David Hessl, Bronwyn Glaser, Akhila Kosaraju & Allan L. Reiss

Introduction

The Special Curriculum Opportunity Rating Scale (SCORS) was developed as an observer rated measure for parents, teachers, or clinicians to use to assess children's academic and developmental needs and the effectiveness of special education and therapeutic programs in meeting their needs. The SCORS was used previously in a study of the biological and environmental factors influencing the outcomes of children with fragile X syndrome. Fragile X syndrome, caused by mutations in a single gene of the X chromosome, is associated with neurobehavioral characteristics including social deficits with peers, social withdrawal, gaze aversion, inattention, hyperactivity, anxiety, depression and autistic behavior. The findings from this study serve as the first opportunity to review the psychometric properties of this new measure.

The SCORS is comprised of three elements: (1) a self-report curriculum record describing the number of hours per week a child receives specific educational and therapeutic services in various settings; (2) a 15 item Q-sort that describes a child's developmental needs; and (3) a 15 item Q-sort describing a child's recent developmental improvements. The same 15 developmental skills are used to describe a child's developmental needs and developmental improvements such that the correspondence between these two independent Q-sort ranking systems serves as a measure of the effectiveness of the child's educational and therapeutic programs in meeting the child's developmental needs. This correspondence or correlation is called the Special Education Effectiveness Index (SEEI) and ranges from −1.0 to +1.0.

Item Selection

The SCORS items were selected from a review of the developmental needs of children with mental retardation, autistic spectrum disorders, and learning disabilities listed in the DSM-IV (American Psychiatric Association, 1994). The initial set of items used for data collection covers the following behavioral domains: reading and writing skills, math skills, attention skills, daily living skills, speech and language skills, social behavior skills, emotion management skills, impulse control skills, anxiety management skills, the ability to manage repetitive behaviors, school performance skills, energy management skills, planning skills, the ability to manage sensory sensitivities, and physical coordination.

Applications

The SCORS is useful for a broad range of applications. It is brief, taking less than 30 minutes to complete. It can be used to describe children ages 5-18 and at any developmental level. In addition, the SCORS can be used by multiple reporters and Q-sort descriptions of a child may be compared or combined.

A Q-sort ranking system was used for the SCORS because of its descriptive and psychometric properties (Block, 1978). First, it is an ipsative rating system. This means that the items are ranked relative to one another in terms of their relevance to the child being described rather than in terms of their relevance to an imagined normative standard or anchor. This ensures that the measure is person or child-centered, and eliminates the problem of parents, teachers and clinicians who may complete this measure with different normative standards in mind. Second, a Q-sort uses a forced distribution. The items are ranked from 1 to 15 in a flat distribution. This type of distribution forces a rater to give more information about a child than if they were choosing from among a few options on a Likert-type scale and eliminates rater response biases. Third, the potential use of the SCORS by multiple raters allows it to be useful in a group discussion about a child. Different perspectives of a child (e.g., from teachers, clinicians, consultants, parents) can be represented by independent Q-sorts and given equal value in the discussion (e.g., in an IEP or a case conference).

Additionally, the independently derived Q-sorts may be combined by simply averaging item values and re-ranking the items. A composite of multiple raters has higher reliability and validity than any single Q-sort because it capitalizes agreement and minimizes idiosyncratic perspectives about a child. This last application makes the SCORS a powerful research tool. A researcher can establish a highly reliable and valid assessment of a child's developmental needs and recent improvements or growth.

Methods

The first aim of this study was to assess the reliability of this measure using a test-retest approach. The second aim of this study was to make an initial assessment of the validity of this measure in terms of how the items performed individually and together in the description of this sample. Inter-item correlations were reviewed, inter-rater agreement was analyzed, the educational effectiveness scale index (EESI; generated by correlating the two Q-sort scales) was analyzed, and composite profiles of sample groups were reviewed for their face validity.

For the purposes of this study, 92 children with fragile X syndrome were rated by their mother and primary teacher on the SCORS. Of the 92 children in this study, 28 were females and 62 were males. They ranged in age from 6 to 17 years of age (*M* = 10.88 years +/- 2.77). Families in 36 U.S. states and Canada, across urban, suburban, and rural areas, were represented in the sample.

Children were administered the WISC-III and the mother of each child completed the SCORS during the course of an eight-hour home-based evaluation of each participating family. The parents of each child gave the SCORS materials to the child's primary teacher for completion and the teachers sent the data directly back to us.

Results and Discussion

The females in this study had full-scale IQ scores ranging from 40 to 123 (*M* = 73.78 +/- 23.11). The males in this study had full-scale IQ scores ranging from 40 to 76 (*M* = 45.70 +/- 7.15). These IQ scores are consistent with the well-defined cognitive phenotype of males and females with fragile X syndrome (Baumgardner, Reiss, Freund, & Abrams, 1995; Dykens, Hodapp, & Leckman, 1994). On average, the females spent 17 hours in class with typical students, 9 hours in special education class and 2 hours receiving individualized education within the school setting. The males, in contrast, spent an average of 8 hours in class with typical students, over 18 hours in special education class, 4 hours receiving individualized education in school, and two hours receiving therapeutic services outside of school.

Reliability

Twenty pairs of "Needs to Develop" Q-sorts and 17 pairs of "Recently improved" Q-sorts were collected from mothers of children affected by fragile X syndrome within a one month period. The mean correlation of the "Needs to Develop" Q-sort was .68 (*SD* = .19). The mean correlation of the "Recently Improved" Q-sorts was .66 (*SD* = .16). These results indicate that this measure has reasonably high test-retest reliability.

Inter-rater Agreement

For each of the 92 children included in this sample, a curriculum record and two Q-sorts were collected from the child's mother and primary teacher. Mother teacher agreement ranged from -.18 to .88 with a mean of .38 +/- .26 on the "Needs to Develop" Q-sort and from -.54 to .86 with a mean of .22 +/- .35 on the "Recently Improved" scale. In order to improve the reliability and validity of the Q-sorts for each child, the mother and teacher Q-sorts were combined by averaging the two ratings. The parent-teacher composites were used in all further analyses.

Item Analyses

Inter-item correlations were generated for all items on both Q-sorts. On the "Needs to Develop" Q-sort, inter-item correlations ranged from -.423 to .612 and had a mean of -.07. On the "Recently Improved" Q-sort, inter-item correlations ranged from -.456 to .535 and had a mean of -.07. Only two items correlated above .5 on both scales. These items were "Reading and Writing Skills" and "Math Skills" (r = .612 on "needs to develop" Q-sort and r = .535 on "recently improved" Q-sort).

The generally low inter-item correlations among these items indicate they are measuring independent constructs with little redundancy. Since the aim of this measure is to be as brief as possible, single item scales are preferable. The high correlation in this sample of two academic skills is likely due to the broad range of functioning of these children and does not indicate that we should combine these items without further testing with other samples.

Educational Effectiveness Scale Index

As shown in Table 1, the EESI's of the composited Q-sorts of the entire sample range from -.63 to .87 and the girls have a higher mean EESI (*M* = .38 +/- .33) than the boys (*M* = .24 +/- .33). Interestingly, mothers rated the effectiveness of services higher than teachers did for both boys and girls indicating that the teachers' ratings were not overly biased by a desire to "look effective". As well, the broad range of the EESI scores demonstrate that these constructs represent a full range of possible relationships between developmental needs and improvement as a function of interventions.

Table 1
Educational Effectiveness Scale Index Score by Respondent for Boys and Girls

	Boys			*Girls*		
Rater	*Range*	*Mean*	*S.D.*	*Range*	*Mean*	*S.D.*
Mother	-.48 -.75	.12	.30	-.47 -.70	.27	.31
Teacher	-.61 -.58	.05	.26	-.60 -.61	.18	.31
Composites	-.63 -.84	.24	.33	-.25 -.87	.38	.33

Fragile X Profiles

As a means of analyzing the content validity of the SCORS mean profiles of the "Needs to Develop" Q-sort and the "Recently Improved" Q-sort were generated from the composites of the pre-adolescent and adolescent groups of boys and girls with fragile X syndrome. A comparison of the boys and girls profiles reveals gender differences and similarities consistent with the literature (Dykens et al, 1994; Freund, Reiss, & Abrams, 1993; Boccia & Roberts, 2000). Parents and teachers rate academic skills as most important for the girls to develop while they rate "attention skills" and "impulse control skills" as most important for the boys to develop. This is consistent with the higher cognitive functioning of the girls in comparison to the boys. In contrast, "social behavior skills," "anxiety management skills," and "emotion management skills" are rated as important for both boys and girls to develop; this is consistent with the findings that both boys and girls with fragile X syndrome struggle with social anxiety and avoidance.

A comparison of the mean "needs to develop" Q-sorts and "recently improved" Q-sorts by age group and gender reveals some important developmental discrepancies. Among the pre-adolescent boys and girls, "anxiety management skills," "emotion management skills," and "impulse control skills" are significantly lower on the "recently improved" composite than they are on the "needs to develop" composite indicating that for both young boys and girls with fragile X, the development of these skills is delayed and potentially problematic. Among adolescent boys, "impulse control skills" and "planning skills" are also significantly lower on the "recently improved" composite than they are on the "needs to develop" composite; this indicates an area of lasting developmental problems that are insufficiently addressed by the current interventions these young boys are receiving. The improvement of skills among adolescent girls, on the other hand, is relatively consistent with their developmental needs and shows no significant discrepancies.

In summary, the SCORS demonstrates reasonably high test-retest reliability, and by compositing multiple raters' Q-sorts, the SCORS has the potential to be a very highly reliable and valid assessment measure of children's developmental needs and recent improvements. The correspondence between these two constructs offers a measure of the effectiveness of a child's educational and therapeutic services in meeting his or her developmental needs. This measure may be used for IEP planning and case conferences as well as for research purposes.

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Symposium Discussion: Young Children's Mental Health Problems and the Transition to School: Research and Policy Issues

Louisa B. Tarullo

The papers in this symposium are nothing short of revolutionary. They are indicative of a dawning national consciousness of a simple fact—something obvious to this audience, but "news" to some others—children who enter school socially and emotionally healthy, or in other words, confident, friendly, secure in loving adult and peer relationships, willing to persist at new and challenging tasks, able to listen and communicate well, and who are curious about the world around them, are more likely to be successful in the early years of school. This "social-emotional school readiness" is fully as important as any cognitive or academic skill children bring with them to the classroom door.

We see signs of this newfound awareness from impressive sources. The Surgeon General convened a conference of experts to declare the importance of mental health to children's learning and general health (U.S. Department of Health and Human Services, 2000). The National Research Council's report, "From Neurons to Neighborhoods" recommends that, in addition to supporting literacy and numeracy, equal resources be given to translating the best research on children's mental health into practice (National Research Council and Institute of Medicine, 2000).

Thus, we are in good company. The presentations in this session represent the kind of interdisciplinary conversations these expert groups have advocated: taking lessons from developmental and clinical research, and measuring them against investments in federal policy and programs.

First, Dr. Huffman and her colleagues conducted an impressive synthesis of risk and protective factors contributing to child outcomes in the early school years. They gave special attention to causal factors that might be malleable to intervention, and wound up by asking: knowing what we know, why haven't we done more?

Then, Dr. Cavanaugh joined the conversation with a comprehensive review of current governmental investments in this area. She challenged us to consider how families at risk are served by multiple, often uncoordinated services, and she urged us to build on what we know to improve program effectiveness: investing early rather than later, taking family and community risks into account, and building federal/state/and local partnerships to accomplish our common purpose.

Next, Ms. Kerivan Marks offered us a specific case: How do different gatekeepers to services impact access to care? And—of particular interest—how do aspects of the family environment like parenting stress, impact the likelihood of a child being identified and receiving services? Her work builds on a body of work about reporter bias and ingrained barriers to considering practical implications.

Finally, Dr. Dyer-Friedman raised the crucial issue of measurement: do we have the right tools to assess the effectiveness of an intervention, once children do gain access to services? She presented evidence of a flexible tool that takes account of multiple reporters and tracks change over time.

Let us examine these issues in a specific federally supported program, Head Start. In the federal research on Head Start and Early Head Start—programs serving low-income children from birth through age five—the question of outcomes has gained increased significance. This population of children is likely to exhibit most of the aspects of risk and disadvantage that Dr. Huffman has so carefully explored. How do we take stock of whether our programs are making a difference for them? Obviously, we are not only interested in narrow measures of academic competence! We want to take a "whole child" view, which encompass all the domains of health, mental health, and learning readiness.

I would like to offer a few results from two Head Start studies—one of preschoolers at the point of school entry, and one of infants and toddlers, to make two main points:

1. Assessments of child outcomes should be comprehensive in nature; and,
2. What parents do—and what programs do—matters for children's development and learning.

The first results come from a study of a nationally representative sample of 3200 children and families. These children were in Head Start, and were tracked from program entry through first grade. When they first came to Head Start, these children were at risk for many school difficulties. For example, they scored on average a full standard deviation below national norms on measures of vocabulary and pre-literacy skills. Furthermore, parents reported that speech and language impairments were the most prevalent area of disability, affecting about 12% of children. Parents were less likely to report emotional/behavioral disorders, although clinical studies of this population show much greater prevalence.

Parents and teachers both reported growth in social skills over the program year, and observed that social play became more complex, especially in classrooms of higher quality. The small percentage of children with problem behaviors stayed relatively constant, with one bright spot—there was a significant reduction in the percentage of children reported by parents or teachers as having problems with hyperactivity. We are currently looking at correlations of these findings with children's self-report of health and well being in first grade. Children showed growth in some pre-literacy measures, like vocabulary and writing, but not in others, like letters and print concepts. The more parents read to children, the greater their vocabulary scores—over and above parent education and initial scores. The higher the classroom quality in terms of supporting language, the higher children's scores in this area.

The link between program quality and child and family outcomes also emerged in an evaluation of Early Head Start. Compared to control group children, two-year-old children who had experienced at least a year of Early Head Start had higher scores on the Bayley and were less likely to be in the at-risk category. Program parents were observed to be more responsive, and reported more reading, routines, and less spanking. And quality mattered: the earlier programs implemented the performance standards, the more likely they were to show impacts—on service use and on outcomes.

Head Start and Early Head Start are examples of federal funding of locally designed, community responsive programs, based on a core set of standards. Head Start offers a vibrant, dynamic infrastructure, which is open to many proven approaches. As one of the early venues for children's entry into education, care and services, this program needs all the best research-based models and measures that can be provided.

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