

## ORIGINAL ARTICLE

## Mothers' Trait Verbal Aggressiveness as a Predictor of Maternal and Child Behavior During Playtime Interactions

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*This article explores associations between mothers' trait verbal aggressiveness (VA) and maternal and child behavior during playtime interactions. Forty mothers completed a 10-minute play period with one of their children (range = 3–8 years) and then responded to D. A. Infante and C. J. Wigley's (1986) trait VA scale. Mothers' trait VA was associated positively ( $r = .48$ ) with their rate of directing and inversely ( $r = -.44$ ) with their child's rated cooperation. Qualitative analyses of a subset ( $n = 8$ ) of interactions suggest that mothers high in trait VA used directives to control the choice, rate, and duration of activities, and used physical negative touch along with directives, more than low-VA mothers. Behaviors associated with trait VA occur even during brief mother-child interactions in which triggers for aggressive behavior largely are absent.*

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Within the communication discipline, a substantial body of research has explored trait verbal aggressiveness (VA), defined as “the tendency to attack the self-concepts of individuals instead of, or in addition to, their position on topics of communication” (Infante, 1987, p. 164). Persons high in trait VA are thought to be extremely sensitive to situational stimuli that might elicit aggression and hence use aggressive messages such as attacking another's appearance or character, teasing, ridiculing, and swearing more frequently than those low in trait VA (Infante, Riddle, Horvath, & Tumlin, 1992; Sabourin, Infante, & Rudd, 1993).

In the context of families, research has established a clear link between parental verbal aggression and negative child outcomes such as aggression toward peers and delinquency (Moore & Pepler, 2006; Solomon & Serres, 1999; Teicher, Samson, Polcari, & McGreenery, 2006; Vissing, Straus, Gelles, & Harrop, 1991). Along similar lines, parents' general propensity toward verbal aggression has been linked with their use of corporal punishment as well as their children's relational satisfaction (see Infante, 2005).

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Although it is clear that attacking a child's self-concept frequently has deleterious effects, trait VA may be associated with less-than-optimal parenting practices in a broader range of situations than those that typically elicit verbally aggressive behavior. This study explores that possibility by examining associations between mothers' trait VA and maternal as well as child behavior during brief play sessions ( $N = 40$  interactions). We will show that mothers' trait VA is evident behaviorally even during short, playtime interactions where situational stimuli that might elicit verbally aggressive behavior are, for the most part, absent. We do this via quantitative interaction analyses of observational data as well as qualitative follow-up of the same data focused on a subset of mothers who scored low ( $N = 4$ ) and high ( $N = 4$ ) in trait VA. To develop our rationale, we review research on trait VA and parenting style, identify gaps in the literature, and forward research hypotheses and questions focused on playtime interactions.

### Trait VA and parenting style

Studies of parenting style date back to at least the 1930s and 1940s (see Darling & Steinberg, 1993; Stafford & Bayer, 1993). Research consistently identifies two major dimensions of parenting style, which have been labeled control and support (Peterson & Rollins, 1987) and demandingness and responsiveness (Maccoby & Martin, 1983). The first dimension, control or demandingness, refers to how frequently and consistently parents attempt to modify their children's behavior as well as what means they use to gain compliance (e.g., reasoning/induction vs. coercion/power assertion). In Baumrind's (1967, 1972, 1991) well-known typology, authoritative parents are high on the control dimension in that they attempt to shape their children's goals, expect them to display age-appropriate behavior, and encourage internalization of moral standards; however, they exert control via induction rather than only power assertion and allow their children to express disagreement. Authoritarian parents also are high on the control dimension, but they rely primarily on power assertion and discourage child disagreement. Permissive parents are low on the control dimension, being less likely to enforce rules consistently and more likely to use guilt when they do attempt to control.

The second dimension, support or responsiveness, refers to parental behaviors that communicate warmth, affection, or acceptance, as opposed to hostility or rejection, though responsiveness also reflects the degree to which the parent attends and adjusts to the child. In Baumrind's (1991) typology, authoritative and permissive parents both are high on the support dimension, although authoritarian parents are less likely to communicate acceptance and warmth.

Prior research suggests that trait VA is associated with the control dimension of parenting style. Parental trait VA is associated inversely with the perceived appropriateness and effectiveness of fathers' plans for responding to child noncompliance (Beatty, Burant, Dobos, & Rudd, 1996) and positively with parents' use of harsh physical discipline (Kassing, Infante, Pearce, & Pyles, 1999; Roberto, Carlyle, &

McClure, 2006). More broadly, parental trait VA is associated with authoritarian rather than authoritative styles of control. Bayer and Cegala (1992) demonstrated that parental trait VA was associated positively with the degree to which parents reported that they controlled through coercion and inversely with the degree to which they respected their children's autonomy.

Not surprisingly, trait VA also appears to be inversely related to the support dimension of parenting style. Bayer and Cegala (1992) found that parental trait VA was directly associated with parent reports of temper and detachment from their elementary school-aged children. Beatty, Zelle, Dobos, and Rudd (1994) showed that fathers' trait VA scores predicted their adult sons' perceptions of paternal criticism and sarcasm. Adult sons who perceive their fathers as critical and sarcastic in turn reported lower satisfaction with the father-son relationship (Beatty & Dobos, 1992). Given that verbally aggressive behavior by definition attacks a child's self-concept, this inverse association between the parental trait VA and the support dimension makes conceptual sense, and research to date has laid an important groundwork for understanding how a predisposition toward verbal aggression influences parenting.

Despite these advances, important gaps remain in our knowledge about how this predisposition is reflected in parent-child interactions. First, we know little about how trait VA might be associated with parental practices in nonconflictual situations. Research to date has focused on associations between trait VA and how parents believe they behave either in general or specifically in situations where their children have misbehaved. The former focus makes sense in that traits, as general predispositions, should be associated with patterns of parental behavior across multiple situations (Belsky & Barends, 2002). The latter focus also makes sense in that verbally aggressive behavior arises from the interaction of parental predisposition and situational stimuli (e.g., child noncompliance) that elicits anger and frustration (Rudd, Vogl-Bauer, Dobos, Beatty, & Valentic, 1998). What we do not know, however, is whether a propensity toward verbal aggression is apparent even when parents are not explicitly attacking their child's self-concept. If trait VA as a predisposition is associated with broad dimensions of parenting style such as frequent control and lack of support, it may be evident even in situations where parents are not extremely angry or frustrated, such as those involving play. Even when they are not engaged in verbally aggressive behavior, parents with a predisposition toward verbal aggression may interact in ways that subtly undermine their children's self-esteem or social competence.

Furthermore, and related to this concern, there is an almost complete lack of observational research about trait VA and parenting. Studies to date have gathered self- or child perceptions of parental trait VA as well as self- or child reports of parental behavior. Research on a wide variety of communication topics documents differences in actor, recipient, and observer perspectives (e.g., Burgoon, Buller, Floyd, & Grandpre, 1996; Sillars, Roberts, Dun, & Leonard, 2001; Street, Mulac, & Wiemann, 1988). For college-aged children, their own perceptions of their parents'

trait VA, but not their parents' self-reported trait VA, are associated with their recall of how frequently their parents had used corporal punishment (Roberto et al., 2006). Physically abusive parents also hold discrepant perceptions of their children when compared with outsiders who observe those same children (Lau, Valeri, McCarty, & Weisz, 2006). We simply do not know whether parental trait VA will predict observational measures of parent or child behavior.

### **Hypotheses concerning trait VA and playtime interactions**

Researchers have observed mothers and children engaged in short, unstructured playtime interactions as a way of comparing everyday interactions in families with and without a history of child physical abuse (e.g., Borrego, Timmer, Urquiza, & Follett, 2004; Kavanagh, Youngblade, Reid, & Fagot, 1988). We adopted a similar tack by observing playtime interactions involving mothers who likely would vary in their scores on trait VA. Despite the seeming artificiality of videotaping play sessions outside of the home, earlier studies have detected differences simply by asking mothers and children to play with toys as they normally would at home. In what follows, we describe how maternal and child behavior were assessed in the current study and then forward research hypotheses and questions about maternal trait VA.

#### **Maternal behavior**

To assess maternal behavior, we explored existing microlevel schemes such as the Family Interaction Coding System (Kavanagh et al., 1988; Reid, 1986), which classifies maternal behaviors at 6-second intervals into 29 categories. We eventually settled on a 21-category scheme that captured virtually all the maternal behaviors in our own videotaped interactions (for the complete coding scheme, see Wilson, Morgan, Hayes, Bylund, & Herman, 2004). Seven of these 21 maternal behaviors seemed particularly relevant to operationalizing the parenting dimensions of control/demandingness as well as support/responsiveness; hence, these behaviors are the focus of the current study.

Child criticism, defined as messages that communicate overt disapproval of the child, belittle the child, or condemn the child or the child's behavior, is one of the seven maternal behaviors analyzed in this study. Because many statements coded as child criticism are verbally aggressive messages (see the examples in Table 1), we predict that "maternal trait VA will be positively associated with how frequently mothers criticize their children during short playtime interactions" (H1). Despite the seemingly straightforward logic that verbally aggressive mothers will produce verbally aggressive messages, there are reasons to be cautious about making this assumption. Infante and Wigley (1986) argue that "aggressive behavior in interpersonal communication is a joint product of the individual's aggressive traits and the way the person perceives ... the given situation" (p. 63). Because the observation period in this study is short and children are playing with new toys, it is possible that the interactions may not contain frequent situational triggers (e.g., oppositional

**Table 1** Definitions, Examples, and Reliabilities for Maternal Behavior Categories

Cluster Label	Description	Examples	Scott's pi
Negative command	Mother issues an imperative for her child to behave or cease behaving in a particular way in a harsh, loud, or unpleasant tone of voice, often accompanied by a negative facial expression.	"Sit down and do work." "Don't question my integrity." "Don't do that."	.89
Neutral command	Mother issues an imperative for her child to behave or cease behaving in a particular way in a calm, flat tone of voice.	"Watch your head." "Take that out of the box." "Help momma clean up."	.96
Suggestion	Mother proposes a course of action for her child (or both of them) in the form of a statement; includes neutral instructions provided by the mother (e.g., teaching how a toy works).	"You could try the puzzle piece there." "Let's do this." "We're gonna draw." "You gotta put it in the right hole."	.85
Child criticism	Mother communicates overt disapproval of her child, belittles her child, or condemns her child (or the child's behavior).	"You're lazy." "It's no wonder your little brother doesn't like to play with you." "I ain't bringing you no where else."	1.0
Child praise	Mother conveys a positive evaluation of her child (e.g., the child's behavior, appearance, or personality) or compliments her child.	"You're right!" "Yeah, that's good." "Very nice."	.93
Question about child's mental state	Mother asks a question about her child's preferences, thoughts, plans, or feelings.	"What do you want to do?" "Do you know what's in the box?" "What color do you want?"	.89
Question about the toys/task/setting	Mother asks her child a question about a toy, the task, or the setting.	"What's this?" "Where is it?" "Is that a dog?"	.86

child behavior) that would elicit child criticism. Consistent with this thinking, Kavanagh et al. (1988) observed differences in positively and neutrally valenced but not negatively valenced maternal behaviors when comparing short play periods

involving physically abusive and nonmaltreating mothers, even though other studies have found differences in negatively valenced behaviors when the two groups of mothers are observed for longer periods of time (Wilson, Shi, Tirmenstein, Norris, & Rack, 2006).

Aside from child criticism, we assessed six other behaviors to operationalize the two dimensions of parenting style. For control/demandingness, we measured how frequently mothers issued neutral commands, negative commands, and suggestions. Conceptual definitions and examples for these behaviors are shown in Table 1. Commands take the form of imperatives; suggestions propose a course of action for the child (or mother and child) with varying illocutionary force from "You could" to "Let's" to "You gotta" (the latter form often occurs when a mother is explaining how to use a toy). Commands and suggestions fall into the category that Searle (1976) labels "directives" or speech acts in which a speaker attempts to get a hearer to do something the hearer otherwise might not do. Mothers may vary in the degree to which they take charge of the play period and direct their child's activities rather than following their child's lead or negotiating choice of activities. Hence, we predict that "maternal trait VA will be positively associated with how frequently mothers issue commands and suggestions" (H2).

Three behaviors also were used to assess support/responsiveness. Praise communicates acceptance and warmth; hence, we assessed how frequently mothers praised their children. Questions can signal attentiveness and interest in the child and the child's agenda; hence, we also assessed how frequently mothers asked questions about their child's mental states (i.e., what the child was thinking, feeling, planning, or wanting) and questions about the toys, task, or setting. Because maternal VA would be expected to covary with expressions of warmth and involvement, we predict that "maternal trait VA will be inversely associated with how often mothers praise their child and ask questions about the child's mental states or the toys/task/setting" (H3).

### Child behavior

To assess children's behavior, we trained observers to rate children at 30-second intervals along two dimensions: cooperation and involvement. *Cooperation* refers here to the degree to which the child's actions are in agreement or harmony with the apparent wishes of the mother. Cooperation is demonstrated by actions such as complying with the mother's directives as well as negotiating what to do rather than demanding one's own way. Noncooperation is evident in behaviors that are difficult for the mother to manage, such as saying "no" frequently or refusing to follow rules. *Involvement* refers to the degree to which the child is engaged or connected with the mother through interaction. Involvement is demonstrated by actions such as active participation in conversations with the mother as well as being lively and energetic. Lack of involvement is evident in behaviors that indicate passivity and withdrawal. Involvement as used here is not synonymous with positive child behavior; it can also be negative (e.g., direct expressions of anger). Involvement refers to a child's activeness rather than cooperativeness.

We expect that “mothers’ trait VA will be inversely associated with observer ratings of their children’s cooperativeness during the play period” (H4). Verbal aggression tends to beget verbal aggression (Reid, 1986; Sabourin et al., 1993); hence, children of high-trait VA mothers may reciprocate verbally aggressive maternal behavior during the play period and hence be rated less cooperatively. More broadly, children of mothers high in trait VA may resist frequent maternal directing during the play period even if their mothers do not become verbally aggressive. Baumrind (1973) found that preschool children (especially sons) of authoritarian, as opposed to authoritative, parents displayed more hostility and less cooperation during interactions with teachers and peers. Our expectations regarding involvement or activity level are less clear—for example, physically abused children display higher rates of both externalizing (high involvement) and internalizing (low involvement) problems (Cerezo, 1997)—and hence is left as a research question (RQ1).

## Methods

### Participants and research sites

Participants were 40 mothers along with one of their children between the ages of 3 and 8 years.<sup>1</sup> Participating mothers on average were 31.50 years at the time of the study ( $Mdn = 29.00$ ,  $SD = 8.43$ ). They had been between 15 and 41 years at the time of the birth of their first child ( $M = 21.92$ ,  $Mdn = 19$ ,  $SD = 7.09$  years). They currently were parenting between one and seven children ( $M = 2.87$ ,  $Mdn = 2.00$ ,  $SD = 1.57$  children). Twenty-seven (68%) described their ethnic background as “African American,” 8 (20%) as “Hispanic American (Latina),” 2 (5%) as “European American,” 1 (2%) as “Asian American,” and 2 (5%) as “Other.”

Thirteen mothers (33%) described their marital status as “married,” 25 (62%) as “single,” and 2 (5%) as “divorced.” For single parents, 9 lived with no other adult in the household, 8 with extended family, and 8 with an unmarried partner. Mothers had completed between 8 and 22 years of formal education ( $M = 13.01$ ,  $SD = 2.34$ ). Thirteen mothers (33%) indicated that they worked outside of the home 40 or more hours per week, 5 (13%) between 20 and 39 hours per week, 3 (8%) fewer than 20 hours per week, and 18 (46%) did not work outside of the home (1 no response). Participating children on average were 4.85 years old ( $SD = 1.55$ ); 24 of the 40 children (60%) were male, whereas 16 (40%) were female.

Participants were recruited from two social service agencies in a large metropolitan area. The first is a nonprofit religiously based organization that operates a foster home for abused or neglected children, treatment programs for abusive parents, counseling programs for families at risk for child abuse, and a neighborhood day-care center. Most participants from this organization were involved with the family counseling program or the day care. The second agency is a nonprofit religiously based organization that offers health and counseling services in one of the poorest neighborhoods in the metropolitan area. Most participants from this site were recruited from the agency’s pediatric clinic or a program that offered prenatal care

and contraception counseling. Mothers were paid \$50 for completing the data collection. Assuming  $N = 40$  and  $\alpha = .05$ , statistical power to detect large effects ( $r = .50$ , two-tailed) is .92, but power to detect medium effects ( $r = .30$ ) is only .48 (Cohen, Cohen, West, & Aiken, 2003, p. 52).

### Procedures

Flyers advertising the study, approved by the relevant university institutional review board (IRB), were posted at both agencies. We subsequently contacted clients who indicated an interest to schedule a 2-hour data collection at the agency where they received services. Upon arriving with one of their children and signing a consent form, participating mothers completed a three-part data collection: (1) a 10-minute videotaped playtime interaction plus a cleanup period with their child, (2) a stimulated-recall interview immediately afterward, and (3) a battery of questionnaires including the verbal aggressiveness (VA) scale (Infante & Wigley, 1986).

Playtime interactions were videotaped in a conference room at the relevant agency. A camcorder was set on a tripod near the door of the conference room, with a cable running out to a monitor in an adjoining room. Before beginning the playtime interaction, one of the researchers read the following instructions to the participating mother:

During the next 10 minutes, you will be playing together with your child. We have brought a box of five toys for you and your child. You and your child may play with one of these toys for the entire 10 minutes, or you may play with several different toys from the box . . . We will spread out a blanket and place the box of toys on the blanket. You and your child should play on the blanket—this will make sure that you both stay within the range of the video camera during the whole play-period.

Mothers also were told that both researchers would be outside of the conference room during the play period, but they would be able to see the mother and child playing via the monitor. After making sure these instructions were clear, the researcher also read:

We will signal when the 10-minute play period is over. At that point, please put the toys away back in the box. Please make sure that your child helps you as you clean up. We will wait until you and your child have cleaned up before coming back into the room.

After approximately 10 minutes, one researcher knocked, opened the door, said "It's time to clean up," and shut the door. The researchers did not enter the room again until the mother and her child had put all the toys back into the box; hence, the cleanup period varied in length by design. The playtime and cleanup periods together lasted approximately 12 minutes ( $M = 12$  minutes 07 seconds,  $SD = 1$  minute 12 seconds).

During Part 2 of the data collection, mothers watched the videotape and described aloud what they recalled thinking and feeling at various points during the play session. During Part 3, mothers completed a demographic questionnaire (including questions about their age, age at birth of their first child, marital status, family structure, ethnic background, employment status, and the participating child's age), the VA scale, the Child Abuse Potential Inventory (CAPI; Milner, 1994, 2004), and several other measures not relevant to the current report. Data reported in the Results section come from Parts 1 and 3 of the study.

## Instrumentation

### *Socioeconomic status*

Scores on a mother's years of education, age at the time of the birth of her first child, and number of children all were moderately related, mean  $|r| = .38$  after  $r$ -to- $z$  transformation. Hence, an index of socioeconomic status (SES) was created by standardizing scores on all three variables and then subtracting number of children from years of education and age at first childbirth. Mothers with higher scores on this SES index had completed more schooling, were older when giving birth to their first child, and currently were parenting fewer children.

### *Verbal aggression (VA) scale*

Maternal trait VA was measured using a 10-item subscale of Infante and Wigley's (1986) original 20-item VA scale. The VA scale includes 10 negatively worded and 10 positively worded items. Negatively worded items (e.g., "When individuals are very stubborn, I use insults to soften their stubbornness") appear to tap a person's general propensity for verbal aggression as originally intended. Rather than simply tapping the absence of aggression, positively worded items ("I try to make people feel good about themselves even when their ideas are stupid") appear to tap intentional attempts to support others during disagreement. Although most studies treat the 20-item VA scale as unidimensional, recent research shows that the scale factors into two dimensions (aggressiveness and benevolence) and that these dimensions correlate differentially with other variables as would be expected if they measured separate constructs rather than opposite ends of a single dimension (Beatty, Rudd, & Valencic, 1999; Levine et al., 2004). Based on Levine et al.'s (2004) recommendation, we summed each mother's responses to the 10 negatively worded items to compute her level of trait VA. Participants indicated on a 5-point Likert-type scale how true each item was of them "when they tried to influence other persons"; hence, higher scores on this 10–50 scale indicate greater self-reported propensity to use verbally aggressive messages in general rather than specifically with one's child or family. Internal consistency for the 10-item VA scale was  $\alpha = .83$ .<sup>2</sup> The VA scale has an estimated 11th-grade readability level (Roberto & Finucane, 1997); hence, one of the researchers always offered to read the scale aloud and record the mother's answers, and some mothers did choose to complete the scale in this fashion.

### *Child Abuse Potential Inventory*

The CAPI (Milner, 1994, 2004) was included as a control variable in this study. The CAPI is a 77-item forced-choice format questionnaire with a fourth-grade readability level that assesses the degree to which a respondent endorses beliefs and feelings that typify physically abusive parents. The measure is composed of six descriptive factors: three involve psychological characteristics (distress, rigid expectations, and unhappiness) and three involve interactional characteristics (perceiving problems relating with one's child, family, and others in general). In an earlier report (Wilson et al., 2004), we demonstrated that mothers' total scores on the CAPI were inversely associated with how often they praised their child as well as asked questions during the play period. Because mothers' scores on the VA scale and CAPI share substantial covariation (Wilson, Hayes, Bylund, Rack, & Herman, 2006), we assessed whether mothers' general propensity for verbal aggressiveness still was associated with maternal or child behavior once this assessment for risk of child physical abuse had been controlled. Internal consistency for the 77-item CAPI was high ( $K-R20 = .87$ ).

### **Coding procedures: Maternal behavior**

Mothers' behaviors initially were coded at 6-second intervals using a 21-category coding system. Definitions and examples for the 21 categories can be found in Wilson et al. (2004). The system was developed by adapting Reid's (1986) Family Interaction Coding System to behaviors that were present in a pilot data collection in which three female graduate students each were videotaped while playing with one of their children. Two undergraduate coders, both masked to the research hypotheses, were trained for approximately 10 hours to use the 21-category coding system. Coders studied the category definitions and examples and practiced coding videotapes from the pilot data collection along with two of the authors.

To assess coding reliability, both undergraduates independently coded three of the playtime interactions from the actual study. In each case, one of the authors started and stopped the videotape at 6-second intervals for the entire interaction. Both undergraduates coded all three videotapes without talking while sitting apart in the same room. Coders were considered to have "agreed" each time that both identified the same behavior (e.g., neutral command) as being present or absent during a specific 6-second interval; coders disagreed when one identified a behavior as present, whereas the other did not. Percent agreement between the two coders across the three tapes exceeded 95% for each of the seven maternal behaviors assessed in this study; Scott's pi, which corrects for chance agreement, was .85 or higher for all seven categories (see Table 1). Disagreements were resolved via discussion. The two coders then split the remaining 37 videotapes, so that each coded 18 or 19 interactions.

To compute "rates" for the seven behavioral categories, we calculated the proportion of 6-second intervals within each playtime interaction during which a mother enacted each of the seven behaviors. For example, if a play period is 12 minutes long including the cleanup, then it would contain 120 6-second intervals,

and if a mother spoke a neutral command during 24 of these 120 intervals, then she would receive a proportion score of 0.20 for neutral commands (24/120).

Descriptive statistics and correlations for the seven maternal behaviors appear in Table 2. As is apparent, rates for the three maternal behaviors tapping control or demandingness (i.e., negative commands, neutral commands, suggestions) all were strongly interrelated (mean  $r = .56$  after  $r$ -to- $z$  transformation); hence, a composite category for rate of "directing" was created by summing each mother's overall rates for negative commands, neutral commands, and suggestions. Treating these three behaviors as items in a scale, internal consistency for this composite category was  $\alpha = .74$ .

Rates for the three maternal behaviors tapping support/responsiveness (i.e., praise, questions about the child's mental state, questions about toys/task/setting) all were moderately interrelated (mean  $r = .34$ ); hence, a composite category for rate of support/responsiveness also was created by summing each mother's overall rates for these behaviors. Internal consistency for this composite category was  $\alpha = .61$ .

Rates for child criticism did not correlate significantly with any of the other six behavioral categories. This may reflect that child criticism was rare—mothers on average criticized their children in less than one-half of 1% of the 6-second intervals in their play period (see Table 2). Child criticism was not combined with either composite category.

#### Rating procedures: Child behavior

Three different undergraduate students, also masked to the hypotheses, were trained to rate children's levels of cooperation and involvement during the playtime. Raters evaluated each child's cooperation and involvement at 30-second intervals. For each interval, raters completed a six-item measure regarding the child's cooperation (e.g., "Has complied immediately with the mom's suggestions and requests"; "Has performed helpful behaviors";  $\alpha = .85$ ) and a six-item measure regarding the child's involvement (e.g., "Has contributed actively to the conversation with the mother"; "Has been lively and energetic";  $\alpha = .96$ ) during the relevant 30 seconds. These measures were created based on our conceptual definitions of cooperation and involvement. Responses to each item were made on a 1–9 scale such that higher scores indicated greater cooperation or involvement.

Following training, each of the three undergraduates independently rated levels of child cooperation and involvement for all 40 playtime interactions, stopping the tapes themselves and rating at 30-second intervals. Each rater's responses to the six cooperation items and the six involvement items were averaged to produce that rater's cooperation and involvement score for each 30-second interval, and these scores in turn were averaged across 30-second intervals to produce that rater's mean cooperation and involvement score for an entire tape. Treating the three raters as "items" in a three-item scale, interrater reliability across the 40 videotapes was  $\alpha = .72$  for cooperation and  $.87$  for involvement. Scores on child cooperativeness and

**Table 2** Descriptive Statistics and Correlations Between Maternal Trait VA, Demographics, and Maternal and Child Behavior

Variable	M	SD	2	3	4	5	6	7	8	9	10	11	12	13	14
1. SES	0.002	2.30	.37*	-.27	-.02	-.13	-.21	-.05	.14	.16	.01	-.01	.24	-.07	-.09
2. Marital status	1.31	0.47	1.0	-.23	.11	-.18	-.12	-.05	.04	-.06	.28	.43**	.2	.08	.08
3. Child age	4.83	1.58	1	1	-.14	-.15	.07	.03	.06	.09	-.18	-.35*	-.39*	.08	.1
4. Child gender	1.38	0.49		1.0	1.0	-.08	-.15	-.29	-.36*	-.1	.09	-.09	-.28	.17	.25
5. Mother's trait VA	20.61	8.13			1.0	.46**	.46**	.46**	.32*	.27	.01	-.23	.09	-.02	-.44**
6. Negative commands	0.019	0.04			1.0	.51**	.51**	.53**	.53**	.27	.17	-.08	-.03	-.07	-.41**
7. Neutral commands	0.202	0.11			1.0	.67**	.67**	.67**	.67**	-.13	.15	-.14	.01	.13	-.08
8. Suggestions	0.143	0.07			1.0	1.0	1.0	1.0	1.0	-.09	.21	-.02	.07	-.07	-.14
9. Criticism of child	0.004	0.02			1.0	1.0	1.0	1.0	1.0	1.0	-.21	.12	-.11	.07	-.51**
10. Praise of child	0.081	0.04			1.0	1.0	1.0	1.0	1.0	1.0	.29	.41**	.41**	.22	.21
11. Questions: CMS	0.162	0.08			1.0	1.0	1.0	1.0	1.0	1.0	1.0	.33*	.33*	.06	.08
12. Questions: TTS	0.116	0.08			1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	-.15	.07
13. Child involvement	5.55	0.57			1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.29
14. Child cooperation	5.90	0.37			1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Note: N = 40 mothers and their child. For marital status, 1 = not married, 2 = married. For child gender, 1 = male, 2 = female. SES = socioeconomic status; CMS = child's mental state; TTS = toys, task, or setting.

\*p < .05. \*\*p < .01.

involvement were averaged across the three raters to produce overall ratings of these variables for each tape.

## Results

The mean score for mothers ( $N = 40$ ) on the 10-item verbal aggression (VA) scale was 20.79 ( $SD = 8.14$ ). Regarding maternal behavior, the most frequent behaviors were neutral commands (on average, 20% of all 6-second intervals), questions about the child's mental states (16%), suggestions (14%), and questions about toys/tasks/setting (11%). Mothers on average also praised their children with some regularity (8% of all intervals). Negative commands (2%) and child criticism (less than one-half of 1% of all intervals) were much less common. Regarding child behavior, children on average were rated slightly above the midpoint by observers on the 9-point scales assessing both cooperation and involvement (see Table 2).

### Maternal trait VA and maternal behavior

H1 predicted that maternal trait VA would be positively associated with mothers' rates of child criticism. Although the correlation between maternal VA and child criticism cluster was in the predicted direction,  $r(38) = .27$ ,  $p = .10$ ,  $CI_{95} = -0.05$  to 0.54, it did not reach conventional levels of statistical significance—probably because few mothers explicitly criticized their child (see Table 2).<sup>3</sup> This finding runs contrary to H1.

H2 predicted that maternal trait VA would be positively associated with mothers' rates of negative commands, neutral commands, and suggestions. As can be seen in Table 2, the correlations between maternal VA and negative commands, neutral commands, and suggestions all are statistically significant. When these three behaviors were summed, maternal VA also was significantly correlated with overall rates of directing,  $r(38) = .48$ ,  $p < .01$ ,  $CI_{95} = 0.20$  to 0.69. Although this confidence interval is wide, it merits note that what Cohen et al. (2003) label as a "small" association ( $r = .10$ ) does not fall within it. These findings support H2.

H3 predicted that maternal trait VA would be inversely associated with mothers' rates for praise, questions about the child's mental states, and questions about the toys, tasks, and setting. None of the correlations between trait VA and these three behaviors approached significance. When these three behaviors were summed, maternal VA also was not associated with the composite variable assessing their support/involvement,  $r(38) = -.19$ ,  $ns$ ,  $CI_{95} = -0.47$  to 0.13. These findings offer no support for H3.

Several follow-up analyses were conducted to further clarify the relationship between the maternal trait VA and the composite measure of directing behavior. Initially, we split VA scores into quartiles to create four groups of mothers who were low, moderately low, moderately high, and high in trait VA ( $N = 10$  mothers per group). A one-way analysis of variance (ANOVA) with maternal VA as the independent variable and the directing composite as the dependent variable revealed that

maternal VA had a significant, and substantial, impact on directing behavior,  $F(3, 36) = 4.06, p < .02, \eta^2 = .25$ . A Tukey post hoc test further revealed that observed rates of directing by mothers high in trait VA ( $M = 0.53, SD = 0.27$ ) were significantly greater than rates of directing for mothers moderately high ( $M = 0.31, SD = 0.12$ ), moderately low ( $M = 0.31, SD = 0.14$ ), or low ( $M = 0.32, SD = 0.12$ ) in trait VA, whereas the latter three groups of mothers did not differ. In other words, mothers "high" in trait VA on average issued a command or suggestion within slightly more than one-half of the 6-second intervals during their play periods, whereas the other three groups of mothers used directives within only about one-third of the 6-second intervals. The significant correlation between maternal VA and directing is thus attributable to higher rates of directing by mothers who fall in the upper quartile on the trait VA scale.

To control for demographic factors, we conducted an analysis of covariance (ANCOVA) in which maternal trait VA (four groups) was the independent variable, the composite measure of directing was the dependent variable, and maternal SES, marital status (yes/no), child age, and gender all were entered as covariates. The only statistically significant covariate was child gender,  $F(1, 31) = 4.19, p < .05, \eta_p^2 = .12$ , reflecting mothers who played with sons engaged in more directing ( $M = 0.42, SD = 0.22$ ) compared to mothers who played with daughters ( $M = 0.29, SD = 0.09$ ). Even after controlling for demographic factors, however, maternal VA continued to exert a significant, and substantial, impact on rates of directing,  $F(3, 31) = 5.13, p < .01, \eta_p^2 = .33$ . Finally, we conducted an ANCOVA in which directing was the dependent variable, maternal trait VA (four groups) was the independent variable, and mothers' scores on the CAPI were entered as a covariate. Mothers' CAPI scores were not associated with their rates of directing during the play period,  $F(1, 34) = 0.01, \eta_p^2 = .00$ . Maternal trait VA continued to share a significant, substantial association with rates of directing after scores on the CAPI were controlled,  $F(3, 34) = 2.97, p < .05, \eta_p^2 = .21$ .

#### Maternal trait VA and child behavior

H4 predicted that maternal trait VA would be positively associated with observer ratings of child cooperation, whereas RQ1 asked whether ratings of child involvement would be associated with maternal VA scores. The relevant correlations can be seen in Table 2. Maternal VA was significantly correlated only with child cooperation,  $r(38) = -.44, p < .01, CI_{95} = -0.15$  to  $-0.66$ . Consistent with H4, as mothers' trait VA scores increased, observer ratings of their child's cooperation during the play period decreased. In response to the RQ1, maternal trait VA was not associated with ratings of children's level of involvement (activity).

Once again, we split mothers into quartiles based on their trait VA scores and ran a one-way ANOVA on child cooperation. The analysis produced a significant effect for maternal trait VA,  $F(3, 36) = 4.52, p < .01, \eta^2 = .27$ . Ratings of child cooperation followed a similar pattern as did rates of maternal directing, in that mean cooperation scores for children whose mothers were low ( $M = 5.91, SD = 0.37$ ), moderately

low ( $M = 6.08$ ,  $SD = 0.34$ ), and moderately high ( $M = 6.02$ ,  $SD = 0.23$ ) in trait VA all were greater than the mean cooperation ( $M = 5.59$ ,  $SD = 0.35$ ) score for children whose mothers were high in trait VA. A Tukey post hoc test revealed that the second and third of these mean scores were significantly higher than the fourth; the first fell in between and did not differ from the others. Although this pattern is not quite as clear cut as it was for maternal directing, it is apparent that the significant correlation between maternal VA and ratings of child cooperation occurred largely due to the fact that the children whose mothers' trait VA scores fell in the upper quartile on average were rated as displaying less cooperation compared to children whose mothers' trait VA scores fell in the bottom three quartiles.

To control for sociodemographic factors, we conducted an ANCOVA in which maternal trait VA (four groups) was the independent variable, child cooperation was the dependent variable, and four demographic variables (marital status, SES, child age, and gender) were covariates. None of the four covariates was statistically significant. Maternal trait VA, however, continued to predict ratings of child cooperation,  $F(3, 31) = 3.38$ ,  $p < .05$ ,  $\eta_p^2 = .25$ , after these covariates were controlled. Finally, we conducted an ANCOVA where child cooperation was the dependent variable, maternal trait VA (four groups) was the independent variable, and mothers' scores on the CAPI were a covariate. Mothers' CAPI scores were not associated with observer ratings of their child's cooperativeness,  $F(1, 34) = 0.10$ , *ns*,  $\eta_p^2 = .01$ , whereas maternal trait VA continued to share a significant, substantial association with ratings of their child's cooperativeness,  $F(3, 34) = 3.78$ ,  $p < .02$ ,  $\eta_p^2 = .25$ .

### Qualitative follow-up analyses

Quantitative analyses indicate that mothers in this study who score higher on self-reported trait VA also engage in more frequent directing of their child's behavior during play activities. Interpreting this finding is challenging given that all mothers in this study issued commands and made suggestions. This raises the question, therefore, of whether the use of directives differs qualitatively among mothers who score differently on the trait VA measure or whether this behavior is simply a difference in quantity. By looking at the sequential context in which directives are occurring (i.e., not just how often they occur but where and to what end), we develop a clearer understanding of directing behavior as it relates to verbal aggression. We proceed with the assumption that the frequency of a verbal action may be less relevant than the placement of that action in a particular sequential context (Schegloff, 1993).

To further explore the sequential relevance of the mothers' directing behaviors, we selected from the larger sample the mothers with the four highest and the four lowest scores on the trait VA scale. (Henceforth, the shorthand "high-" and "low-" VA mother is used to indicate these two categories.) By choosing the extreme ends of the scale, we hoped to capture more cleanly any qualitative distinctions that might be useful in interpreting the quantitative findings. These eight interactions were transcribed and analyzed in detail to identify any verbal or nonverbal characteristics that

typified the high- and low-VA mothers. The methods employed to compare these two groups of mothers are described next, followed by our findings.

### *Participants*

Table 3 presents descriptive statistics for the subsample of mothers in the qualitative analysis along with information about their children. The two groups of mothers are similar in terms of race/ethnicity and education, but the four high-VA mothers are older on average (and were older when they gave birth to their first child) and are parenting slightly more children as compared to the four low-VA mothers. The four high-VA mothers all happened to participate in the study with a son, whereas two of the low-VA mothers brought sons and two brought daughters. Despite these differences, quantitative analyses reported above show that maternal trait VA, as assessed through self-report, still predicts rates of maternal directing as well as ratings of child cooperation in the larger data set after the effects of demographic factors were controlled. As would be expected based on the quantitative findings, the four high-VA mothers, on average, issued a directive (negative command, neutral directive, or suggestion) in 70% of the 6-second intervals in their play periods, whereas the four low-VA mothers on average issued directives in only 27% of the intervals (see Table 3).<sup>4</sup>

### *Methods*

Each of the eight videotaped interactions was transcribed in its entirety by the authors; each author was responsible for transcribing two interactions, one in the high-VA category and one in the low-VA category. Researchers did not look for any set of predetermined or theoretically likely categories of behavior. Instead, as transcription proceeded, authors were alert to contrasts and similarities between the videotaped play periods. Analysis proceeded with authors bringing their assessment of both unique and similar behaviors to the group, and these assessments were then scrutinized by the whole group through repeated viewings and the detailing and correction of transcriptions.

Ultimately, the types of verbal and nonverbal sequences (actions) that occurred within the category (high or low VA) were assembled under descriptive headings (e.g., mother or child initiates a game, playful competition, simultaneous [identical] vocal activity such as singing the same song). In other words, there was no particular focus on directing sequences, *per se*. Once this set of actions was available, researchers returned to the task of looking for behaviors or sequence types across the categories. "Low-VA" tapes were inspected for instances of "high-VA" behavior and vice versa. The underlying assumption was always that all mothers in the sample could engage in all types of activities; researcher efforts were directed at finding where the groups of mothers overlapped and where they were distinct.

For the final analysis, the second author retranscribed all instances presented here, drawing on the analytic and technical framework of conversation analysis (Sacks, Schegloff, & Jefferson, 1974). Although this author was not masked to

**Table 3** Descriptive Statistics for Four High-Trait VA and Four Low-Trait VA Mothers and Their Children

ID No.	Directing (Proportion of 6-Second Units)		Child Cooperation	Child Involvement	Mom Ethnicity	Mom Age	Age at First Birth	No. of Years Education	No. of Children Parenting	Child Age	Child Gender
	Trait VA Score	Score									
6	38	1.15 <sup>a</sup>	5.27	4.86	AA	31	17	13	6	5	Male
18	34	0.33	4.47	5.71	AA	58 <sup>b</sup>	N/A	13	3	6	Male
21	37	0.59	5.66	6.48	Mixed	21	15	12	4	3	Male
24	36	0.71	5.82	5.92	AA	43	39	15	1	4	Male
High-VA mothers	36.25	0.70	5.31	5.74	75% AA	38.25	23.66	13.25	3.5	4.5	100% Male
2	10	0.08	5.35	4.69	Latina	29	24	15	1	5	Male
31	10	0.27	6.11	5.8	AA	21	15	10	2	6	Female
38	11	0.38	6.59	6.5	AA	23	16	14	3	5	Female
41	10	0.36	6.08	6.02	AA	29	18	12	5	8	Male
Low-VA mothers	10.25	0.27	6.03	5.75	75% AA	25.5	18.25	12.75	2.75	6	50% Male

<sup>a</sup>This proportion exceeds 1.00 because directing is the sum of rates for three behaviors—negative commands, neutral commands, and suggestions—and the sum for these three is greater than 1.00 for this mother. On average, she uses 1.15 directives in each 6-second interval.

<sup>b</sup>This “mother” actually is the child’s maternal grandmother; however, she had sole custody of the child, and the child did not have regular contact with his biological mother.

mothers' VA scores, the approach to transcription does constrain the researcher from importing a priori assumptions into the analysis, the emphasis instead being on "strict and parsimonious structuralism" (Levinson, 1983, p. 295). Using this approach allows for patterns of interaction to emerge not simply from the analyst's viewpoint but from the orientations and behaviors of the participants in the interaction.

### *Findings*

We first overview the findings from the qualitative analysis and then provide illustrations in the form of transcribed excerpts (see also Roberts, Wilson, Delaney, & Rack, in press). The four mothers in the high VA category tended to control the choice of activities engaged in during the play period as well as the pace and duration of activities. This is not to say that low-trait VA mothers never controlled the choice, pace, or duration of activity (as we will show below) but only that high-VA mothers did so repeatedly and in a manner that tended to enforce an activity choice that they had made. Low-VA mothers were more likely to follow their child's lead or seek their child's input about choice of activity, though high-VA mothers did seek child input on occasion as well. Finally, all four of the high-VA mothers used physical negative touch (PNT), along with directives, when trying to alter their child's actions. PNT refers to "any physical touch that is intended to be antagonistic, aversive, hurtful, or restrictive of the ... child's activity" (Borrego et al., 2004, p. 899). Examples of parental PNT by high-VA mothers included restraining a child by the shoulder or the wrist to prevent him from reaching a toy or pushing a child's arm in a way that interrupts the child's manipulation of or trajectory toward an object. No instances of PNT occurred in the four low-VA tapes.

To illustrate the findings, we compare and contrast four episodes involving a different high-VA and low-VA mother. The first two, Excerpts 1 and 2, are taken from the onset of the play period and contrast both quantitatively and qualitatively; the mother in Excerpt 1 uses imperative formulations (directives) several times, whereas the low-VA mother (Excerpt 2) does not use any. The high-VA mother also uses PNT to disrupt the child's trajectory of play; the low-VA mother uses a report format ("It's hard to see on that color") to possibly accomplish a similar goal. The second contrasting pair, Excerpts 3 and 4, differ only qualitatively; both the high- and the low-VA mothers use imperatives, but in Excerpt 3, the high-VA mother is verbally (and nonverbally) enforcing the completion of an activity, whereas in Excerpt 4, the low-VA mother is getting a drawing activity organized. In all excerpts, M refers to mother and C refers to child. All names are pseudonyms.

Excerpt 1 begins at the start of the play period involving a high-VA mother and her 3-year-old son. The mother has put the box of toys on the edge of the blanket that circumscribes the play area. The child reaches into the box of toys and takes out a plastic container of Lego<sup>®</sup> blocks that has a hat-shaped lid. The mother assesses the toy, saying "ew that's pretty" but then pulls out a shape-sorting toy (Line 1) and places it just behind the child.

*Excerpt 1 (Dyad 21)*


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1	M:	Here go some more to:ys,	<i>M pulls out shape sorter.</i>
2	C:	What's t[hat?	
3	M:	[Let's pour em out. Come on.	
4	C:	What's –	
5	M:	Wanna play with mommy?	
6	C:	Uh huh. ((affirming))	
7	M:	Come on.	
8		(2.0)	<i>C turns back to the box of toys.</i>
9	M:	>Come here let mommy show you.<	<i>M places hand on C's shoulder;</i>
10			<i>M squeezes and pulls slightly back.</i>
11	M:	Wait a minute.	<i>M removes a toy from C's hand.</i>
12	M:	This next okay?	
13	C:	M hm ( )	
14	M:	>Come right here=Put it right here.<	<i>C is returning to lean in the toy box.</i>
15	M:	Look. <u>W</u> ait a minute.	<i>M puts her hand on child's lower</i>
16			<i>arm; M pulls toward her; child</i>
17			<i>straightens his arm backward and</i>
18			<i>lifts it out of her grasp.</i>

---

Although the child initially notices and pulls from the toy box the “Lego man” container, the mother, while positively assessing the toy, attempts nonetheless to reorient the child to playing with a different toy: the shape sorter (Line 1). Her motivation, however well intentioned it may be, is not recoverable from the talk; what is clear, however, is that the shape-sorter toy is either (a) her preference for their joint activity or (b) she does not want the child taking out more toys. Her verbal actions (commands and suggestions) and nonverbal activity (physical touch) from Lines 9–17 attempt to get the child engaged in the activity she has selected. While her voice barely gets louder (not enough to transcribe as substantially different from her surrounding talk), her vocal quality does tense slightly by speeding up or by slightly rising in tone at Lines 9, 14, and 15. Her physical touch in Lines 15–16 can be classified as negative in that the child displays discomfort or resistance by moving to release himself from her grasp. To briefly characterize this sequence, although the child initially agrees to his mother's choice of activity, he subsequently resists her choice; she persists, however, by repeatedly moving to gain control of his attention and enforce her choice through her verbal directives and PNT.

Excerpt 2, in contrast, presents a low-VA mother and her 5-year-old son. This is also at the onset of the play period. We have chosen this excerpt because, from a quantitative standpoint, this mother does not issue any commands or suggestions. However, she also makes an attempt to redirect the child's activity, as the mother in Excerpt 1 did, but her attempt (which fails) is formulated as a report/assessment of his activity, not as a directive or with negative touch.

In this excerpt, the mother has removed a puzzle from the toy box and the child has removed a pad of colored paper. The mother asks "what else is in there?" and the child removes a package of colored markers, at which point the mother says "ah ha" (hearable as "eureka!" at Line 1) and the child works to open the package.

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*Excerpt 2 (Dyad 2)*

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1	M: Ah <u>ha</u>	
2	(4.0)	<i>C starts working to open the markers pack</i>
3	M: (You're) gonna rip it out?	<i>and continues on this task during silences.</i>
4	(6.0)	
5	M: °Can I have one?° =	<i>C has now removed a marker.</i>
6	C: =Here rip it out.	<i>M reaches; C slightly tips pack toward her.</i>
7	M: What <u>color</u> .	<i>C begins to color on a sheet of black paper.</i>
8	(3.0)	
9	M: What color do you want.	
10	(2.0)	<i>M empties markers on the floor.</i>
11	C: ( )	<i>C still coloring on black paper.</i>
12	M: It's hard to see on that color (.) Bobbie.	
13	C: What?	
14	M: It's hard to <u>see</u> on that color.	
15	C: Mmm	
16	((3 lines elided))	
17	M: hh mm What is it?	
18	C: Snake.	
19	M: Very nice. It's pretty.	

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Excerpt 2 differs from Excerpt 1 in several respects. Rather than controlling the choice of activity, this mother allows the child to persist in the activity he has chosen; she initially removed a puzzle, but he removed a pad of colored paper and markers, and he persists in that direction of play without interruption from the mother. At Lines 5, 7, and 9, the mother essentially asks permission to join him in the coloring (once he has removed a marker for himself) and she asks for his preference about a color (presumably to add to the drawing). The mother makes what appears to be an indirect attempt to alter her son's behavior through her report (Line 12) that it is hard to see what he is drawing because he is using a dark-colored marker on dark construction paper. When there is no uptake of her report, however, she does not directly suggest or insist on changing the paper, she simply asks him what he is drawing. Although in Excerpt 1 the mother's insistence met with resistance, in Excerpt 2, the mother allows the child to pursue his choice of activity and possibly avoids resistance by simply moving along with the child's trajectory.

Excerpts 3 and 4 both occur midway through the play period. In Excerpt 3, a high-VA mother and her 5-year-old son are engaged in an activity in which the child must match plastic figurative shapes (e.g., a car, a girl, a house) with plastic

blocks into which the shapes fit. Most shapes are a different color than the blocks into which they fit, so that the boy must orient to shapes rather than colors to find correct matches. After several unsuccessful attempts, the boy fits one shape, at which point he and his mother clap and the boy attempts to fit another one.

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*Excerpt 3 (Dyad 6)*

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- |    |  |   |
|----|--|---|
| 1  | M: YAY:::  | <i>M and C clapping in celebration.</i>           |
| 2  | C: Where this one go?                                    |   |
| 3  | M: I'm not gonna tell ya where it goes. I'm not gonna.   |   |
| 4  | C: It (don't) fit.                                       |   |
| 5  | M: You gotta- Which one doesn't go in there.             |   |
| 6  | Nope. Just because it red doesn't mean it fits in there. |   |
| 7  | That's the girl, that's a house.                         |   |
| 8  | It do- a girl and a h- house don't go in there.          |   |
| 9  | A ka- (.) Get this over here.                            | <i>M reaches across child for other blocks.</i>   |
| 10 | (1.0)  | <i>C's gaze follows to his left side.</i>         |
| 11 | M: Here go o::ne.  | <i>M sets a block in front of child,</i>          |
| 12 |  | <i>but he pushes a car structure at his left.</i> |
| 13 | M: Let's wait. I w[anchyu-                               | <i>M reaches tighter across C's body,</i>         |
| 14 | C:                   [uh                                 | <i>M grasps child's wrist.</i>                    |
| 15 | M: No. I really wanchyu to put this puzzle together.     |   |
| 16 |  | <i>At the word "put" M pulls C's arm; this</i>    |
| 17 |  | <i>realigns his torso to the shape blocks and</i> |
| 18 |  | <i>causes him to lean in toward them.</i>         |
| 19 | M: Come on. Aw come on.                                  | <i>M releases grasp.</i>                          |
- 

Similar to Excerpt 1 (the high-VA example, above), the mother here moves to control the child's focus on a particular activity, perhaps because she is trying to encourage him to complete it on his own. The mother is initially explicit in her refusal to help (Line 3), but after the child is clearly unsuccessful, she moves to find a block that might be useful to him. Her "directive" (Line 9: "get this over here") is actually her reaching for the block herself. The result of this action, however, is that as the child's gaze follows her hand, he becomes "distracted" by a car at his left side and he begins to roll it around. In response to this, the mother produces an inclusive formulation ("Let's wait."), which is hearable/seeable as a directive, particularly because it is coupled with the "barring" action of her arm tight against his body (Line 13). The mother then explicitly states her desire for him to complete the task, and again embodies this as she grasps his wrist, and pulls him back to the shape blocks activity. In sum, the directives in this sequence are not particularly forceful in themselves; it is the coordinated and embodied action of restraining and reorienting the child that indexes the mother's insistence that the child completes the activity they had started.

In contrast, in Excerpt 4, a low-VA mother issues several directives to her 6-year-old daughter that actually are instructions in the service of getting the play activity organized. The sequence began with the mom moving to introduce a "writing" activity that had been picked out earlier by the daughter, but they got distracted by solving several puzzles. They are now picking up the idea of drawing/writing on a pad of paper that has been sitting out on the blanket throughout the interaction so far.

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*Excerpt 4 (Dyad 31)*

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1	C:	Yea:h. I wanna write some (markers).	
2	M:	Here go some paper.	
3	C:	Kay.	
4	M:	What are we gonna do.	<i>M now has paper pad in her lap.</i>
5	C:	We're gonna wri::te.	<i>C opening marker case.</i>
6	M:	We're gonna write your name (then)	
7		we're gonna dra:w.	<i>Simultaneously M and C set paper</i>
8			<i>and markers on the blanket in front</i>
9			<i>of them.</i>
10	M:	I'm gonna write on one.	
11		You're gonna write on one.	<i>M tears off a sheet of paper.</i>
12	C:	Kay.	
13	M:	Whatcha wanna write?	
14	C:	I on't know.	
15	M:	Or what you wanna draw.	
16		(5.0)	<i>C gets settled in front of sheet of</i>
17			<i>paper that is on the blanket.</i>
18	M:	Here you can write on this.	<i>M hands C pad; M picks up a</i>
19		I'll write top of here.	<i>puzzle and puts her single sheet on it.</i>
20	C:	I'm gonna write my name	
		with a red mar:ker.	
21		((2 lines elided))	
22	M:	I'm gonna draw.	
23	C:	I'm gonna write my name first. I'm gonna write my last name too.	

---

In some respects, this low-VA mother displays qualities that typify the four high-VA mothers: She issues frequent directives (Lines 6, 7, 11, and 18) and chooses the activity that she and her daughter undertake. Yet, this example differs in important ways from those involving high-VA mothers. In this sequence, the directives organize how they will play, which is interspersed with questions soliciting her daughter's input (Lines 4, 13, and 15). Furthermore, the directives elaborate on the daughter's answers; for instance, when the daughter states that they are going to write, the mother elaborates by saying that they are going to write their names and then draw (Lines 6–7). By the end of the excerpt, the daughter describes her unique part of the

activity—she is going to write with a red marker (a different color than her mother) and is going to write both her names even though her mother has started to draw (Lines 20–23). The daughter does not resist her mother's choice of activity—perhaps because she enjoys drawing or was initially attracted to the colorful markers, but perhaps because the activity is constructed as collaborative, with the mother organizing some structural details (supplying sheets of paper and backing to write on) and also inquiring about the child's plan or preferences.

## Discussion

This study investigates several hypotheses concerning mothers' trait verbal aggressiveness (VA) and maternal and child behavior during playtime interactions. Our most straightforward prediction—that mothers' trait VA would be associated with how frequently they criticized their child—was not supported, most likely because child criticism rarely occurred during the playtime interactions. Despite this, mothers' level of trait VA was positively associated with directing behavior (commands and suggestions). Maternal trait VA shared substantial variance with rates of directing,  $r = .48$ , even though trait VA was assessed via questionnaire and directing via behavioral observation. Additional analyses revealed that this relationship (a) reflected substantially higher rates of directing by mothers in the upper quartile on the trait VA scale and (b) remained statistically significant, and substantial, after controlling for marital status, SES, child age, and gender as well as scores on the CAPI. During a brief, nonconflictual play period, trait VA was evident in the control dimension of parenting style. Trait VA was less evident in the support dimension in our data, as mothers' trait VA did not predict their rates of praise or questions.

Qualitative analyses of a subset of the sample shed further light on these findings. First, the four mothers highest in trait VA directed more not just in response to repeated resistance by their child; rather, these mothers often attempted to control choice of activities from the very start of the play period. Second, the four mothers high in trait VA did not issue directives in response to "misbehaviors" by their children, at least as that term typically has been defined (violations of social norms or moral conventions). Mothers in our high-trait VA excerpts, however, did seem to have clear expectations about how their child "should" play (e.g., play with only one toy at a time, finish one activity before moving on to another) and used directives to enforce those expectations. Third, the four mothers high in trait VA and four low-trait VA mothers enacted different behaviors along with directives: Mothers high in trait VA in some cases used PNT in conjunction with directives to alter their children's behavior; low-trait VA mothers were more likely to intermix actions that granted their child some autonomy (e.g., giving the child a choice between parent-controlled options) along with directives. Fourth and finally, children in the low-trait VA excerpts displayed virtually no resistance to their mother's directives; children in the high-trait VA excerpts occasionally resisted their mothers' directives though this resistance tended to be indirect and short lived.

Prior accounts for verbally aggressive behavior do not seem adequate to explain the relationship between trait verbal aggressiveness and directing observed in this study. Infante (1987) stresses that verbally aggressive behavior is a joint product of predisposition and situational factors that arouse frustration and anger (e.g., child noncompliance; also see Rudd et al., 1998). This account helps make sense of the nonsignificant relationship between maternal trait VA and child criticism—children on the whole were cooperative and many mothers expressed surprise that 10 minutes already had passed when they received the instruction to clean up. Being videotaped also may serve as an aggression inhibitor, at least when the session lasts only 12 minutes (see Wilson, Shi et al., 2006). But this account does not explain why a predisposition toward VA would be evident in maternal directing at the start of the play period or in the absence of aggression triggers such as oppositional child behavior.

One possibility is that trait VA is associated with the degree to which mothers frame playtime interactions as situations in which they need to “take control” as opposed to play with their child for play’s sake. Several theories suggest that stable individual differences influence how individuals frame social interaction. Relational framing theory (RFT; Dillard, Solomon, & Palmer, 1999; Solomon, Dillard, & Anderson, 2002) argues that two dimensions underlie all relational judgments—dominance/submission (the degree to which one party attempts to control the behavior of another) and affiliation/disaffiliation (the degree of liking or disliking expressed through behavior). People use relational frames, or memory structures storing organized information about relationships, to interpret what is going on during social interaction. Because the same behaviors can be used to convey dominance and affiliation, a key assumption of RFT is that interpreting behavior within one frame (e.g., dominance) tends to inhibit the competing interpretive frame (e.g., affiliation). For mothers high in trait VA, the dominance/submission frame may be salient—they may view playtime as a situation in which they should control what they and their child will do, which would lead them to insist on selecting the initial choice of activity or demand that their child completes one activity before moving to another. For mothers low in trait VA, the affiliation/disaffiliation frame may be salient—they may view playtime as a situation in which they should do something together *with* their child, such that choice of activity is less important than collaboration. Future research should investigate whether trait VA is associated with mothers’ judgments about the relevance of these two relational frames in a variety of situations, especially ambiguous ones where either frame may explain child behavior.

Along a similar line, Bugental and Happaney (2000, 2004) argue that parents differ in the degree to which power-based schemas are salient as they interpret interactions with their children. These authors focus on parents who see their child, rather than themselves, as having primary control over the outcomes of interaction. Such “low-power” parents are quick to perceive interaction with their children as a power struggle; they are exceptionally reactive to any child behavior that could be interpreted as challenging their authority or constraining their autonomy and rely on power assertion, verbal degradation, and in some cases physical assault to regain their power.

Low-power mothers might interpret some child behaviors, such as proposing a different activity or taking longer than they thought was necessary to complete an activity, as personal challenges and respond with directing behavior accompanied when necessary by PNT. Future research might investigate whether trait VA is associated with mothers' scores on the Parent Attribution Test, a self-report measure assessing perceived parent and child control over interaction outcomes.

With regard to child behavior, maternal trait VA was inversely associated with observer ratings of their child's cooperativeness during the play period,  $r = -.44$ , despite the fact that children on the whole were rated as moderately to highly cooperative. Because parents and children mutually influence each other (Stafford & Bayer, 1993), this finding and the previous ones may be related; for example, mothers high in trait VA may have directed more because they perceived their child to be less cooperative. Alternatively, children with high-trait VA mothers may have been less cooperative because they had been the target of their mothers' verbal aggression in the past or because they were resisting inept maternal directing during the play period. Another possibility is suggested by communibiology, which argues that the "neurobiological structures underlying temperament traits and individual differences are mostly inherited" (Beatty, McCroskey, & Heisel, 1988, p. 48). If a predisposition to verbally aggressive behavior is inherited, then children of mothers high in trait VA may have been rated as less cooperative because those children themselves were predisposed toward verbal aggression. It merits note that children in this study, like their mothers, rarely engaged in verbally aggressive behavior during the play period. Still, it is possible that a predisposition toward verbal aggression in children is associated with a broader range of noncooperative behaviors just as trait VA in mothers is associated with directing even in the absence of triggers for verbal aggression. Understanding this issue will require measures that tap individual differences in thresholds of neurobiological systems more directly (Morgan & Wilson, 2005) or longitudinal studies of twins that track parenting and child behavior over time (e.g., Knafo & Plomin, 2006).

Several limitations on these findings should be noted. Our results are based on a small convenience sample of predominantly low-income African-American mothers and children and, hence, caution should be taken in generalizing findings beyond this context. It merits note that most mothers who were very high and who were very low in trait VA were African American and, hence, the findings for trait VA are not confounded with race or ethnicity. In addition, the playtime interactions observed were relatively short and, hence, maternal trait VA might predict rates of child criticism had longer interactions been assessed. Although we analyzed maternal behavior at a microlevel (seven behaviors coded at 6-second intervals), our quantitative analyses assess only behavioral frequencies and not sequences. Our qualitative analyses offer insights about sequence, but they are based on only a subset of the sample, and some behaviors that emerged (e.g., PNT) were not coded quantitatively across the full sample and therefore could be idiosyncratic to this subset of mothers. Finally, mothers completed the VA scale after finishing the playtime interaction.

Although we think it is unlikely that the substantial association between maternal trait VA and directing behavior occurred because mothers were rating their trait VA by recalling their behavior during the play period, subsequent research might counterbalance the order of tasks to rule out this possibility.<sup>5</sup>

Balancing these limitations are several strengths. This study is the first—to our knowledge—to demonstrate that parental trait VA predicts parent and child behavior assessed via observational methods. Because verbally aggressive parents may hold distorted perceptions of their own and their child's behavior (Lau et al., 2006), linking self-reported trait VA to observations by trained coders/raters is an important complement to prior research. By mixing qualitative and quantitative methods, we also capitalize on the strengths of each: The qualitative analyses help clarify the meaning of the quantitative results (e.g., showing that mothers high in trait VA are not just issuing directives more frequently but rather are using them to control the choice and rate of activities more so than low-trait VA mothers), whereas the quantitative analyses help assure the validity of conclusions drawn in the qualitative follow-up (e.g., showing that different rates of directing displayed by mothers high vs. low in trait VA remain after factors such as mothers' child abuse potential or child gender are controlled).

This assessment of strengths and limitations suggests three additional directions for future research. First, we need to know more about how the differences in parenting observed in this study actually matter. What is communicated implicitly when parents interact in ways that downplay their child's preferences and limit their child's autonomy during play? Do such patterns undermine children's sense that they can reliably elicit positive responses from their parents and thereby undermine children's sense of "safe ground" and self-esteem (Morgan & Wilson, 2007)? Might parental trait VA be detrimental not just because it is associated with anger and verbal attack in stressful situations but also because it is associated with nonoptimal patterns of parenting in nonstressful situations? Answering such questions will require longitudinal data exploring patterns of parent-child interactions in a variety of situations, as well as how those patterns are associated with children's self-esteem.

Second, we need to clarify similarities and differences in the constructs assessed by the trait VA scale and the CAPI (Milner, 1994, 2004). Although mothers' scores on these two measures share substantial covariation (Wilson et al., 2006), the measures nonetheless predict different dimensions of parenting style as it is displayed during short playtime interactions: Mothers high in trait VA deliver more commands and suggestions (control/demandingness), whereas mothers high in child abuse potential ask fewer questions and offer less praise (support/responsiveness). In other work, we have shown that the two measures also share different associations with the types of thoughts mothers spontaneously recalled immediately following the play period: Mothers high in trait VA recalled more negative thoughts and feelings about their child and fewer negative thoughts about themselves compared to lower trait VA mothers, whereas mothers higher in child abuse potential simply recalled fewer thoughts and feelings about their child (positive or negative) compared to mothers lower in abuse potential (Wilson, Bylund, Hayes, Morgan, & Herman,

2002). Rather than perceiving that they are engaged in a power struggle with their child, perhaps mothers high in child abuse potential instead are “mentally absent” to a greater extent than low-risk mothers during the play period because attention they might otherwise direct toward their child is being diverted by their own general feelings of unhappiness and distress.

Finally, our study's implications for intervention with families need to be explored. There is growing recognition that a persistent pattern of parental verbal aggression itself is detrimental to children's well-being above and beyond any association between parental verbal aggression and physical abuse (Morgan & Wilson, 2005; Vissing et al., 1991). Our findings, however, suggest that trait VA may predispose parents toward a broader range of less-than-optimal forms of parenting. We must be cautious in this claim because our study does not measure child outcomes such as self-esteem or perceived social competence. Still, our findings suggest that programs working with parents high in trait VA should focus broadly on the control dimension of parenting (e.g., behaviors associated with an authoritative style) and not simply on recognizing and reducing verbal aggression, just as those working with their children should focus on building foundations for cooperative behavior.

## Notes

- 1 Data were gathered with 42 mothers and children; however, mother-child interactions from two families were lost due to equipment failure; hence,  $N = 40$  for this study.
- 2 Reliability for this 10-item aggressiveness subscale (.83) actually was higher than for the entire 20-item VA scale (.71), which is consistent with the claim that the VA scale is not unidimensional. We did exploratory analyses investigating associations between the 10-item benevolence subscale (i.e., the 10 positively worded items) and both maternal and child behavior during the play period. Mothers' benevolence scores were not significantly associated with frequencies for any maternal behavior nor with ratings of child cooperation or involvement.
- 3 One mother in our sample (no. 18) criticized her child in 12% of the 6-second intervals in her play period; no other mother had a rate of child criticism higher than 2% of all intervals. Because this mother was more than five standard deviations above the average score on child criticism for the sample as a whole ( $M = 0.004$ ,  $SD = 0.02$ ), we treated her as an outlier and reran the correlation between maternal trait VA and child criticism. After deleting this mother's scores, the correlation between maternal trait VA and child criticism was virtually 0,  $r(37) = .04$ , *ns*.
- 4 One of the four high-VA mothers (no. 6) exhibited an extremely high rate of directing; indeed, her proportional score (1.15) is more than three standard deviations above the average score for directing for the sample of 40 mothers as a whole ( $M = 0.36$ ,  $SD = 0.19$ ). Even after deleting this mother from the data, however, the correlation between maternal trait VA and directing remained statistically significant,  $r(37) = .35$ ,  $p < .05$ .
- 5 There are several reasons why it is unlikely that mothers were rating their own trait VA largely by recalling their behavior from the play period. First, trait VA scores are temporally stable; Infante and Wigley (1986) report a test-retest correlation of  $r = .82$  for

40 college students who completed the measure 4 weeks apart; mean trait VA for the sample also did not differ significantly at the two time periods. One would not expect high temporal stability if trait VA scores were influenced strongly by events occurring immediately before each test administration. Second, the trait VA scale asked mothers to evaluate their typical behavior during disagreements with people in general (e.g., spouses/boyfriends, siblings, neighbors, coworkers) and not specifically with their child. Third, mothers rarely engaged in verbally aggressive behavior during the play period, which suggests that virtually all mothers would rate themselves as low in trait VA if they were basing their answers on their behavior during the play period. Contrary to this, scores on maternal trait VA varied substantially across the sample (see Tables 2 and 3).

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**Le trait d'agressivité verbale des mères comme variable explicative des comportements  
maternels et infantiles lors d'interactions de jeu**

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**Résumé**

Cet article explore les associations entre le trait d'agressivité verbale (AV) des mères et le comportement maternel et infantile lors d'interactions de jeu. 40 mères ont participé à une période de jeu de 10 minutes avec l'un de leurs enfants (tranche d'âge = 3-8 ans) puis ont répondu à l'échelle de trait d'AV d'Infante et Wigley (1986). Le trait d'AV des mères fut associé positivement ( $r = 0,48$ ) à leur taux de contrôle et inversement ( $r = -0,44$ ) au taux de coopération de leur enfant. Des analyses qualitatives d'un sous-ensemble ( $n = 8$ ) d'interactions donnent à penser que les mères au trait d'AV élevé ont fait usage de directives pour contrôler le choix, le rythme et la durée des activités et qu'elles ont utilisé le toucher physique négatif en même temps que les directives, plus que ne l'ont fait les mères au trait d'AV faible. Les comportements associés au trait d'AV surviennent même lors de brèves interactions mère-enfant au cours desquelles les déclencheurs de comportements agressifs étaient largement absents.

## **Das Müttermerkmal verbale Aggression als Prädiktor für Mutter-Kind-Verhalten in spielerischen Interaktionen**

Dieser Artikel untersucht den Zusammenhang zwischen dem Müttermerkmal verbale Aggression (VA) und dem Mutter-Kind-Verhalten in spielerischen Interaktionen. 40 Mütter spielten 10 Minuten lang mit einem ihrer Kinder (zwischen 3-8 Jahren) und beantworteten dann die VA-Eigenschaftsskala nach Infante & Wigley (1986). Das Müttermerkmal VA war positiv assoziiert ( $r = .48$ ) mit der Häufigkeit des führenden Eingreifens und umgekehrt assoziiert ( $r = -.44$ ) mit der vom Kind beurteilten Kooperation. Qualitative Analysen eines Teils ( $n = 8$ ) der Interaktionen deuten darauf hin, dass Mütter mit hoher VA führendes Eingreifen nutzen, um die Wahl, Häufigkeit und Dauer von Aktivitäten zu kontrollieren. Sie nutzten außerdem häufiger physisch negative Berührungen zusammen mit dem führenden Eingreifen als Mütter mit niedriger VA. Mit dem Merkmal VA verbundene Verhaltensweisen finden sogar in kurzen Mutter-Kind-Interaktionen statt bei denen Auslöser für aggressives Verhalten weitestgehend fehlen.

# **El Rasgo de la Agresividad Verbal de las Madres como Vaticinador del Comportamiento Materno y del Niño Durante las Interacciones en el Recreo**

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## **Resumen**

Este artículo explora la asociación entre el rasgo de agresividad verbal de las madres (VA) y el comportamiento materno y del niño durante las interacciones en el recreo. Cuarenta madres completaron un período de 10-minutos de juego con uno de sus hijos (oscilando = 3-8 años) y luego respondieron a la escala sobre el rasgo VA de Infante y Wigley (1986). El rasgo VA de las madres fue asociado positivamente ( $r = .48$ ) con el grado de direccionamiento e inversamente ( $r = -.44$ ) con el grado de cooperación de su niño. Los análisis cualitativos de un subset ( $n = 8$ ) de interacciones sugieren que las madres con rasgos altos de VA usaron directivas para controlar la selección, el tipo, y la duración de las actividades, y usaron el contacto físico negativo junto con directivas, más que las madres con rasgos bajos de VA. Los comportamientos asociados con el rasgo VA durante las interacciones breves entre la madre y su niño que provocan el comportamiento agresivo se encuentran mayormente ausentes.

# 用源自母亲性格的言语侵犯性预测戏耍互动期间的母亲和儿童行为

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本文探讨了母亲性格言语侵犯性（VA）和母亲和儿童行为之间的关联性。四十位母亲和她们的一位孩子（3至8岁）完成了10分钟的戏耍活动，然后回答 Infante 和 Wigley's (1986) 的性格VA指数问题。母亲的性格VA和他们的发指令的频率为正相关 ( $r = .48$ )，和她们孩子所评估的合作反相关 ( $r = -.44$ )。互动子集 ( $n=8$ ) 的定量研究建议：高VA性格的母亲比低VA性格的母亲更多地通过指令来控制活动的选择、频率和持久度并配上身体的负面接触。和性格AV相关的行为即使在短暂的，无侵犯性行为的诱发因素的，母亲-儿童互动期间也会发生。

놀이시간 상호작용기간중 어머니와 아이 행위의 예측계로서 어머니들의 특징적 언어  
폭력에 관한 연구

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요약

본 논문은 놀이시간 상호작용에서의 어머니들의 특징적 언어폭력(VA)과 어머니와 아이들의 행위사이의 관련성에 대한 연구이다. 40명의 어머니들이 그들의 어린이들(3살부터 8살 사이)과 10분간 놀이시간을 같도록 했으며, 그 후 Infante 와 Wigley's (1986)의 특징적 VA척도에 대답케 하였다. 어머니들의 특징적VA는 그들의 감독비율과 긍정적으로 연계( $r = .48$ )된 것으로 나타난 반면, 그들 어린이들의 비율화된 협조와는 반대의 관계( $r = -.44$ )를 보인 것으로 나타났다. 상호작용의 하부 영역( $n = 8$ )에 대한 양적분석들은 특징적 VA가 높은 어머니들은 낮은VA부모들보다, 활동들의 선택, 비율, 그리고 기간을 통제하기 위해 지시를 내리는 반면, 육체적으로는 별 접촉을하지 않는 것으로 나타났다. 특징적VA와 연계된 행위들은 짧은 기간 동안의 어머니와 아이간 상호작용중에서도 나타났다.