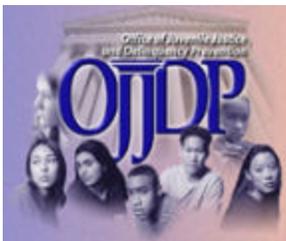


USING RESILIENCE AS A FRAMEWORK FOR EVALUATING SAFE START OUTCOMES

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PREFACE

This report on risk and resilience among young children exposed to violence was developed by the Association for the Study and Development of Community (ASDC) for the Office of Juvenile Justice and Delinquency Prevention (OJJDP) for the Safe Start Initiative under a contract with Caliber Associates. ASDC staff conducted a review of the literature on resilience and childhood violence exposure to compile this report. ASDC staff contributing to this report include: Kojo X. Johnson (Associate), David Chavis (Co-Project Director), DJ Ervin (Senior Associate), Inga James (Associate), Larry Contratti (Research Assistant), and Louisa Conroy (Project Assistant). ASDC would like to thank Lynne Berry, Jill Hunter-Williams, and Oscar A. Barbarin for their contributions to this report.

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1. INTRODUCTION:

Safe Start is intended to bolster protective influences in the lives of children exposed to adversity or negative life circumstances (e.g., abuse, maltreatment, neglect, domestic violence, community violence) (Office of Juvenile Justice and Delinquency Prevention, 1999). This goal dovetails with that of the resilience movement, an effort by many social scientists to understand how children experiencing negative environmental circumstances cope and thrive despite difficult conditions; as such, the resilience framework holds tremendous potential as a methodological and theoretical basis for the Safe Start program evaluation. For each of the Safe Start sites, regardless of level of progress, this framework offers a way of conceptualizing the variables and their relationships for a more holistic understanding of the Safe Start intervention and its effects on participating children, families, and communities. Whether sites are deciding or have decided on their measures, operating out of a resilience framework would help improve Safe Start programs and evaluations.

This paper summarizes the most prominent features of resilience and the most critical issues under discussion by experts in the field. We hope that this summary will stimulate further discussion of how to incorporate the resilience framework into the Safe Start program evaluation design. Topics covered in this paper are:

- An explanation of the resilience framework;
- A presentation of risk and protective factors at multiple levels of influence;
- A discussion of methodological and theoretical considerations for evaluation; and
- A description of the challenges to adopting this framework.

2. THE RESILIENCE FRAMEWORK

Conceptions of resilience

Since the inception of the resilience movement, researchers have discussed how to operationalize resilience. For example, resilience has been defined in the following ways:

- **Resilience as a personal trait:** this approach identifies personality traits that enhance the ability of an individual to overcome adversity (Block & Block, 1980).
- **Resilience as positive outcomes:** this approach focuses on positive developmental outcomes among individuals at high risk, even during continued exposure to threat and/or trauma (Masten, Best, & Garmezy, 1990; Rutter, 1987, 1990).
- **Resilience as an adaptive process:** this approach describes a dynamic process of positive adaptation despite experiences of adversity or trauma (Masten, 1994; Luthar & Cicchetti, 2000; Luthar, Cicchetti, & Becker, 2000).

The various approaches to resilience generally agree on two points: 1) the presence of risk or adversity in the environment is an essential feature of all definitions of resilience, and 2) it

is more prudent to foster the early development of resilient functioning than to intervene later in life after disorders begin to manifest (Cowen, 1991; Knitzer, 2000; Luthar, 2000; Luthar, Cicchetti, & Becker, 2000; Rutter, 2000; Werner, 2000). The literature on resilience tends to emphasize risk and resilience as adaptive processes. This emphasis on process has an important implication for evaluation. The notion of process forces us to consider the multiple levels (e.g., individual, family, and community) involved in resilience and the dynamic nature of resilience that requires assessment over time.

Although the personal-trait approach recognizes the role of the individual in resilience, it myopically focuses attention at the individual level on personality characteristics or traits. The former is problematic as it implies that there is a static personality characteristic that protects against adversity. The latter negates the fact that personal traits that act as protective factors are constantly shaped by the child and his or her interactions with the environment (Scarr & McCarthy, 1983; Rutter, 1992; Roosa et al, 2003). Moreover, locating resilience within an individual poses a dilemma in deciding precisely which personal characteristics/traits to treat via intervention and which to measure to evaluate success. Resilience highlights the importance of attending to the various forms of positive results children experience; however, it overlooks the interplay among variables resulting in the outcomes.

For the Safe Start project, it may prove more useful to measure the presence and influence of protective factors in the family environment and in the child. Moreover, given that the Safe Start project aims to increase protective factors in the family environment, it is incongruous to measure the success of the program by the mere absence of pathology (e.g., PTSD). Its evaluation should involve a search for assets as well as screening for disorders and pathology. In addition to the critiques offered by the resilience framework, using PTSD symptoms as a critical indicator of success is problematic for three reasons: First, PTSD symptoms may not be evident until later in the developmental process; second, the symptoms attributed to PTSD overlap with other mood disorders (American Psychiatric Association, 1994); third, the PTSD approach chooses a single individual-level variable to represent a dynamic, multiple-variable phenomenon.

Essential features of the resilience process

Embodied in the resilience-as-process approach are four essential components: adversity, vulnerability/risk factors, protective factors, and positive adaptation:

- **Adversity** may be defined as negative life events and circumstances statistically associated with poor adaptation (Luthar & Cicchetti, 2000; Dawes & Donald, 1994). Using the Safe Start model, exposure to violence represents a source of adversity for children.
- **Vulnerability** or **risk factors** are variables that compound the negative effects of living with violence (Luthar & Cicchetti, 2000). For example, duration of exposure (brief or ongoing) and proximity to violence (e.g., proximal violence within the family or distal violence between community members) may be risk factors for exposure to violence.

- **Protective factors** are variables that have a buffering effect or “modify the effects of risk in a positive direction” (Luthar & Cicchetti, 2000, p. 858). They serve to maintain optimal functioning or good development in the face of adversity or poor social conditions but which have no effect on outcomes when conditions are propitious (Sameroff, 1999)¹. Parental warmth and early treatment may be positive factors that mitigate exposure to violence.
- **Positive adaptation** is demonstrated through competence or success in accomplishing stage-salient developmental tasks (Luthar & Zigler, 1991; Masten, Best, & Garmezy, 1990; Masten & Coatsworth, 1998; Waters & Sroufe, 1983).

Resilience, then, refers to the processes through which the effects of exposure to adversity are modified by protective or vulnerability factors in positive or negative directions. Given this definition, resilience may be either positive or negative; thus, the process model acknowledges that the variables may not yield a positive outcome—another strength of this definition, as compared to those of the individual and outcome models.

Given the dynamic nature of resilience, Luthar (2000) suggests that the first objective of resilience research should be to identify vulnerability/risk and protective factors that influence the outcomes of individuals living with adversity. Having identified these, researchers must follow up by identifying the mechanisms or processes operative in producing these positive and negative outcomes. Within the context of Safe Start, it would be most efficacious for sites to focus on identifying the risk and protective factors for the specific types of adversities examined. Once these variables are identified, determinations can be made regarding how they interact and influence outcomes.

¹ A distinction is now made between promotive and protective factors. Promotive factors are those which are associated with and lead to good outcomes independent of whether the circumstances are adverse. Protective factors are those which serve to maintain optimal functioning or good development in the face of adversity or poor social conditions but which have no effect on outcomes when conditions are propitious (see Sameroff, 1999).

3. IDENTIFYING RISK AND PROTECTIVE FACTORS

Mere exposure to violence does not forecast negative outcomes for children who have been exposed at a young age. In spite of dire circumstances, many children have a tremendous capacity to bounce back. Copious evidence indicates that children confronted with even severe forms of adversity have the potential not only to survive, but to thrive (Garmezy, 1993; Garmezy & Masten, 1994). Successful adaptation or adjustment to adversity does not occur by chance though. Adaptation is linked systemically to positive factors in the community, family, and child (Garmezy & Masten, 1994). These factors contribute to *resilience processes* that enhance the child's ability to develop competence and maintain wellbeing in different domains, despite the adverse circumstances.

Children's experience(s) with violence, as well as with risk and protective factors, are not unidimensional phenomena. Risk/vulnerability and protective factors derive from multiple levels of influence (Cicchetti & Aber, 1986; Cicchetti & Lynch, 1993; Luthar & Zigler, 1991; Masten et al, 1990; Werner & Smith, 1990). Risk, promotive, and protective factors may operate on the individual, family, community, and even societal/macro-systemic levels to varying degrees (Bronfenbrenner, 1977; Roosa et al, 2002). Since children depend greatly on others to supplement their own capacity to cope, evaluators and interventionists alike should be aware of assets in the child's family (e.g., effective parenting or family cohesion). For children exposed to violence, it also is important to be aware of other sources of adversity (e.g., poverty or disruption in family structure), since these can exacerbate the negative impacts of violence exposure (Garmezy, 1993; Rutter, 2000; Gorman-Smith & Tolan, 2003).

Resilience in young children must also be understood in light of the child's developmental status— which dictates her capacity for effective coping. In children ages five years and younger there is immense variation in the rate and status of children's development of basic capacities (e.g., self regulation of affect, behavior and attention, executive function, thinking, planning and the use of cognition to mediate and give meaning to experience, and the use of self talk to direct behavior and affective expression, and regulate arousal).

Tables 1-3 present brief lists of risk and protective factors that have been identified in the resilience literature on young children. Note that risk and protective factors are often opposite poles of the same dimension. For example, high IQ may serve as a protective factor for young children experiencing adversity; low IQ in the same circumstances could be a risk factor.

Table 1: Individual-level Factors

	Risk Factors	Protective Factors
INDIVIDUAL-LEVEL RISK & PROTECTIVE FACTORS	<ul style="list-style-type: none"> • Close proximity to victim or perpetrator (Nader, Pynoos, Fairbanks, & Frederick, 1990; Gorman-Smith & Tolan, 2003) • [Young] age of child (Osofsky, 1995; Perry et al, 1995) • Presence of other adverse factors, e.g., poverty, disrupted family relationships & functioning (Garmezy, 1993; Rutter, 2000; Gorman-Smith & Tolan, 2003) 	<ul style="list-style-type: none"> • Physical competence, e.g., good health (Davis, 1999). • Social and relational competence, e.g.: secure attachment (Fonagy et al, 1994); the ability and opportunity to recruit social support from adults (Garmezy, 1983); and positive peer relationships (Benard, 1990) • Cognitive competence, e.g. : high IQ (intelligence quotient; Garmezy, 1985); high EQ (emotional quotient; Goleman, 1995); language acquisition and reading ability (in preliterate children, early language acquisition; Hart & Risley, 1995); capacity to plan (Rutter, 1987); ability to problem-solve (Wolin & Wolin, 1994); self-efficacy or effectance motivation (White, 1976); self-understanding (Beardslee, 1993); cognitive appraisal (Hill & Madhere, 1996) • Emotional competence, e.g. : easygoing temperament (Rutter, 1987); emotional regulation (Thompson & Calkins, 1996); high self-esteem and confidence (Werner, 1996); sense of humor and creativity (Wolin & Wolin, 1994; Solnit, 1987) • Moral competence, e.g. : opportunity to contribute (Beruta-Clement, 1984); active participation in a caring and learning environment (Bernard, 1990) • Spiritual competence, e.g. : faith, (Werner, 1996); sense of meaning (Erikson, 1963); morality (Kagan, 1996)

Research on children's social and academic functioning has identified several aspects of familial and social environment which act as risk factors and thus are associated with increased frequency of academic and socio-emotional difficulties. These factors include household composition, socio-economic status or material hardship, limited English language proficiency, stressful life events, parental well-being and functioning, and quality of community (Barbarin & Richter, 2001).

Sameroff et al (1987) studied several risk factors including high maternal anxiety, maternal rigidity in their beliefs about children and their development, low maternal education, stressful life events and large family size. Although each of these factors was related to children's pre-school competence in its own right, their work suggests that cumulative effects resulting from the combination of these risk factors is of critical importance. The sum of the risks may be more informative than the nature of a specific or individual risk. The more risk factors the greater the likelihood of impaired functioning.

Table 2: Family-level Factors

	Risk Factors	Protective Factors
FAMILY-LEVEL RISK & PROTECTIVE FACTORS	<ul style="list-style-type: none"> • Unstable or unsafe home (Martinez & Richters, 1993) • Lack of dependable, supportive family (Gorman-Smith & Tolan, 1998) • Lack of emotional connectedness to family (Gorman-Smith & Tolan, 1998) • Parental neglect (Cicchetti, Toth, & Rogosch, 2000) 	<ul style="list-style-type: none"> • Parental monitoring (Jarrett, 1995) • Presence of a calm and effective caregiver (Pynoos, 1993) • Organization and support within the family (Gorman-Smith & Tolan, 1998) • Family cohesion (Gorman-Smith & Tolan, 1998) • Supportive family environment (Barbarin & Richter, 2001) • Family provides transcendental meaning to suffering (Barbarin & Richter, 2001) • Effective maternal coping skills (Barbarin & Richter, 2001) • Parental optimism (Slaughter & Epps, 1987) • Family functioning characterized by warmth, cohesion* • Enlightened discipline* • Favorable ethnic identification* • Supportive extra-familial relationships* <p>* (Barbarin, 1999; Barbarin, Whitten, Bond, & Conner-Warren, 1999; Christian & Barbarin, 2001; Barbarin, 2002)</p>

Furstenberg et al (1999) systematically identified risk factors at multiple levels: family process, family structure, parent characteristics, peers, community functioning and community demographics. Family process risk factors include: support for autonomy, discipline effectiveness, parental investment and family emotional climate. Family structure risk factors include marital status, receipt of welfare, and household crowding. Parent characteristics identified were education, personal efficacy, resourcefulness, and mental health. Risky peer factors were pro-social and antisocial peers. Community functioning risks include: institutional involvement, informal networks, social resources, economic adjustment. Community demographic risk factors include average Neighborhood SES (e.g. % poverty), neighborhood problems and school climate.

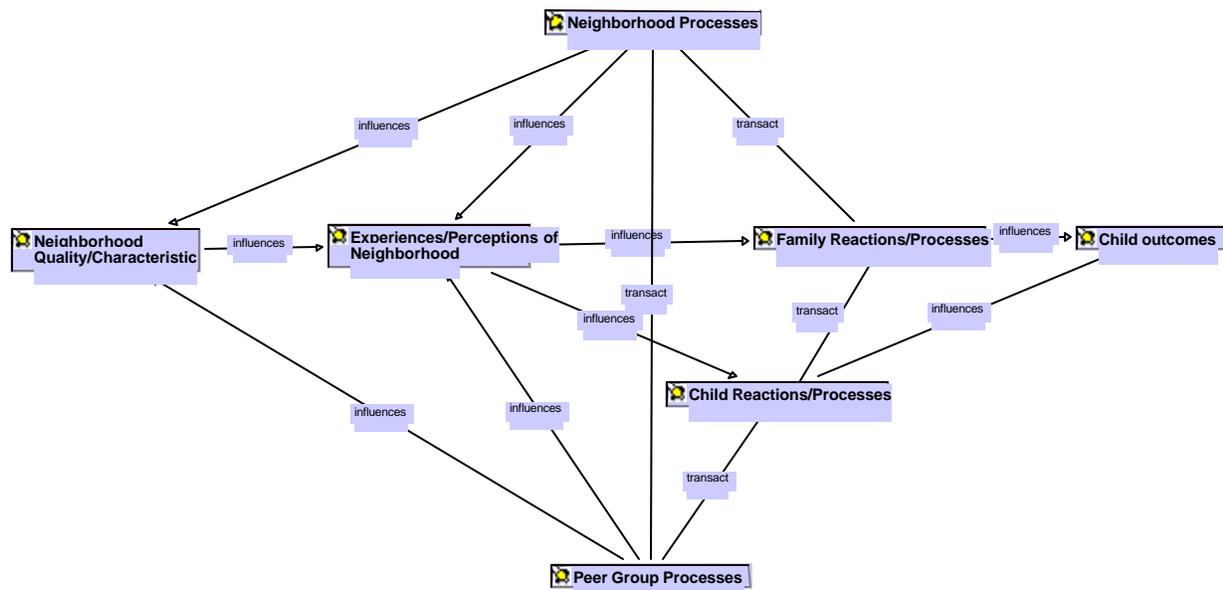
Table 3: Community-level Factors

	Risk Factors	Protective Factors
NEIGHBORHOOD/ COMMUNITY RISK AND PROTECTIVE FACTORS	<ul style="list-style-type: none"> • Hostile community environment (Barbarin & Richter, 2001) • Lack of communication & collaboration between organizations targeting children (Jarrett, 1995) • Underdeveloped neighborhood institutions (Connell & Aber, 1995) 	<ul style="list-style-type: none"> • Supportive adults (Jarrett, 1995; Schorr, 1988) • Supportive community structures (Reid, Landesman, Treder, & Jaccard, 1989; Barbarin & Richter, 2001) • Interactions among institutions and organizations targeting children (Jarrett, 1995) • Healthy neighborhood institutions (Connell & Aber, 1995) • Willingness to intervene for common good (Sampson et al, 1997) • Social support in the family, neighborhood, schools, & churches (Keltner, 1990; McLoyd, 1990; Ogbu, 1985; Spencer, 1978)

4. UNDERSTANDING THE DYNAMIC PROCESS OF RESILIENCE

How risk and protective factors interact with one another to actuate protective processes is of key importance to researchers; therefore, transaction models have been developed to better explain how risk operates in the “real world”. Roosa and his colleagues (2002) have developed a heuristic transaction model to illustrate how risk and protective factors at the neighborhood and family levels influence child outcomes through transaction-focused relationships among neighborhood, family, and child processes. Transaction models such as this one are useful for understanding the developmental ecology of a child exposed to violence. For example, community violence may be experienced directly (proximally), or the child may experience violence through the perceptions and reactions of his or her caregiver (distally). As demonstrated in the Birth to Ten Project (Barbarin & Richter, 2001), children exposed to proximal forms of violence, such as family violence, may experience symptoms such as behavioral and speech problems, feeding problems, somatic complaints, and academic difficulties between ages four and six, while children exposed to community violence were more likely to display symptoms of PTSD. Proximity to the perpetrator and/or victim plays an important role in determining what outcomes to anticipate as a result of violence exposure (Nader et al, 1990). Therefore it is important to be able to pinpoint the sources of risk in the child’s developmental ecology and how it is mediated and moderated by factors in the child’s social environment. Figure one presents a transactional model of neighborhood and family influences on child development.

Figure 1: HEURISTIC MODEL OF NEIGHBORHOOD INFLUENCES ON CHILD DEVELOPMENT (Roosa et al, 2002)



5. HOW EVALUATORS CAN USE THE RESILIENCE FRAMEWORK

The resilience framework provides multiple possibilities to support the Safe Start program. Specifically, it can guide evaluators in:

- Refining the goals of the Safe Start program;
- Shaping and modifying the intervention;
- Understanding the role of ecological variables and their interplay on children's outcomes;
- Choosing measures that focus on assets as well as deficits; and
- Analyzing findings.

5.1 The Resilience Framework and Safe Start Goals

The resilience framework suggests that we discuss Safe Start as an effort to build resilience among children exposed to violence. The goals of the initiative are already consistent with this purpose, explicitly identifying the overarching Safe Start goal as one of building resilience. However, the resilience framework would provide evaluators and program directors with a theoretical basis for the project and empirical support for their work. In other words, placing Safe Start in a resilience framework does not alter the goals already set by program sites, but provides a broader context within which to understand site efforts.

In addition, the resilience framework suggests a shift in the paradigm guiding Safe Start evaluation, positing that program success may be better defined by the enhancement of protective factors than by the absence of pathology. This focus reflects the spirit of the Safe Start program, as well as its overarching goal of promoting well-being. Thus, instead of focusing on the presence or absence of PTSD symptoms as a critical indicator of program success, we propose evaluation of Safe Start be based on identification of indicators of well-being (e.g., mental health, strong parent-child relationships, behavioral control).

5.2 The Resilience Framework and Intervention Development

The following ten principles have been presented by Luthar (2000) as a guide for developing interventions based on the resilience framework. These principles also provide useful guidelines for evaluation research:

- Interventions must have a strong theoretical base.
- Interventions for a specific group must be based on research and theory on that group.
- An intervention should include the promotion of competence and positive adaptation, not just the reduction of negative outcomes/maladjustment.
- An intervention should build on community assets and capitalize on resources within the population.

- An intervention should target vulnerability (risk) and protective processes operative on various levels (individual/child, family, community) (Bronfenbrenner, 1977; Cicchetti & Lynch, 1993; Sameroff & Chandler, 1975).
- Interventions must be developmentally specific (focusing on specific cognitive, social, and emotional capacities of children) and developmentally appropriate (focused on specific domains) (Noam, 1992; Shirk, 1988; Toth & Cicchetti, 1999).
- The community must participate in deciding intervention outcomes and strategies to ensure contextual relevance (Brody et al, 1994; Cowen et al, 1996; Fantuzzo, Coolahan, & Weiss, 1997; Hawkins & Catalano, 1992; Jensen, Hoagwood, & Trickett, 1999; Lerner, Fisher, & Weinberg, 2000; Seitz & Apfel, 1999).
- Services provided through interventions ultimately should become self-sustaining (Comer, 1988; Hynes & Comer, 1996).
- Data from intervention groups should be compared with data from similar control groups.
- Interventions should be carefully documented and evaluated.

Another consideration for interventionists is the importance of focusing not just on the individual child but on the family and community as well. The role of family and community in enhancing the ability of children to cope with violence is substantial. Strengthening families and building communities are key components in successful prevention and intervention strategies. First, when family support is enhanced, families themselves become therapeutic agents for the child. Second, when community connection among people is increased and the networks through which social ties are established are improved, the likelihood that individuals will fall through the cracks is decreased and the likelihood that they will access the services they need is increased.

5.3 The Resilience Framework and an Ecological Focus

The resilience approach recommends that evaluators attend to the system in which a child is located, considering how the dynamic relations among individual, family, and community variables affect the child's ability to cope with trauma. All evaluators can benefit from reviewing the risk and protective factors identified in the resilience literature, in that such a review might help the evaluator:

- Gather additional theoretical and empirical support for targeting the variables in their models; and
- Identify additional variables of interest not yet taken into account by their models.

5.4 The Resilience Framework and Measure Selection

A primary issue of concern to evaluators is that of measurement. There are three main variables that should be of interest to Safe Start evaluators: exposure to adversity (violence), presence of protective factors, and resultant competence.

Luthar & Cushing (1999) summarize three approaches to measuring risk that are typically adopted in resilience research.

- **Multiple-item measures of risk:** this approach relies on measures usually administered in questionnaire or interview format and used to document multiple adverse influences in a child's life. For example, *The Things I Have Seen and Heard*, by Richters and Martinez (1990), measures a variety of childhood exposures to violence.
- **Specific life stresses:** this method concentrates on specific life occurrences that may constitute sources of risk for children and their families, such as war (Casella & Motta, 1990) and child abuse or neglect (Cicchetti, Rogosch, Lynch, & Holt, 1993).
- **Constellations of multiple risks:** children exposed to violence usually are also exposed to other risks and stressors, such as poverty, family disruption, inadequate housing, and lack of access to social resources (Gorman-Smith & Tolan, 2003). This technique involves the simultaneous consideration of multiple socio-demographic and familial indices.

Similarly, the resilience literature reveals three methods of measuring competence (Luthar & Cushing, 1999):

- **Multiple-item measures of competence/maladjustment:** this practice uses ratings of behavioral indicators of emotional health and/or a child's ability to complete salient developmental tasks. Resilient adaptation can be assessed from ratings given by parents, teachers, and peers via interview or questionnaire. Assessments of resilience also may be derived from performance on standardized achievement tests or academic performance (Wyman et al., 1991, 1993; Richters & Martinez, 1993).
- **Absence of maladjustment:** this approach uses semi-structured or structured interviews, for example, the Kiddie-Schedule for Affective Disorders and Schizophrenia-Lifetime Version/K-SADS-E (Endicott & Spitzer, 1978) or the Diagnostic Interview for Children & Adolescents/DICA (Reich & Welner, 1988), to determine the absence or presence of psychiatric disorders in children at high risk for psychopathology.
- **Multiple indices of adjustment:** this method adopts a summative approach that involves the integration of scores across different domains of competence derived from multiple methods and multiple informants. Within this approach are two categories: theoretically based and empirically based approaches. The summative approach helps to undergird the validity of measurement of the competence construct.

5.5 The Resilience Framework and Data Analysis

The resilience framework also can aid with data analysis. The resilience literature has identified a number of strategies that can be useful to evaluators when examining risk and protective factors:

- When using interviews to assess psychopathology, consider the following steps to limit problems of reliability of measurement due to inter-rater differences (see "Best Estimate Diagnosis," Leckman et al, 1982):

- Provide comprehensive training for interviewers (Weissman et al, 1986);
 - Institute initial and periodic tests for inter-rater reliability (Luthar & Cushing, 1999); and
 - To increase stringency in measurement, set the absence of maladjustment, rather than the presence of maladjustment, as a criterion for measurement (Luthar & Cushing, 1999).
- When using multiple indices of adjustment:
 - Consider using a summative approach involving the integration of scores across different domains of competence derived from multiple methods and multiple informants to help establish the validity of measurement of the competence construct (Luthar & Cushing, 1999); and
 - Be wary about which constructs are being used to describe a specific population, given that composite scores can be unreliable when one or more of the constructs selected is not appropriate to the sample (Luthar & Cushing, 1999).
- When considering multiple socio-demographic and familial indices of risk (e.g., low parental income, emotional unavailability of parents), assess each variable within the constellation of risks as representing a source of risk for the sample under consideration.
- When examining statistical associations among variables
 - Attend to the magnitude of association between risk and outcome variables (Luthar & Cushing, 1999);
 - Consider curvilinear associations or a truncated range of variables, particularly in cases of low correlation between risk and outcome (Luthar & Cushing, 1999); and
 - Distinguish between distal and proximal risk factors, given that child outcomes may be influenced by the level of exposure to risk (i.e., proximal vs. distal; Baldwin, Baldwin, & Cole, 1990; Richters & Weintraub, 1990).
- When encountering interpretive ambiguities in measuring competence, Luthar and Cushing (1999) make the following suggestions:
 - Establish definitions of resilience founded on theory-based hierarchies of competence prior to research;
 - Link competencies measured to specific domains of risk;
 - Formulate descriptive characterizations of competence to help clarify the connotations of high and low competence;
 - Do not make pointed statements about resilience when the domains under study were circumscribed from the beginning; and
 - Select an anchor point on the scale of potential life stressors where it is anticipated that the distribution scores may fall.

Statistical Inference of Resilience

Resilience researchers also have provided guidance on documenting relevant associations between risk and competence variables using two basic approaches: variable-based and individual-based. A **variable-based approach** draws statistical links between risk, protective/risk factors, and competence. Resilience is not measured directly but statistically inferred. When used alone, the variable-based approach is prone to fallacies of measurement. This approach is more effective when used in combination with an individual-based approach.

Given the small sample sizes that many Safe Start sites predict, an individual-based approach may be more appropriate than the variable-based for data analysis.

Using the **individual-based approach**, the investigator isolates an individual who experiences high risk yet demonstrates high competence. Methodological approaches may vary and may be either mixed-method (quantitative and qualitative) or qualitative-only. Qualitative methods are extremely useful in resolving the ambiguities inherent in statistical analysis (Wyman et al, 1993; Werner & Smith, 1992; Radke-Yarrow & Brown, 1993). In studies where a variable-base approach is necessary, a qualitative analysis of exemplar cases of resilience derived from the sample may fortify the research design. Of key importance in resilience research is how exactly risk is associated with risk/protective factors and competence; qualitative methods have proven valuable in documenting the interactive processes linking adversity and risk/protective factors (Barbarin & Richter, 2001). Qualitative methods can complement statistical analyses by adding clarity to quantitative findings that indicate resilience. Interview data, for example, can be instrumental in making determinations about a child's proximity to and level of involvement with risk factors (Barbarin & Richter, 2001). The investment of resources required for a skillful integration of quantitative and qualitative methods is rewarded substantially by the strengthening of the research design.

6. CHALLENGES TO USING THE RESILIENCE FRAMEWORK

The study of resilience in young children exposed to violence represents a unique but surmountable challenge to Safe Start evaluators. The central challenge associated with using the resilience framework to guide evaluation is that of defining the variables relevant to resilience (i.e., the determination of which variables constitute risk factors, protective factors, and adaptation indicators). For example, a single measure of PTSD symptomology may represent a protective factor (e.g., a low score, suggesting few symptoms), a risk factor (e.g., a high score, suggesting psychopathology), or a child outcome (e.g., a low score, suggesting mental illness or well-being, depending on the context). Happily, each Safe Start site has developed a logic model representing site-specific understanding of the relations among resilience-relevant variables and evaluators may use these logic models to guide the operationalization of terms. In addition, evaluators may refer to the resilience literature for suggestions on categorizing variables. Finally, as suggested above, setting the absence of maladjustment as the criterion for measurement lends a stringency to measurements (Luthar & Cushing, 1999).

Another challenge facing Safe Start evaluators is that traditional clinical measures generally are not asset-focused, making it difficult to choose measures of protective factors. Nevertheless, some sites have tried to identify positive measures. If sites are not using positively tailored instruments, evaluators can still frame the analyses in positive terms. For example, if a measure emphasizes pathology, evaluators might present that measure in a health-focused format.

7. SUMMARY

A few messages to the Safe Start evaluators deserve emphasis.

- **Adverse impact of the social environment:** The role of the social environment can not be overlooked. A child's social environment may include family, community, and peers, and interactions with them have a powerful effect on children's well being and functioning. Adverse social environments contribute to poor outcomes for children.
- **Cumulative effects of risk:** While violence is the source of adversity of primary interest to the Safe Start initiative it is important to remember that adversity comes in **multiple** forms and originates from multiple sources to individuals. The effects of these distinct sources of adversity are **cumulative**.
- **Resources (Assets) are protective factors:** Some resources may act as protective factors. As such they mediate the effects of adverse environments on individuals. The extent to which adversity impairs development and functioning of young children depends on the resources they have available. These resources may be accessed through the child's interactions with family or community members.
- **Focus on positive outcomes:** Positive outcomes convey a lot about the ability of resources to mediate the effects of adverse environments.
- **Resources and risk can be found on multiple levels:** Assess the resources and risks that the child and her family are exposed to at multiple ecological levels (e.g., individual, family, and community).

Resilience describes a process of adaptation in the face of adversity rather than a fixed personality trait. The Safe Start evaluation may benefit from the documentation of the effects of the intervention against violence exposure, taking into consideration all of the assets and risks present in family and community contexts. Protective factors contributing to resilience also must be investigated in these contexts, keeping in mind the complex interactive nature of risk and protective factors.

The search for indicators of resilience demands that we change the way we look at childhood violence exposure. A paradigmatic shift may be needed in the Safe Start evaluation, as program success may be better defined by the enhancement of protective factors than by the absence of PTSD symptoms. Adopting a resilience framework provides a theoretical and empirical context for the Safe Start initiative, in general, and for evaluators, specifically. The resilience approach allows the evaluator to discuss project goals, conceptualize variables, understand the systems involved, select measures, and conduct data analysis. This paradigmatic shift comes with its own set of challenges. The cost of facing these challenges will be offset in the long run by benefits of validity in the evaluation design. The use of resilience as well as risk and protective factors will enable evaluators to better understand and document the outcomes of clinical and other Safe Start interventions.

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