

Attachment in Surinam-Dutch Families: A Contribution to the Cross-Cultural Study of Attachment

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A study on attachment in indigenous Dutch families and in families who came to the Netherlands from Surinam—a former Dutch colony in South America is described. Sixty-five mothers and their infants participated, including 26 mothers who had immigrated from Surinam. Attachment behaviours and maternal responsiveness were recorded in the Strange Situation and in free play. The Infant Characteristics Questionnaire, and a questionnaire on child-rearing attitudes were completed. In the Surinam-Dutch group, maternal responsiveness was related to quality of attachment, although the Surinam-Dutch mothers scored significantly lower on the responsiveness scale than the Dutch mothers. The attachment classification distribution of the Surinam-Dutch dyads did not significantly differ from Dutch or global distributions. However, Surinam-Dutch mothers appeared to be more anxious about child-rearing than Dutch mothers. Surinam-Dutch mothers who had recently arrived in Holland tended to show less responsiveness, and were more anxious about child-rearing than Surinam-Dutch mothers who had immigrated several years ago. These data may reflect strains that arise from the transition from one culture to another.

INTRODUCTION

In attachment theory it is hypothesised that the readiness to establish an attachment relationship, defined as a relatively durable affective relation-

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ship between children and one or more specific persons with whom they regularly interact (Bowlby, 1971; Ainsworth, Blehar, Waters, & Wall, 1978), is a universal phenomenon. Because of its evolutionary roots, attachment is claimed to be present in all human beings, irrespective of the specific culture in which they were born (Ainsworth, 1967; Bowlby, 1971). Studies in several different cultures have been carried out to test the universality hypothesis, not only in the U.S.A. but also in Western-European countries like Great Britain (Smith & Noble, 1987), The Netherlands (Van IJzendoorn, Goossens, Kroonenberg, & Tavecchio, 1985), Sweden (Lamb, Hwang, Frodi, & Frodi, 1982), and West Germany (Grossmann, Grossmann, Huber, & Wartner, 1981); in Africa (Kermorian & Leiderman, 1986); in Israel (Sagi et al. 1985); and in Japan (Durrett, Otaki, & Richards, 1984; Miyake, Chen, & Campos, 1985). From these studies it can be deduced that attachment behaviours are present in every culture and that the intracultural differences in quality of attachment—as measured through the Strange Situation procedure (Ainsworth & Wittig, 1969)—are larger than the cross-cultural differences (Van IJzendoorn & Kroonenberg, 1988).

Cross-cultural comparisons could not take into account, however, South-American cultures, because attachment research has not yet been carried out in that part of the world (Van IJzendoorn & Kroonenberg, 1988). Following Li-Repac (1982), who studied attachment in Chinese immigrant families in the U.S.A., we decided to study attachment in families who came to the Netherlands from Surinam—a former Dutch colony. Until the beginning of the seventies, the Surinamese emigrated mainly because they wanted to get a higher level of education in the Netherlands. Most of these emigrants were Creole-Surinamese. In the years before and after the independence of Surinam in 1975 the number of emigrants grew enormously because of the negative economic prospects in Surinam, and because of the insecure political situation there. Hindustani, Javanese, and other ethnic groups decided to emigrate to the Netherlands especially because they feared Creole domination after independence. In 1985 more than 30% of the whole Surinamese population was residing in the Netherlands (about 195 000 people) (Van den Berg-Eldering, 1988).

Of course, it is not possible to describe “pure” cultural differences when immigrant families are studied, because they are in a transitional stage, being exposed to new cultural values (Li-Repac, 1982). Nevertheless we hypothesised that parents raised in Surinam would show at least some culture-specific child-rearing behaviours and attitudes. The question then is whether attachment patterns found in the Surinam-Dutch group are comparable to those found in families from other cultures, and especially in Dutch families. Furthermore, intracultural differences should be focused upon because the Surinam-Dutch group consists of families from different ethnic origins, i.e. Creole, Hindu and Javanese. Before being

able to answer these questions, however, the validity of the Strange Situation procedure to measure attachment in Surinam-Dutch families must be established. Parental responsiveness to infant's signals is considered to be one of the most important validity indices for attachment security (Ainsworth et al., 1978; Bretherton, 1985; Lamb, 1987). It was therefore hypothesised that in the Surinam-Dutch sample a higher degree of maternal responsiveness would correspond with greater infant attachment security.

In sum, four hypotheses will be tested. First, we hypothesise that the Strange Situation procedure is a valid instrument to measure attachment security in our Surinam-Dutch sample, and correlates with maternal responsiveness. Secondly, we hypothesise that the Surinam-Dutch attachment classification distribution does not differ significantly from the distribution in a comparable Dutch sample nor from the "global" distribution (Van IJzendoorn & Kroonenberg, 1988). Thirdly, we suppose that intra-cultural differences in attachment classification distribution may be greater than cross-cultural differences. Fourthly, it is hypothesised that Surinam-Dutch mothers have not been completely assimilated into the Dutch culture, but on the contrary show different child-rearing behaviours and attitudes from Dutch mothers.

METHOD

Subjects

In this study 65 mothers and their infants participated. All subjects had Dutch nationality, but 26 mothers had immigrated from the former Dutch colony, Surinam, a South-American country. Mean duration of stay in Holland was 13.2 years. ($SD = 4.89$; minimum 6 years and maximum 22 years). Fifteen mothers from the Surinam-Dutch sample were Creole, eight were Hindu, and three were from other ethnic groups. Mean educational level of the Surinam-Dutch mothers was 4.4 ($SD = 1.63$) on a scale ranging from 1 (low, i.e. 6 years of school attendance) to 9 (high, i.e. 16 years or more). Their infants were 18 months old ($SD = 2.10$) and 39% of the infants were boys. Mean educational level of the 39 Dutch mothers was 6.2 ($SD = 2.62$). The Dutch infants were 18.7 months old ($SD = 0.61$), and 49% were boys. Subjects were recruited through birth announcements in a local paper; and through personal contacts of research assistants.

Procedures

The Strange Situation. The Strange Situation procedure for measuring quality of mother-infant attachment consists of eight episodes, the last seven of which should ideally last 3 minutes each; episodes may be

shortened, however, if the baby is very upset. The infant is confronted with a strange environment (i.e. the playroom in the laboratory), with a strange person, and with two separations from the mother (for details see Ainsworth et al., 1978). To assess the quality of the attachment relationship, the behaviour of the infant is scored on six 7-point rating scales. The scales are for proximity and contact seeking, maintenance of contact, resistance, avoidance, search behaviour, and distance interaction. The pattern of scores in the two reunion episodes leads to the classification of mother–infants dyads as having anxiously avoidant attachment (A), secure attachment (B), or anxiously resistant attachment (C).

Two native Dutch observers (Hans Plomp and Marinus van IJzendoorn) independently coded 20 video-recorded Strange Situations. Mean reliability of the interactive scales was 0.78; intercoder agreement for classification in the three main categories was 90%. The author of this paper, who coded all Strange Situations, was trained by Brian Vaughn in a Strange Situation workshop at the University of Minnesota (Minneapolis). After coding crying behaviour in the two reunion episodes following the coding system of Ainsworth et al. (1978) (intercoder reliability 0.99), a continuous scale for security of attachment was computed, based on the algorithm validated by Richters, Waters, and Vaughn (1988).

Responsiveness. Responsiveness was defined as the mother's ability to perceive and interpret accurately signals implicit in the infant's behaviour, and to respond to them promptly and accurately (Ainsworth, Bell, & Stayton, 1974). Mothers were asked to play with their infant, as they habitually did at home, in our laboratory playroom for 8 minutes before the Strange Situation procedure started. Play sessions were recorded on video, and Ainsworth et al.'s (1974) rating scale for measuring responsiveness was applied to rate maternal behaviour. The native Dutch coder—Marion van Dam—was blind to infants' attachment classifications. Intercoder reliability on ten sessions was 0.92.

Infant Characteristics Questionnaire (ICQ). The mothers in our samples completed the Dutch version of the ICQ (Bates, Freeland, & Lounsbury, 1979) to assess temperament. Kohnstamm (1984) found satisfactory validity and reliability figures in a sample of 7000 Dutch parents. The following dimensional structure was found (see also Tavecchio & Van IJzendoorn, 1987):

1. *Difficultness.* This dimension indicates how often a child cries or fusses and how much attention he/she generally demands from the caregiver. A low score indicates an "easy" temperament. Alpha reliability for the Surinam–Dutch mothers was 0.63, and for the Dutch mothers 0.69.
2. *Adaptability.* This dimension indicates the child's ability to adapt to

new circumstances, such as strangers or environments. A low score indicates a high degree of adaptability. Alpha reliability for the Surinam-Dutch sample was 0.75 and for the Dutch mothers 0.87.

3. Cuddly. This dimension reflects the child's acceptance of being picked up or cuddled. A low score indicates dislike for being cuddled. Alpha reliability for Surinam-Dutch mothers was too low: 0.12, and for Dutch mothers 0.66.

4. Persistence. This dimension indicates the child's obedience and docility. A high score corresponds with disobedience. Alpha reliability for the Surinam-Dutch sample was 0.73, and for the Dutch sample 0.76.

5. Mood. The child's typical mood (cheerful or rather sober). High scores point to a rather dejected mood. Alpha reliability for the Surinam-Dutch group was 0.74, and for the Dutch group 0.86.

Child-rearing attitudes. A questionnaire measuring maternal attitude to child-rearing methods and problems was applied. The questionnaire has been developed and validated by Engfer and Schneewind (1976) who found the following scales:

1. Stress. This scale, consisting of six items, indicates the degree to which the mother feels overburdened by child-rearing problems. Alpha reliability for the Surinam-Dutch group was 0.77; and for the Dutch mothers 0.67.

2. Punishment. This scale of six items reflects mother's opinion about physical punishment as a child-rearing method. Alpha reliability for the Surinam-Dutch sample was 0.74 and for the Dutch mothers 0.70.

3. Frustration. This scale of five items indicates parental feelings of being restricted by the child in doing things for themselves. Alpha reliability in the Surinam-Dutch group was 0.69, and for the Dutch mother 0.78.

4. Anxiety. This scale is based on eight items and reflects maternal concern for the child's health and development. Alpha reliability for the Surinam-Dutch mothers was 0.64 and for the Dutch group 0.72.

5. Role. This scale, consisting of four items, points to the role of children in the mother's life: the child's importance for maternal feelings of self-fulfilment. Alpha reliability for the Surinam-Dutch group was 0.65, and for the Dutch mothers 0.82.

Low scores on the childrearing attitude scales indicate high degrees of stress, frustration, and anxiety, and a central role of the child in parent's life. A low score on punishment reflects a rather positive view on physical punishment as child-rearing method.

Analysis

First, a Spearman correlation coefficient for the relation between attachment security and maternal responsiveness in the Surinam–Dutch sample was computed. Because of the small sample size a distribution-free coefficient was preferred. Secondly, intracultural differences in attachment security, responsiveness, temperamental variables, and child-rearing attitudes within the Surinam–Dutch sample were tested through the distribution-free Mann–Whitney U test. Thirdly, cross-cultural differences in attachment classification distributions were assessed using a test for multinomial distributions, in which proportions found for the global and the Dutch samples are taken as the expected values for the Surinam–Dutch sample. Furthermore, using Van IJzendoorn and Kroonenberg's (1988) algorithm, the Surinam–Dutch sample was projected into the global distribution to see which samples were closest to the Surinam–Dutch sample. Lastly, temperamental differences and differences in child-rearing attitudes and behaviour between the Surinam–Dutch and the Dutch dyads were tested through analyses of covariance.

RESULTS AND DISCUSSION

The Strange Situation and Surinam–Dutch families. One of the most important indicators of the validity of the Strange Situation procedure is its correspondence with maternal responsiveness. In this study, responsiveness of Surinam mothers correlated 0.34 ($P < 0.05$) with the continuous variable security as computed according to the Richters et al. (1988) algorithm. The more responsive Surinam mothers were to their infants' signals in a free-play situation, the more secure their infants behaved in the stressful Strange Situation procedure. Although the correlation is not high compared to the Ainsworth et al. (1978) findings, it is well above the average correlational effect size found by Goldsmith and Alansky (1987) in their meta-analysis of 12 pertinent studies (0.16). Responsiveness tended to correlate positively with time spent in Holland (0.35; $P = 0.059$; $N = 21$): the longer the Surinam–Dutch mothers had stayed in Holland, the more responsive to their infants' signals they tended to be.

The sample of Surinam–Dutch families was not culturally and racially homogeneous. Creole, Hindustani, and other ethnic groups were represented. Because of our small sample size, we were only able to compare Creole with other ethnic groups on security of attachment. With the Mann–Whitney U test, we did not find an intracultural difference in security of attachment ($U = 74$; $P = 0.66$). Also, we did not find intracultural differences in maternal responsiveness ($U = 76$; $P = 0.73$), nor in temperamental variables or child-rearing attitudes between the Creole and the other groups.

TABLE 1
Comparison of Surinam-Dutch, Dutch, and Global Attachment Classification Distributions

Classification	Surinam-Dutch		Dutch		Global ¹	
	n	(%)	n	(%)	n	(%)
Avoidant (A)	6	(23)	14	(36)	423	(21)
Secure (B)	14	(54)	21	(54)	1294	(65)
Resistant (C)	6	(23)	4	(10)	273	(14)
Total	26	(100)	39	(100)	1990	(100)

¹Global distribution derived from Van IJzendoorn and Kroonenberg (1988).

Cross-cultural differences in attachment classification distributions are described in Table 1. The Surinam-Dutch sample seems to have contained an overrepresentation of resistant infants (23% versus 14% in the global distribution) but a statistical comparison of the Surinam-Dutch distribution with the Dutch and the global distributions did not reveal any significant differences (Surinam-Dutch versus global distribution: $X^2(2) = 2.14$; $P = 0.34$; Surinam-Dutch versus Dutch distribution: $X^2(2) = 2.38$; $P = 0.30$).

Using the following formulae for computing the X co-ordinate and Y co-ordinate respectively, the Surinam-Dutch sample can be projected into the correspondence analysis solution of the samples-by-classification table given in Van IJzendoorn and Kroonenberg (1988):

$$X = (-0.6447 f_A - 0.0313 f_B + 1.1473 f_C)/(0.2696 \times N)$$

$$Y = (-0.7031 f_A + 0.3495 f_B - 0.5670 f_C)/(0.2286 \times N)$$

where $N = f_A + f_B + f_C$.

The X co-ordinate is 0.3677, and the Y co-ordinate is -0.4589. The Surinam-Dutch sample distribution was closest to the U.S. samples of Schneider-Rosen and Cicchetti (1984), and Egeland and Farber (1984), and the Chinese-American Li-Repac (1982) sample (see Van IJzendoorn & Kroonenberg, 1988). These samples were characterised by an overrepresentation of anxious attachments, especially C-type attachments.

Differences between Surinam-Dutch and Dutch dyads. Although the Surinam-Dutch attachment classification distribution did not appear to deviate significantly from the Dutch and global distributions, Surinam-Dutch and Dutch mothers appeared to differ rather strongly in responsiveness to infants' signals in a free-play situation. In Table 2 means and

TABLE 2
Temperamental and Attitudinal Differences Between Surinam–Dutch and Dutch
Mother–Infant Dyads

Variables	Surinam–Dutch (<i>n</i> = 26)		Dutch (<i>n</i> = 39)		Controlled for educational level	
	<i>M</i>	(<i>SD</i>)	<i>M</i>	(<i>SD</i>)	<i>F</i>	<i>P</i>
Temperament						
Difficulties	3.4	(1.03)	3.0	(0.67)	4.3	0.043
Adaptability	3.1	(1.32)	2.8	(1.06)	3.2	0.077
Cuddly	5.0	(1.57)	4.6	(1.20)	1.3	0.264
Persistence	4.8	(1.74)	4.3	(1.23)	3.1	0.082
Mood	2.0	(1.04)	2.2	(0.85)	0.3	0.580
Attitudes						
Stress	2.1	(0.65)	2.4	(0.50)	5.3	0.024
Punishment	1.9	(0.77)	2.4	(0.49)	6.2	0.015
Frustration	2.3	(0.74)	2.5	(0.51)	5.3	0.025
Anxiety	2.2	(0.49)	2.7	(0.47)	12.4	0.001
Role	1.5	(0.59)	2.1	(0.64)	6.6	0.012
Responsiveness	3.6	(2.14)	6.5	(1.70)	25.6	0.000
Security	0.00	(0.82)	0.00	(1.20)	0.01	0.931

Note. Degrees of freedom for the *F* tests: 1,63.

standard deviations for maternal responsiveness in the Surinam–Dutch and Dutch samples are given. An analysis of covariance with maternal educational level as covariate (Surinam–Dutch and Dutch mothers differed significantly on educational level, $t(62) = 3.16$; $P < 0.01$), showed that Surinam–Dutch mothers displayed significantly less responsiveness compared to Dutch mothers.

From Table 2 it can also be seen that Surinam–Dutch mothers differed significantly from Dutch mothers in their child-rearing attitudes, as measured by the Engfer and Schneewind (1976) scales. Surinam–Dutch mothers appeared to be more stressed by rearing their infants, more frustrated and overconcerned, and they gave a more central role to the infant in their own life compared with Dutch mothers. Furthermore, Surinam–Dutch mothers appeared to be somewhat more positive about physical punishment than Dutch mothers. A multivariate analysis of covariance (with educational level as covariate) showed a significant multivariate effect (Pillai = 0.27; $F(5,56) = 4.29$; $P < 0.01$). In the temperamental domain, Surinam–Dutch mothers perceived their infants as more difficult than the Dutch mothers. However, a multivariate analysis of covariance (without the unreliable “cuddly” variable) did not show a significant effect

(Pillai = 0.12; $F(4,58) = 2.02$; $P = 0.10$). Time spent in Holland only correlated significantly with anxiety (0.60; $P = 0.002$; $N = 21$). Surinam-Dutch mothers appeared to be more anxious about child-rearing if they had spent less time in Holland.

It should be kept in mind that the sizes of the Surinam-Dutch and Dutch samples were relatively small, and that these samples cannot be considered representative of the two populations. Generalisations to all Surinam-Dutch and Dutch families are, therefore, not warranted until our results have been replicated in larger groups.

CONCLUSIONS

Because maternal responsiveness and infant's attachment security correlate in the expected direction, the Strange Situation appears to tap validly an important dimension of the relationship between Surinam-Dutch mothers and their 18-month-old infants. Furthermore, the Strange Situation classification distribution does not show significant intracultural or cross-cultural differences. The procedure appears to be rather robust for cultural variations in child-rearing practices and attitudes (Van IJzen-doorn, 1990). Surinam-Dutch and Dutch mothers do differ significantly in child-rearing behaviour, i.e. responsiveness, and in their attitudes to the burden of rearing a young child. Surinam-Dutch mothers show less responsiveness to infants' signals, or they experience child-rearing as a heavier burden compared with Dutch mothers. They favour physical punishment more, and they perceive their infants temperamentally as more difficult than Dutch mothers. Although these cultural differences exist, even when differences in educational level have been controlled for, the same percentage of Surinam-Dutch and Dutch infants was securely attached to their mothers (54%).

Our Surinam-Dutch samples is most comparable to Li-Repac's sample (1982) of Chinese-American families. These first-generation families from China, struggling to adapt to a new cultural environment, and to strike a balance between their own cultural and personal identity and the new cultural demands, were found to be anxious and overly concerned about child-rearing. Parents felt strongly that their children should have a better life in their new country than the parents themselves would be able to create. But in child-rearing the parents wavered between complete adaptation to the American norms, and their own somewhat stricter criteria of controlling the child's behaviour. This ambivalence of complete adaptation versus strong adherence to their own culture resulted in less optimal, inconsistent child-rearing patterns, i.e. less responsive behaviour, especially in culturally less integrated families. This inconsistent responsiveness is mirrored in a (quite modest) overrepresentation of ambivalent-

resistantly attached children (Ainsworth et al., 1978), in L1-Repac's sample as well as in our Surinam–Dutch sample. We found that Surinam–Dutch mothers who had lived in Holland for a considerable number of years tended to show more responsiveness, and were definitely less anxious about their infants' development than Surinam–Dutch mothers who had immigrated more recently. Our data therefore appear to indicate that strains may arise from a transition from one culture to another. Nevertheless, in both L1-Repac's and our sample most infants appeared to adapt rather well to the cultural transition and to be robust for their mothers' suboptimal responsiveness, indicating that infants' attachment behaviour should be considered as a conditional strategy flexibly adaptable to the specific sociocultural niche in which children have to live (Hinde, 1982; Lamb, Thompson, Gardner, & Charnov, 1985).

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