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The Parent Affect Test: Development, Validity, and Reliability

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The studies described here report the development of a Parent Affect Test (PAT), measuring parental anger (PATa) and pleasure (PATp) towards children, together with reliability and validity tests. A behavior-analytic approach was used; situations and anger/pleasure related response scales were empirically generated. Married parents filling out the scale rated themselves and their spouse on typical anger and pleasure towards their children. The pattern of results suggested acceptable reliability and some validity of the PATa for mothers and the PATp for fathers. The inventory was also given to mothers attending Parents Anonymous (PA). The PATa significantly differentiated PA from a control group of mothers.

The role of anger in the etiology and maintenance of punitive, aggressive and violent behavior directed at children has been assumed to be an important one by a number of researchers in recent years (Gordon, Jones, & Nowicki, 1979; Spinetta, 1978; Kenel, 1976). However, investigations of parental anger have been hampered by the absence of adequate measures that distinguish between anger as an *affective* response and both aggression as a motor response and *attitude* as a cognitive response. Further, there have been no instruments to assess the affective experience of parental anger specifically.

The importance of distinguishing between affect and action is assessing anger has been stressed by Novaco (1975) and Biaggio (1980). In a factor analysis of responses to four general anger self-report instruments, Biaggio found five separate factors, two of which accounted for 75.7% of the common variance: 1) willingness to experience and express anger (58.9%) and 2) overt (motor) anger expression (16.8%). One of the measures reported on by Biaggio, the Anger Self-Report (ASR) developed by Zelin, Adler and Myerson (1972), was used by Kenel (1976) in attempting to discriminate between child abusing mothers and assaultive non-abusing mothers. Although Biaggio found that several ASR subscales have moderate to high loadings on the two general anger factors (.41 to .82), none of the subscales provided statistically significant differences between the comparison groups in Kenel's study. This suggests that the ASR and other general anger measures have limited utility in assessing the role of anger in child abuse as differentiated from other aggressive behaviors.

Using the 50-item Michigan Screening Profile of Parenting (MSPP) developed by Helfer, Schneider and Hoffmeister (1977), Spinetta (1978) derived six clusters of questions by factor analysis. One of these clusters, which he called "tendency to become angry and upset", significantly discriminated between abusing mothers and other groups of non-abusing mothers. However, the questions relating to anger, while attempting to tap different dimensions of self-reported anger, are so few that they do not provide adequate measurement of any of them. Degree of affective anger response was investigated by Gordon, et al. (1979) in test construction of the Intensity of Parental Punishment Scale (IPPS). Although the authors concluded that the 47 child behaviors in the IPPS have a high correlation with felt parental anger, they ap-

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parently chose not to include anger affect responses in the instrument.

Clearly, a measure of parental affective responses is needed. The purpose of the series of studies presented here is to develop such a measure and to provide evidence in support of its validity and reliability. A paper-and-pencil format was proposed for the instrument, since a secondary aim was to develop an efficient screening tool for a large number of parents with anger problems. The format which we selected is similar to that developed by Endler and Hunt (1968) in the measurement of situational hostility.

Experimental data on parent training programs that teach parents to positively reinforce desirable child behaviors (e.g., Patterson, Littman, & Hinsey, 1964), as well as common sense, suggest that a measure of parental anger that includes neutral-to-pleased poles would be beneficial. As Westbrook (1976) has pointed out: "The most important distinction people make about their experience is between the good and the bad, the positive and negative, the pleasant and unpleasant" yet there are no general measures of positive affect. And, as with parental anger, there are apparently no instruments for assessing parental pleasure.

Therefore, the primary purpose of our research was the development of a parental affect inventory with two subscales, one to tap anger responses to negative child behaviors and a second scale to measure responses to positive child behaviors (pleasure score). Thus, the focus of the inventory is on measuring the experience of affect rather than the concomitant cognitive processes or motor responses which might be expressive of affect. Two validity studies were also conducted. In the first, parent couples were asked to answer the Parent Affect Test (PAT) and to rate both their own and their spouse's problems with anger toward and tendency to feel intensely pleased with their children. We predicted that self and spouse reports of anger problems would be positively correlated with anger scores while self and spouse reports of a tendency to feel intensely pleased would be positively related to pleasure scores on the PAT.

Since the validity of any self-report inventory is potentially contaminated by the test-takers' tendency to respond in a socially desirable fashion (SD), the Edwards Social Desirability Inventory (1953) was also administered to measure whether scores on the PAT are tapping a more general tendency to answer questions according to their judged desirability.

Our second validity study compared the scores of mothers attending Parents Anonymous (PA) groups for their own problems with scores of general population mothers matched for marital status. (Individuals attending Parents Anonymous for themselves are primarily those parents with self-identified problems with child abuse.) Because, as noted previously, others have suggested that anger towards children is related to child abuse, we predicted that PA mothers would score higher on the anger scale than the control mothers.

Inventory Development

Situation Generation

Subjects and procedure. A total of 244 fathers and 323 mothers were sampled. With the exception of 34 subjects from Washington, D.C., all parents were from the Seattle, Washington area. In an effort to obtain a mixed racial, educational, and economic group, subjects were sampled in area shopping centers, welfare waiting rooms, and other public places. The first 383 subjects were asked to list as many situations as they could remember where one of their children did something upsetting to them. They were instructed to describe the situation in detail, note how they felt and what it was about the situation that was upsetting. A number of examples were given. Parents continuously asked us, however, if they could also write down child behaviors that were pleasing. It was at this point that we decided to expand the proposed instrument and include affective responses to positive situations as well. The final 184 subjects were asked in counter-balanced order to report both negative incidents and child behaviors that made them feel good.

Results. Approximately 1,000 negative situations were generated by the first sample and another 1,000 positive and negative situations by the second sample. Situations were examined by the authors and those where parents indicated responding with negative emotions other than anger (irritation, being "mad", etc.) were eliminated. Although it was comparatively easy to eliminate non-anger inducing situations in the negative case (for example, reported feelings of disappointment or fear are different than anger; irritation and feeling "mad" are variations in the emotion of anger) such was not the case with the positive items. In general, it seemed less defensible to differentiate pride or feeling warm from feeling pleased. Thus, all items eliciting positive affect were kept with the exception of duplicate and ambiguous items. The remaining items were categorized according to similarity of content and rewritten in a general, brief format (e.g., "My child stole something."). An attempt was made to include items pertinent for various developmental age groups in an attempt to apply the inventory to

as many children as possible. A total of 164 items (97 negative items and 67 positive) remained.

Affect and Relevancy Check on Situations

This phase of the research was conducted to determine first, whether the affective scaling of the items was accurate, i.e., angry vs. pleased items, and second, whether the items were relevant to a wide sample of parents with children of various ages.

Subjects and procedure. Volunteer parents (in exchange for lemonade or coffee) at area street fairs, grocery stores, and shopping centers were subjects. A first sample of 92 parents (63 mothers and 29 fathers) were asked to rate their emotional responses to each of the 164 items on a 9-point Likert type scales (very pleased, very angry). Respondents were instructed to rate items that were not applicable to any child within the family because of age as neutral affectively. An exception was a small group of items written to apply to children under 5 years of age; these items were listed separately and parents were instructed to respond to them only if one or more of their children were under 5 years ($n=39$). A second sample of 180 parents (138 mothers and 42 fathers) were asked to report on the frequency (in absolute numbers) with which a given child only had exhibited each of the 164 behaviors during the previous two weeks. Parents were asked to report on only one child and were selected such that there were ten parents representing each of 18 cells by age of child (one year and under, 2 years, and so on through 18 years).

Results. Combining the affective ratings of the first sample with the frequency ratings of the second sample, we found that behavior ratings for children under the age of two years were sufficiently different both in frequency and affective parental response from ratings for older children to require a separate inventory. Similarly, parent ratings for children aged 12 years and older indicated that these children did not frequently exhibit many of the behaviors during a two-week period to allow for the development of an effective screening instrument. However, for children aged 2 through 11 years, 40 items (20 anger-inducing and 20 pleasure-inducing situations) had a high probability of occurring within a two-week span.

Criteria for selection for each situation item were: 1) To qualify as a good situation item for a particular age, the percent of parents indicating that the event occurred during the past two weeks had to be 50% or better; 2) To qualify as a good situation item across ages (and, thus, be included in the inventory), all but two of the ages had to meet the 50% criteria, and those two ages could not be at the same end of the age range being examined; 3) the affective loading was unambiguous indicating that anger items elicited anger and pleased items elicited pleasure.

Response Generation

Because affect can be conceptualized as a *pattern* of responses (Osgood, Suci, & Tannebaum, 1957), wherein multiple dimensions of the experience can be seen to converge, the format of our inventory was designed to allow parents to rate their responses to child behaviors on a series of six, 7-point bipolar response scales. Scales were selected that had a demonstrated utility in anger research and that were related to the intensity or direction of emotional responding. Three scales, "feel good/bad", "feel angry/pleased", feel tense/relaxed", were included because they have been found to be significant dependent variables associated with self-report of anger induced in the laboratory (Kaplan, 1975).

Additional response scales were generated empirically by asking 24 parents, "When your child does something that angers (pleases) you, how do you feel?" Parents were questioned until redundancy of categorical response was reached. Responses were collapsed categorically; polar opposites were selected from those empirically generated logically. Three additional response patterns were generated in this manner: "want to yell/praise", "want to hug-kiss/hit-spank", and "want to send child to room/be with child".

Format and Scoring

The format of the Parental Affect Test (PAT) consists of the forty child behaviors (20 anger and 20 pleased items) listed in random order (see Table 1 for items) with the six bipolar responses, listed in one of four random orders and balanced for directionality, directly below each item. In all of the studies reported here, the inventory requires the parent to select one child and respond to each item as if that particular child had engaged in the action described. Two scores can be obtained, the first by summing the average ratings for the 20 anger items (PATa) and a second score by summing the average ratings for the 20 pleasing items (PATp). Scores are calculated such that a high score on each scale represents high anger and high pleasure, respectively. Two separate scores are calculated since it makes little sense conceptually to consider total affect as the average of affective responses to both negative and positive events. Additionally, it is quite possible that groups may differ in terms of how they respond to negative vs. positive child behaviors.

Table 1. *Parent Affect Test: Items and Scales*[1]

Scales

1. feel angry	_ _ _ _ _ _ _ _ _	feel pleased
2. feel bad	_ _ _ _ _ _ _ _ _	feel good
3. feel tense	_ _ _ _ _ _ _ _ _	feel relaxed
4. want to hit/spank	_ _ _ _ _ _ _ _ _	want to hug/kiss
5. want to yell	_ _ _ _ _ _ _ _ _	want to praise
6. want to send child to room	_ _ _ _ _ _ _ _ _	want to be with child

Items: Negative Situations

1. My child gets into some things that don't belong to him/her
2. My child does not listen to me
3. My child talks back to me
4. My child comes home dirty and messy
5. My child leaves his/her belongings all over the house
6. My child interrupts me while I am on the phone (eating dinner, etc.)
7. My child carelessly spills something (a drink, plate of food, etc.)
8. My child criticizes me as a parent
9. My child does not do his/her household chores
10. When getting dressed to leave the house, my child dawdles and fools around
11. My child asks me repeatedly if he/she can have something
12. My child complains
13. I ask my child to do something and he/she gets really angry
14. My child begins yelling
15. I repeat more than once what I want my child to do, and he/she still doesn't do it
16. My child puts his/her feet on the furniture
17. My child starts crying when I punish him/her
18. My child pesters other children
19. My child asks me repeatedly if he/she can do something
20. My child does not clean up his/her room

Items: Positive Situations

1. My child shares a favorite possession with a friend
2. My child acts respectful toward me
3. My child makes a good decision
4. My child expresses the desire to be with me
5. My child learns something new quickly
6. When I play a game with my child, he/she smiles a lot
7. My child takes good care of his/her belongings
8. My child comes to me and gives me a kiss
9. My child greets me pleasantly when I come home
10. My child chooses to eat a well-balanced meal
11. My child seems happy
12. My child enjoys the outdoors and nature
13. I ask my child to do something for me and he/she does it
14. My child acts respectfully toward someone in authority
15. My child hugs me
16. I explain to my child why he/she needs to stop some bad behavior and he/she obeys me
17. My child helps out with the household chores without being asked
18. My child joins me in an activity (walking, bowling, swimming, etc.)
19. My child is honest and confides a mistake he/she has made
20. While playing at sports, my child does very well

[1]Copies of the actual inventory can be obtained by writing the first author.

Validity and Reliability: Convergent and Discriminate Validity with a General Population

Method

Subjects. Via area radio, poster, and letter advertisements, 49 couples with children between the ages of 2 and 11 years were recruited.

Measurement. Each parent received the PAT, the Edwards Social Desirability Inventory, and a demographic data schedule (Linehan, Note 1). In addition, 16 couples received a questionnaire designed by the authors to tap self-reports of anger problems, perceptions of spouse anger problems, self-reports of intense pleasure with their children, and perceptions of spouse's pleasure with children. Specifically, parents were asked to rate on seven-point scales the degree to which 1) "You consider that you have a problem with anger towards your child(ren)" (anger self-report); 2) "Someone observing you with your child(ren) would consider that you have an anger problem" (imagined report of observer); 3) "You consider that your spouse has a problem with anger towards the child(ren)" (spouse anger); 4) "You (are) a person who very often or very intensely feels pleased with your child" (self-report pleasure); 5) Your spouse (is) a person who very often or very intensely feels pleased with your child" (spouse pleasure).

Parents were instructed as to which of their children they should respond to on the PAT and assignment was conducted such that the designated children were representative across the age range. Subjects were tested in groups.

Results

PATa and PATp scores were computed for mothers and fathers separately. Means and standard deviations are presented in Table 2. Student's *t*-tests were performed and indicated no significant difference between mother's and father's PATa scores ($t(44) = 1.61$). Mothers, however, scored significantly higher on the PATp scale ($t(44) = -4.12, p < .01$).

Table 2. *Means and Standard Deviations of the PAT for Mothers and Fathers*

	PATa		PATp	
Parent	*M*	*SD*	*M*	*SD*
Mothers	98.02	8.79	130.34	9.62
Fathers	95.58	7.22	121.01	12.47

Validity. Pearson product-moment correlations were computed between PATa and PATp scores and for both the PATa and PATp with anger self-reports, imagined reports of observers,

and self-reports of pleasure. In addition, the two scores on the PAT for each parent were correlated with their spouse's ratings of their degree of anger problem and degree of intense pleasure experiences. Taken together, these correlations produce both a measure of convergent validity using two methods (self-report and spouse report) as well as a measure of divergent validity (PATa vs. PATp). Examination of Table 3 suggests that the pattern of results are markedly different for mothers and fathers. For mothers, the PATa appears to be highly (and positively) related to self and spouse reports of anger problems. In contrast, for fathers, the PATp scores are negatively correlated with anger self-report and imagined reports of observers although positively correlated to self-report of general pleasure with the child. The father's PATa and the mother's PATp are negatively correlated with *SD*. For both sexes, PATa is negatively correlated with self-reports of general pleasure with the children. The correlations of PATa with PATp in both the fathers' and mothers' groups were low but significant.

Reliability. In order to measure internal reliability of each of the scores, Cronbach's Alpha statistic was computed for the PATa and PATp separately. Results indicated an $r = .92$ for the PATa and .96 for the PATp, for the entire sample.

Table 3. *Significant Correlations of PATa and PATp with Comparison Measures for Mothers and Fathers*

	Mothers		Fathers	
Measure	*PATa*	*PATp*	*PATa*	*PATp*
PATa	--	+.33**	--	+.21#
Social Desirability (Edwards)	-.09	-.24*	-.26*	.41
Self-Reported Anger Problem	+.76***	+.30	.27	-.51*
Imagined Observer Report of Anger Problem	.37	-.14	.27	-.46*
Spouse-Reported Anger Problem	.64**	.25	-.12	.03
Self-Reported Intense/ Frequent Pleasure	-.51*	.02	-.50*	.50*
Spouse-Reported	-.01	.25	-.30	.41

* = $p < .05$
** = $p < .01$
*** = $p < .001$
\# = $p < .055$

Validity: Between Groups Comparison

Subjects and Procedures

Subjects were 17 mothers attending Parent's Anonymous (PA) groups and 17 general population mothers. General population mothers were recruited to match PA mothers on marital status. The two groups were also equivalent on age, income, and number of children. Subjects were asked to fill out the demographic data schedule (asking non-identifying information) and the PAT. Several questions were included to indentify and then exclude from the sample those PA parents attending for reasons other than their own problems (e.g., spouse problem), as well as those general population mothers with a history of child abuse or attendance at PA meetings for self-identified problems. Subjects were tested both individually and in groups and some mothers took the inventory home to fill out. In all cases, confidentiality was maintained.

Results

Separate *t*-tests were computed for the PATa and the PATp, respectively. Results indicated that PA mothers scored higher on the PATa than did general population mothers. Means were 112.55 and 99.25 respectively. There was no difference between the two groups on PATp (Ms = 126.52 and 129.18 for the PA and general population mothers, respectively).

Discussion

The overall purpose of the research presented here was to develop a reliable and valid measure of parental affect. Our methodology in developing our instrument, the Parental Affect Test, suggests that the inventory has acceptable content validity for parents of children aged two to eleven years. The large number of both child behavior situations and parental responses generated is more than adequate for representative sampling from these two domains.

The convergent and discriminant validities of the instrument, however, appear to be markedly different depending on whether the test taker is a mother or a father. In general, our results suggest that the PATa subscale has acceptable validity for mothers. We found high correlations between scores on it and self-reports of anger problems, self-reports of little pleasure with children, as well as husband reports of wife anger problems. In addition, the scale discriminated between mothers with a history of child abuse concerns and mothers with no such history. In contrast, no evidence for the discriminant validity of the PATp scale for mothers was found in these studies. The absence of a relationship between social desirability scores and the PATa suggests that for mothers the anger scale is not contaminated by a tendency to answer in a socially desirable fashion.

Just the reverse was the case with fathers. When examining the pattern of relationships here we found evidence of validity for the PATp scale,

with little evidence to suggest remarkable validity for the PATa for fathers. Although neither scale was related to wife reports of an anger problem in her husband, the PATp was negatively related to self-reports of an anger problem and positively related to self-reports of frequent or intense experience of pleasure with the children. These data suggest an intriguing hypothesis. For men, a measure of pleasurable feelings towards children (the PATp) may be a more sensitive measure of anger problems with their children. The moderate but significant, negative relationship between social desirability scores and PATa for fathers further supports this conclusion and suggests that reporting parental anger may be less socially desirable for fathers than for mothers, a finding in contrast to findings on sex differences on the acceptability of anger in general. If such is the case, it might be useful to try and develop methods for reducing the social undesirability of parental anger reports for fathers.

The internal reliability of each scale is extremely high and supports the summing of scores over items. The low, but significant, correlation between PATa and PATp scales suggest some overlap, possibly due to a tendency of the instrument to measure emotionality, or intensity of emotional reactions to children in general. More interesting, however, is the substantial independence of the two scales. Not only is the correlation low, but the pattern of results found for each scale were quite different with almost no overlap between findings for PATa and PATp.

Further research is needed to replicate these findings. The *n*s for most analyses were quite low and, thus, the studies should be repeated with larger samples. In addition, the Parents Anonymous study should be extended to include fathers. If we compare a group of Parents Anonymous fathers with a matched group of general population fathers, we might find results on the PATa comparable to those found for mothers. The absence of direct observation data is a further shortcoming of the studies presented here. Research is needed where PAT responses can be correlated with observations of the parents in similar situations. In the absence of such data, it is impossible to determine conclusively whether the PAT is measuring actual differences in experienced anger and pleasure or simply a shared parental belief, due in part to the spouse communicating his or her beliefs to the partners, that anger and pleasure are at a certain level. Thus, we would not recommend the use of the instrument as a sole measure of parental affect and suggest that additional behavioral data also be collected. The Parent Affect Test, however, while still in the experimental stages, does appear to have promise as a screening device for identifying parents likely to experience affective problems relating to their children.

The current study did not allow comparison of affective responses on the part of parents to identical behaviors across the age span. One would expect response differences, depending on the child's age. Normative data for item scores by age would be most useful in interpreting the meaning of the PAT in the individual clinical case.

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