CHAPTER 3

First, Do No Harm

Culturally Centered Measurement for Early Intervention

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First, do no harm! This fundamental principle guiding federal regulations and organizational standards for research protections is often taken for granted by psychologists and others involved with the evaluation of early interventions. Members of the academy assume that intervention research is beneficial, if not directly to research participants, at least for society as a whole, which supposedly draws on our data to improve services for children and families. My experience in research with Latinos, however, has suggested that we need to reexamine this assumption. When conducting research involving ethnic minority populations, we need to keep the goal of "First, do no harm" in mind at every stage of the research process from the design selected for the project through the instrument development to the dissemination of the results.

The premise of early intervention is that we can make a difference in children's lives. In my case, that basic premise was established in the summer of 1965 when I participated as an aide in what I thought was just another one of my mother's preschool programs. Perhaps some of you recognize that summer of '65 was anything but "just another preschool program." Yes, I was one of those bright-eyed, idealistic individuals participating in the first summer of Head Start. And I just knew that the program would change the lives of those young children forever.

That involvement as a Head Start volunteer probably shaped my choice of psychology as a major and after my master's, led to my first job as a head teacher in a laboratory preschool in Canada. There I saw in practice what I learned in theory in graduate training: that basic theory and research provide hypotheses about how, when, and where to intervene. I started a toddler program in the preschool and, remembering the importance of maternal involvement in my Head Start experience, started a mothers' program as well.

But being in Canada taught me another lesson. In exploring early intervention programs for its children living in poverty, Canada was determined to learn from America's successes and failures (Ryan, 1972). That is where I first heard about program evaluations and the infamous Westinghouse Report (Westinghouse Learning Corporation,

1969). This report was an evaluation of the effectiveness of Head Start and suggested that summer programs like the one in which I participated really did not make that much difference in children's lives.

I went to a conference to learn more about Canada's early intervention programs and was shocked to learn that an intervention had actually been terminated because the preliminary data analysis suggested that the children in the intervention scored lower on measures of competence than the controls. Today, the public has more experience with intervention trials being stopped, but in those days, no one ever stopped a scientific study!

This intervention into an intervention occurred at about the same time as other results (Susan Gray's studies at Peabody and the Perry Preschool Project of David Weikart) were showing that my earlier optimistic assumption was right: Early intervention can make a difference (Bronfenbrenner, 1975). But we need to temper that optimism with the realization that the difference might be negative. Thus, when I left Canada to complete my doctorate, I was convinced that to do no harm required rigorous program evaluation as a component within early interventions.

THE FALLACY OF RELYING ON CLASSIC PSYCHOLOGICAL EXPERIMENTAL DESIGN

Most program evaluations rely on traditional research design paradigms, with the experimental method being the gold standard with which all other designs are compared (McCall & Green, 2004). Experimental studies have three characteristics: theory-driven hypotheses, random assignment of participants to intervention or control groups, and consistency or uniformity of the intervention. Indeed, many of the criticisms of the Westinghouse Report focused on the design

of the study, particularly emphasizing that the study did not utilize random assignment to form the control and experimental groups and that the Head Start programs themselves were not uniform across or within programs.

The classic experiment is a powerful tool and the only way to establish causality. When an attempt is made to apply it to many of the basic questions of human development, however, its limitations become apparent. For example, if we are interested in sex differences, we can't randomly assign sex to research participants. For researchers like me interested in ethnic minority groups, culture and ethnicity are particularly problematic for random assignment. A research design in which culture or ethnicity is the independent variable with which the dependent variables of behavior are expected to covary will only be a "pseudo experiment" unless the project involves the manipulation of culture or ethnicity, perhaps through a simulation.

We rarely use simulations to enable random assignment of ethnicity to children and families, but culture or ethnicity is often used as an independent variable to examine the population generalizability of tests or previous research results (Busch-Rossnagel, 1992). Research conducted to examine population generalizability can yield two results: significant differences between the groups or no significant group differences. The finding of no significant group differences is essentially meaningless because it is a test of the null hypothesis.

The finding of group differences is potentially problematic. Ethnicity is so confounded with other variables such as language use, childrearing attitudes, social economic status, and so on, that we really do not know how to interpret a significant difference between ethnic groups. Consider for example the results of a study by Luis Laosa (1980) who observed differences between Chicana and Anglo mothers' teaching

behaviors. When he controlled for differences in educational level of the two groups of mothers, the ethnic group difference disappeared. Thus, when we equate naturally occurring cultural or ethnic groups with the groups that are formed by random assignment in an experiment and draw conclusions about group differences, we run the risk of doing harm by reporting ethnic differences that are likely the result of a confounded variable. These differences often turn into stereotypes about ethnic minorities rather than correct ascriptions of cultural influences on parental approaches to their children's education.

CHARACTERISTICS OF RESEARCH ON LATINOS

In the early 90s, I thought I was poised to begin an intervention study with Latino families. Through the Hispanic Research Center at Fordham, I had been exposed to the demographic profile of Puerto Rican and Dominican families in the Bronx and was concerned about the educational attainment of children in these families. Remembering my experience in Head Start, I sought to use my training in life span development to modify the parenting practices of Latino families to influence their children's development. Trying to expand my knowledge of early childhood socioemotional development to include educationally at-risk Latino children, I started reading more deeply in the literature on Latino families with the goal of developing theory-driven hypotheses for the intervention study (the second characteristic of experimental research, McCall & Green, 2004). Rather than creating experimental hypotheses, I quickly learned that the field of development psychology knew little about Latinos, in general, and even less about their parenting practices and their children's academic success.

Research Inclusion and Representation

I did a context analysis of developmental literature to assess the representation of Latinos (Busch-Rossnagel, 1992). At that time, *Developmental Psychology* and *Child Development* were the two leading journals in the field. In the years 1988, 1989, and 1990, most of the authors did not report the ethnicity of the participants. When the authors did report ethnicity, only 6% of the articles in *Developmental Psychology* and 8% of the articles in *Child Development* included **any** Latinos. Examining the issue of *Developmental Psychology* with the greater percentage of articles including any Latinos, the percentage of Latinos in all the samples combined was .004% of all research participants in the journal issue, at a time when Latinos represented almost 10% of the population and were the fastest growing ethnic minority!

Inclusion in research is not necessarily representation. How valid were the studies including Latinos? In April 1990, *Child Development* published a special issue devoted to ethnic minority children that included seven empirical studies with Latinos. These seven studies, however, did not report the percentage of participants tested in Spanish versus English, although Latinos are often characterized as a linguistic minority (Marín & Marín, 1991). Six of the seven studies used lower- or lower middle-class subjects, but less than half recognized the possible confounded relationship between ethnicity and socioeconomic status. I concluded that the literature was not helpful in providing the necessary foundation theory–driven hypotheses. So, instead of an intervention, I proposed to embark on a longitudinal study of mastery motivation in Puerto Rican and Dominican families.

A CULTURALLY CENTERED APPROACH TO MASTERY MOTIVATION

Mastery motivation is defined as the impetus to achieve and improve one's skills in the absence of any physical reward. The mastery of the environment seems to be the reward in itself. Another way of thinking about mastery is "stick-to-itiveness" (Busch-Rossnagel, 1997). This motivation to act on the environment is a primitive biological endowment, but research has also suggested that aspects of mastery motivation can be acquired. The contingency between the child's action and the outcome produces pleasure in the child, and awareness of the contingency increases motivation. The mastery acquisition process is also social. The encouragement of others provides information about successes and becomes internalized as development occurs. The child who does not receive praise for independent acts will be less likely to develop internal self-praise and thus will continue to be dependent on external sources of motivation (Busch-Rossnagel, Knauf-Jensen, & DesRosiers, 1995).

A Rationale for Studying Mastery Motivation in Latinos

Why do I think mastery motivation is a concept worth investigating? I believe that mastery motivation will help us understand children's success in school. Individuals succeed in school and other endeavors, not just because of cognitive or social abilities but also because they have high levels of achievement motivation, and mastery motivation has been linked with achievement motivation (Dweck & Elliott, 1983). Within a more proscribed age period, research in toddlerhood has shown that mastery motivation will predict later cognitive abilities (Yarrow, Klein, Lomonaco, & Morgan, 1975). Achievement motivation and cognitive abilities are good

predictors of school success. Thus, if we can influence levels of mastery motivation, we should be able to foster children's success in school.

This issue of school success is particularly intriguing for ethnic groups in this country. In particular, Latinos have a lower level of school achievement than other ethnic minority groups (U.S. Bureau of the Census, 2001), and this level of achievement is at odds with the value placed on education in the traditional Latino cultures (Fracasso & Busch-Rossnagel, 1994). Indeed, *No te lo puede quitar nadie* ("No one can take that from you") is a saying frequently repeated to children when urging them to pay attention to their studies.

Although my goal is to be able to use understanding of mastery motivation to improve the school success of Latinos, that is not why I originally chose Latinos as a population for the study of mastery motivation. Indeed, work on differing levels of school achievement, or even differing levels of mastery motivation across ethnic groups, would be exactly the type of pseudo experiment that is fatally flawed and potentially harmful because of its lack of internal validity due to the potential confounds between ethnicity and other variables such as education (Busch-Rossnagel, 1992). Instead, what I hope to articulate in this chapter is an example of how I believe research with differing ethnic or cultural groups should be conducted.

I involved samples of Puerto Ricans, Dominicans, and Mexicans in the United States and in their native countries to study mastery motivation, not only to provide a foundation for early intervention with these populations but because the Latino cultures represent a *contrast* to the predominant European American culture of our society. Specifically, the predominant Anglo-American culture has been characterized as an individualistic culture, one that emphasizes

independence and the separation from relationships such as family, community, and clan. In contrast, Latino cultures are seen as collectivistic or interdependent with an emphasis on familial and communal relatedness (Triandis, Bontempo, Villareal, Asai, & Lucca, 1988). In terms of mastery motivation, the contrast between the child's independent efforts to learn, which have characterized most of mastery motivation research, and the possibility of cooperative attempts may open up new avenues for educational interventions heretofore ignored in the majority culture

Domains of Mastery Motivation

The question of cultural differences in individual versus collective or independent versus interdependent effort influenced my conceptualization of mastery motivation to include multiple domains for expression of mastery motivation. The first domain is *object-oriented persistence.* Most of the work done on mastery motivation has focused on children working by themselves to explore and use a toy. Examples of mastery motivation in this domain would be learning to put pieces in puzzles or finding out how a toy CD player worked. The method used to measure motivation is to quantify the child's persistence in working on a moderately difficult task and their pleasure while doing so, particularly noting smiles or claps when a solution was achieved. This is the individualized approach to mastery motivation (MacTurk, Morgan, & Jennings, 1995).

The notions of mastery motivation can be expanded to include not only actions with toys or objects but also actions directed toward people, or motivation within the second domain, *social mastery motivation.* What we term social mastery motivation can be indexed by the child's attempts to initiate, maintain, and influence interactions with others (Busch-Rossnagel, 1997). I am intrigued by the idea that social mastery motivation may be more compatible with collective cultures than object-oriented persistence.

In my thinking on mastery motivation, I added a third domain, that of *self mastery motivation.* This conceptualization is the result of looking at the literature in mastery motivation within the context of the six dimensions of self-concept (DesRosiers & Busch-Rossnagel, 1998). The motivational component of self-concept, termed self-assertion, is behaviorally expressed through autonomy, or the child's independent effort. Such autonomy is a key component of the definition of object-oriented mastery motivation. The emotional dimension of self-concept, first appearing between 27 and 36 months, is termed self-evaluation, of which pride and shame are operational expressions. The positive affective expression of object-oriented persistence is sometimes called pride, and the operational definition of *pride* and *shame* from either perspective requires comparison of an outcome with an achievement standard. Pride results from success in meeting a standard, whereas shame occurs when the standard is not met. The social dimension of self-concept is self-regulation, or compliance. The development of self-regulation, as expressed by compliance with requests and social norms, may confound the measurement of social mastery motivation.

The Developmental Nature of Mastery Motivation

In addition to exploring multiple domains, my approach stresses the developmental nature of mastery motivation (Busch-Rossnagel, 1997). These developmental changes occur both across and within the age periods. I am interested in the toddler period, which I operationalize as being from 15 to 42 months. During this period, there are probably three different phases and two

transitions of mastery motivation. The first transition occurs between 17 and 22 months and involves a change from exploration and preference for novelty (the first phase) to a preference for challenging tasks and goal-directed activity, coupled with pleasure for success or frustration and sadness at failure (the second phase). The second transition, occurring between 32 and 36 months, involves the mastery of sequential, multipart tasks, the acquisition of standards, and pride when those standards are achieved and shame when they are not (the third phase). The focus on the age period from 15 to 42 months is designed to allow the examination of both of these transitions. I am particularly interested in transitions because they probably hold the key to understanding influences on mastery motivation and ultimately to any interventions that might be suggested by this work.

The Socializing Environment

This emphasis on transitions highlights a third characteristic of my approach to mastery motivation, namely the importance of the socializing environment. The socializing environment includes mothers and other caregivers who affect the context of the child's attempts at mastery (Busch-Rossnagel et al., 1995). I have identified three dimensions of the socializing environment related to mastery motivation. One dimension contains the *inanimate objects* that might be seen in the provision of appropriately stimulating toys. The second dimension, the affective nature of the interaction in the caregiver-child dyad, is termed *emotional communication* and seen in smiles and praise. The third dimension, the didactic or *instrumental interchanges* in the dyad, has been operationalized by contingent responses, specific feedback, and demonstrations. Each of these variables has been shown to affect the development of mastery motivation during

the toddler years in European American samples.

Thus, there are three characteristics of my approach to mastery motivation: multiple domains, developmental changes, and the importance of the socializing environment. Much of this approach still remains at the abstract level because of the limitations in operational definitions of key constructs such as social mastery motivation and the socializing environment, and this lack of measures is particularly problematic for Latino populations.

DEVELOPMENT OF MEASURES OF MASTERY MOTIVATION FOR LATINO POPULATIONS

A decade ago, when I thought I was ready to undertake a study of mastery motivation in Latino children and families, I was lucky that the National Institute of Child Health and Human Development (NICHD) issued a call for studies on normative development in ethnic minority children. As I prepared the grant, however, I realized that new culturally centered instruments were needed before I could embark on a longitudinal study. Fortunately, I was able to convince the study section reviewers of this as well (Busch-Rossnagel, 1998).

The aims of the grant were chosen to provide a basis for the development of culturally centered measures. We started with the simple identification of child behaviors desired by Puerto Rican and Dominican parents (aim 1) and of the childrearing used by these Latino parents to achieve those child behaviors (aim 2). This information formed the basis for our instrument development efforts to fit the concepts of our model. As seen in Figure 3.1, the developmental contextual model of our research proposes that culture influences the socializing environment, which in turn influences the
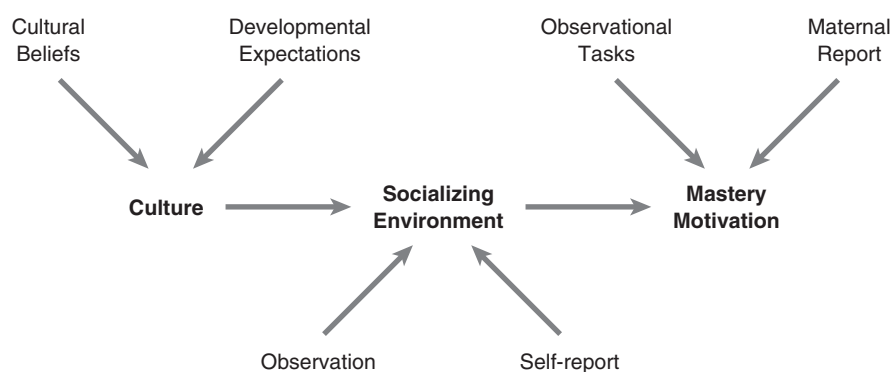
Figure 3.1   Developmental Contextual Model of Research

development of mastery motivation in children. Each construct in the model (culture, socializing environment, and mastery motivation) was to be assessed by two measures (one observational, one self-report when possible), so the other aims of the grant were to develop culturally centered measures of culture and the socializing environment (aim 3), and mastery motivation (aim 4). This next section of this chapter will discuss the development of the measure of the Socializing Environment Questionnaire (SEQ) as an example of these instrument development efforts.

Focus Groups as a Substitute for Ethnography

At the time the grant started, I had just completed the review of the socializing environment for mastery motivation, which identified the three dimensions just discussed (inanimate objects, emotional communication, and instrumental interactions). Most researchers in such a situation would have focused their instrument development efforts on those three dimensions. Please remember, however, that I critiqued the developmental literature because the samples do not often include minorities. For mastery motivation,

I had to question whether conclusions from middle-class European American families with nonworking mothers who have the time to participate in longitudinal research studies will generalize to lower-class families from collectivistic cultures. Specifically, the review that identified the three dimensions was not based on research with Latinos, so I didn't know whether the three dimensions adequately characterized the Latino socializing environment. Thus, I needed to start my work on instrument development at a more basic, descriptive level.

One approach to description of the socializing environment would be ethnography or participant observation in which a researcher immerses herself in the daily life of the setting she is trying to understand. This approach yields detailed observations of parenting practices but is very time-consuming. I substituted focus groups for these lengthy ethnographic techniques. In these endeavors, I was fortunate that Fordham has a diverse student body, with Latinos being the predominant ethnic minority group. The team for the research grant included several graduate and undergraduate students who were bilingual and bicultural, being Puerto Rican, Dominican, Cuban, Argentine, and Mexican in family heritage.

First steps. As a first step, we talked to Latino mental health providers to get vignettes of children's behaviors that were related to socioemotional development. Then, we asked focus groups of Latino mothers and grandmothers to respond to these vignettes. Do you see these behaviors in your children? What other similar behaviors do you see? The vignettes were refined after more discussion with Latino mental health providers, and after some preliminary focus group discussions, we chose six domains of development associated with mastery motivation: object-oriented persistence, social mastery with adults, social mastery with peers, autonomy, pride, and compliance. This is an example of a vignette describing low social mastery with peers: *Ana is a 3½-year-old girl who plays by herself most of the time. Her parents try to get her to play with other children, but often she simply goes back to playing by herself with her favorite toy.*

Coding and creating culturally centered measures. The next focus groups used vignettes in these six areas and asked parents how they would respond to these behaviors. We also asked whether these were desirable behaviors. After the tapes of the focus group discussions were transcribed (and translated, if necessary), content analysis was performed on the statements. This coding revealed statements about behaviors the mothers and grandmothers reported using, what they had seen other parents do, child behaviors that they desired, and childrearing values.

The statements about desired child behaviors and values were used to create measures of the culture; the statements parents made about their own behaviors and about the behaviors of other parents were used to develop the SEQ. The coding of the content analysis showed that six specific behaviors accounted for approximately 50% of the statements parents made about their own behaviors. These were directives (14%),

compliance (10%), tolerance (9%), help (8%), explanations (8%), and bargaining (5%). The statements made by the focus group participants about the behaviors of other parents again included a high percentage of directives (17%), but the rest of the behaviors were different. These statements were coded as referring to physical punishment (11%), verbal punishment (9%), negative physical interventions (8%), and refusals (9%). Obviously, we had a little impression management going on in the discussions, but the inclusion of behaviors likely to be seen as negative in the discussion of *other* parent behaviors suggested that the focus group discussions served the purpose of eliciting an adequate sample of possible parenting behaviors for inclusion in an instrument to assess the socializing environment.

In creating the SEQ, we used these most frequently cited behaviors from both the parents themselves and for other parents as the first set of parenting behaviors. The focus group discussions thus led us to create a test blueprint (see Figure 3.2) that assessed nine parent behaviors within the six domains of socioemotional development. For the six domains, we refined 18 vignettes from the focus groups and then asked graduate students to assess the content validity of the domains, using the index of item-objective congruence. The two vignettes with the highest indexes were selected for each domain; these indexes ranged from .75 to .98 for the 12 vignettes.

The next step was to create response items to tap each of the parenting behaviors for each vignette, for example a bargaining response to an autonomy vignette. When possible, we used specific wording from the focus groups to create the initial set of items. Using the mothers' own words demonstrated our commitment to the mothers as partners in the research process—and when we took the instruments back to the centers for the mothers to debrief the mothers, they often recognized their own wording.

Test Blueprint for SEQ

	Object	Social-Adults	Social-Peers	Autonomy	Pride & Shame	Compliance
Directive						
Explain						
Bargain						
Threat						
– Physical						
Punishment						
+ Physical						
Patience						
Compliance						

Figure 3.2   Test Blueprint for the Socializing Environment Questionnaire

Creating Instruments in Two Languages

Because we were working with populations in which English was often a second language and we wanted to be able to collect data in the country of origin, we needed to have measures available in both English and Spanish. The easiest way to do this is with a simple translation, done by an individual with fluency in both languages.

Translation is not an exact process, so the process often includes having a number of bilingual individuals undertake the translation to achieve a consensus. Unfortunately, the result is likely to be phrases in the second language that are not true to the intent of the English measure because of the lack of precision in the original English version. Another problem is that the most precise words are often less commonly used in everyday interactions, so their use in a psychological measure increases the reading level, and the difficulty, of the measure.

A second way of approaching translation is through the process of *back translation,* which is also known as double translation. For example, to create a Spanish version of an English measure, a bilingual person first translates the English version into Spanish, and this Spanish translation is then translated back into English by a second bilingual person. This completes the back, or double, translation. The back translation (which is in English) is compared with the original English text. If the two versions are different, the Spanish version is altered to more closely approximate the original English. The altered Spanish version is then subjected to another back translation to English.

Back translation through several iterations is usually seen as the best practice to develop linguistically equivalent versions of measures. Because only the Spanish version is modified, however, and the English version is not changed, back translation has limitations. When the original English measure is standardized and cannot be modified

without jeopardizing the psychometric information gathered on the standardized measure, then iterative back translation must suffice to protect the standardization.

When both versions of the instruments are being developed simultaneously, a better option is available. This is the process of *decentering* (Werner & Campbell, 1973). On the surface, the process of decentering is the same as the iterative process of back translation. The difference is that when comparing versions, either the Spanish or the English version may be modified to enhance the match between the two. When discrepancies exist between the two versions, researchers can discuss the intent of the item, rewrite the item for clarification, and then translate and back translate again.

In this way, each round of translation informs the development process for both versions of the questionnaire and often has the effect of clarifying the focus of the items. Decentering is likely to affect the development of a measure because it clarifies the linguistic boundaries of the constructs and thus is likely to lead to culturally centered measures. In the case of the SEQ, these items were subjected to the decentering process to create English and Spanish versions simultaneously. The decentering process continued through several iterations until the final result is equivalent versions in both Spanish and English.

After decentering, we gave both the Spanish and English versions to try-out subjects; some of these individuals were fluent in both Spanish and English and responded to both versions of the questionnaire. Examination of these preliminary data suggested that the Spanish-English equivalence was pretty good but that parents didn't differentiate between negative physical interventions and physical punishments or between parent compliance and tolerance. We collapsed these behaviors, so seven parental response categories remained.

Reliability and Validity of the SEQ

Using a different set of expert raters, we examined the content validity of these items (parenting behaviors in response to a vignette describing child behavior), again using the index of item-objective congruence. It is interesting to look at the responses with the lowest and highest indexes, which were both for a positive physical intervention. The lowest index was to a vignette describing autonomy, which was as follows: *Blanca is a 3-year-old who is always doing something and looks for every opportunity to be involved in everything that is going on. For instance, last night when the family was getting ready to have dinner, Blanca insisted on bringing the dishes to the table, saying, "I do it."* *Blanca seemed to enjoy this activity although her parents had to wait a while longer to sit down to eat.* The positive physical response was *Hand her just her own plate to bring to the table,* and this response was confused with other parenting behaviors, such as patience or bargaining.

The highest index involved the following social mastery with peers vignette: *Marcos is an only child who loves to watch his three cousins play and pulls his mother to come closer to the group of playing kids. However, Marcos will not join in the play even though his cousins are about the same age. His parents are not sure of what to do.* The response was *Start to play with his three cousins so that Marcos will follow.* The index was 1.0, so the raters clearly saw this as a positive physical intervention. What the variability in indexes within domains suggests is that some responses don't fit every domain. For example, we had trouble thinking of physical punishment responses to the social mastery vignettes.

Seventy-five of the 84 item-objective indexes were above .70, and the medians were above .75 (see Table 3.1). Based on this additional evidence for the content validity of

Table 3.1 Validity and Reliability of the SEQ

Parental Response	Item-Objective Congruence (Median)	Coefficient Alpha	2-Week Stability
+			
Directive	.89	.61	.67
Explain	.82	.70	.61
Bargain	.83	.76	.83
Threat	.78	.74	.76
Punishment	.88	.75	.72
Positive physical intervention	.88	.57	.61
Patience/ Compliance	.94	.65	.64

the SEQ, we proceeded to obtain preliminary reliability evidence with this version of the SEQ (Garcia & Busch-Rossnagel, 1996). Our participants for this reliability study were 90 mothers with toddlers between the ages of 15 and 48 months from New York City and Los Angeles. Most of the participants were Latinas (59), but we also included Anglos, African Americans, and Asian Americans. The median level of education was less than a high school diploma.

We collected two types of reliability, internal consistency and 2-week test-retest stability. As seen in Table 3.1, the coefficient alphas ranged from .57 to .76 for the seven parenting behaviors. Sixteen of the 19 mothers also completed the SEQ 2 weeks later. For this small sample, the correlations between time 1 and time 2 ranged from .61 to .83 across the seven parenting behaviors.

One notable aspect of these reliability data is that the alphas and the stability coefficients are fairly similar. Alphas are usually higher than stabilities, suggesting that we still have some work to do on internal consistency. Considering that the test blueprint examined the seven parent behaviors across the six domains of mastery motivation, we are still somewhat uncertain about the

appropriate scales for reducing the data. Our examination of the focus group responses showed us that parents said that their behavior would differ depending on the domain. For example, parents cited more use of directives and bargaining in the domain of object-oriented persistence, whereas physical interventions were used in the social mastery domain. Thus, we probably should not be collapsing parenting behaviors across all domains of child mastery motivation, as we are here.

Parenting Clusters

Instead, there are probably ways that the parent behaviors could be collapsed. To examine this possibility, we conducted a study of the similarity of the behaviors using multiple dimension scaling (Kline & Busch-Rossnagel, 1997). The participants in this study were either child development specialists ($N = 13$) or parents of preschool children ($N = 17$). The stimulus pairs of the seven parenting behaviors were developed using the Ross ordering method (Ross, 1934), which balances both time and space effects. The total number of stimulus pairs was 21, and four versions of the questionnaire were

developed to overcome the effects of fatigue. After reading definitions of the seven parenting behaviors, each participant was asked to indicate the degree of similarity of the two parenting items making up the stimulus pair.

The similarity data were analyzed using nonmetric, multidimensional scaling, and the results suggested three clusters. The first cluster, labeled *negative parental power,* consisted of threats and physical punishments, which might be considered instances of negative emotional communication, which was one dimension of the socializing environment identified in the review (Busch-Rossnagel et al., 1995). Bargains, explanations, and tolerance also formed a cluster and were interpreted as *child-centered behaviors*. Directives and positive physical interventions were grouped together and labeled *positive parental assertion.* These last two clusters were closer together than to negative parental power, and thus these two groups might be two ends of the continuum of instrumental interchanges.

These results highlighted the fact that the questionnaire did not examine the provision of inanimate objects as a dimension of the socializing environment. This omission resulted from the use of the mother's responses in the focus groups as the structure for the test blueprint. The mothers only rarely mentioned providing toys or other objects as a parenting behavior in the focus group discussion of parenting behavior. The contrast between these mothers' responses and the marketing of "educational" toys to enhance child development is striking to me, and I would like to explore it further.

CONCLUSION

By describing in depth the development of this one measure, I hope that I have illustrated what I consider the measurement foundations for intervention programs with ethnic minority groups. First, do no harm in evaluating interventions by utilizing culturally appropriate measures to evaluate the effects of your intervention. This often means developing your own culturally or community-centered measures. Valid instrumentation is necessary, but not sufficient for culturally centered intervention evaluations. Do not rely on pseudo experiments using ethnic minority status as an independent variable in program evaluations because of the confounding of ethnicity with other variables. To achieve valid cultural centering, collaborate with community stakeholders and potential participants at all phases of the intervention, especially during the instrument development. Perhaps what is unique about our instrument development efforts is that we go back to the centers where we did our focus groups to ask the mothers to assess our instruments, to tell us whether they think we have captured their behaviors. In effect we are asking for their evaluation of the face validity of our instruments, a type of validity perhaps not very important from the vantage point of psychological science but clearly an issue when it comes to how individuals respond to research situations.

When I finally get to the point of doing an intervention, I anticipate that I will also be asking the mothers for their reactions with the intention of refining the interventions to fit the mothers' interests and needs. This continued collaboration is the heart of my model of culturally centered research and intervention. In this way, we see the mothers not as subjects, or even participants, but as partners who can join with us in understanding and enhancing children's socioemotional development. Perhaps this is the true legacy for me of that Head Start summer so long ago.

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