

resulting from nursery-school or day-care attendance. This hypothesis has been supported (Blehar, 1977; Ainsworth, 1973; Bowlby, 1969; Rutter, 1979) and refuted (Doyle, 1975; Braun and Caldwell, 1973; Portnoy and Simmons, 1973). The quality of attachment has been assessed chiefly via the manifestation of three behavioural organizations:- (a) reactions to separation (separation anxiety); (b) reactions to strangers (stranger fear/anxiety - both terms will be used due to the disagreement on definition); (c) exploratory play - the ability to use the mother as a secure base from which to explore the environment (Ainsworth et al., 1978; Sroufe, 1979).

These three behavioural systems, together with the behavioural manifestations of the attachment system, are presently seen to co-ordinate and interact giving an overall indication of healthy or pathological adjustment and development in the individual child (Sroufe, 1978; 1979).

The practice of determining psychological adjustment or maladjustment by using frequency counts and by focusing on an isolated specific behaviour has been found to be confusing and meaningless (Sroufe, 1976; 1979; Sroufe and Waters, 1977). The balance and interaction of behavioural and emotional factors throughout childhood has therefore become primary. This is the approach in which the present research is embedded - Does daily quantitative separation interfere with attachment of child and mother, and if so what are the consequences for the separation anxiety, stranger anxiety, frustration tolerance and

copling behavioural systems of the child? The focus of the study is on the consequential developments mentioned and not on the quality of attachment per se.

In addition to the quantitative dimensions of mother-child interaction, the qualitative dimension has been found to be of equal if not greater importance. If a mother is accepting, responsive and sensitive in the interaction with her child, the attachment of the child to the mother is likely to be secure, unambivalent and unanxious in nature (Ainsworth, 1973; 1979; Ainsworth et al., 1978; Fein and Clarke-Stewart, 1973). This allows for the development of an ability to deal with separations, of trust in and receptivity to novel persons and events, and of a tolerance for frustration and healthy coping mechanisms.

In summary, the primary aims of the present study are:-

1. To determine whether a part-time (nursery-school attendance), and a full-time (day-care attendance) quantitative disruption in mother-child interaction, affects the child's separation anxiety, stranger anxiety/fear, frustration tolerance and general coping mechanisms.
2. To determine whether the quality of mothering, i.e., the degree of maternal acceptance and responsiveness, affects the child's separation anxiety, stranger anxiety/fear, frustration tolerance and general coping mechanisms.

Secondary factors that have been found to influence a child's general psychological adaptation to different

situational conditions are:- (a) the age of the child, and (b) the sex of the child. The secondary aims of the present study are therefore:-

3. To determine whether there are sex differences in children's ability to cope with separation, stranger confrontation and frustration and in their general coping mechanisms.
4. To determine whether age of the child influences the development of separation anxiety, stranger anxiety/fear, frustration tolerance and coping mechanisms.

The success of a child's adaptation to the absence of its mother and to new surroundings has been found to be greatly determined by the quality of the substitute care-centres (Etaugh, 1979; Hoffman, 1979). The results of the present study were expected to generate some suggestions for the improvement of care-centres in the community.

As mentioned, attachment, separation reactions, stranger reactions and coping ability have been conceptualised as inter-dependent, interacting behavioural systems (Sroufe, 1977; 1979).

The fourth aim of the study was therefore:-

4. To determine whether there is a relationship between a child's separation anxiety, stranger anxiety, frustration tolerance and general coping mechanisms.

CHAPTER VI

RATIONALE FOR SUBJECT AND INSTRUMENT SELECTION

6.1 Subject Sample

As already mentioned in Chapters I and V, the organizational viewpoint of child development allows for a longitudinal, interactional investigation of behavioural system development. Therefore, inferences regarding the quality of initial child-mother attachment within the first year of life, can be made from an examination of the child's successful or inadequate coping with later developmental issues, e.g., peer interaction, separation from mother, adaptation to school, ego-control and resiliency, etc., (Waters, 1978; Main, 1973; Gove and Sroufe, 1979; Matas et al., 1978).

Between the ages of $\pm$ 8 months to three years the major developmental tasks facing a child are separation, interactions with peer and adult strangers, exploration of the environment with resulting cognitive and intellectual skill attainment, language acquisition, dependence-independence, autonomy and ego-control (Lefrançois, 1973; Helms and Turner, 1976). By the age of three and a half to four, a child should have resolved many of these issues and should be able to tolerate brief separations from mother and home, to interact adequately, even if slightly apprehensively, with strange adults and peers, to delay gratification of needs and wishes, and to be fairly independent in coping with social and cognitive tasks, but with the ability to seek help if necessary.

It is on the basis of these assumptions that most nursery-schools and day-care centres have used three years as the minimum age of enrollment. It is equally due to these developmental changes that the four year-old was chosen as the focus of study in the present research. The selection also allows for a minimum of one year attendance at a preschool centre at the time of observation.

With the increasing number of working mothers worldwide (Hoffman, 1979; Etaugh, (1979), the need for daycare centres for younger children arose. Therefore, there are now many centres offering daily care for children of $\pm$ six months to six years.

As noted in Chapter III, the age of enrollment in a day-care centre affects the attachment relationship, separation and stranger reactions in different ways (Blehar, 1977; Schwarz et al., 1973). It was therefore necessary, in the present study, to include two groups of children attending day-care centres:- a group who had been enrolled at $\pm$ one year of age, and a group enrolled at $\pm$ three years of age.

In summary, the subject sample of the present study consisted of 56 mother-child pairs:- (a) a group of 14 mothers and their $\pm$ four year old children who had attended a day-care centre from the age of approximately one year (9 boys, 5 girls); (b) a group of 14 mothers and their $\pm$ four-year old children who had attended a day-care centre from the age of approximately three years (7 boys, 7 girls); (c) a group of 14 mothers and their $\pm$ 4-year old children who had attended a half-day nursery-school

from the age of approximately three years, spending the afternoon with their mothers (7 boys, 7 girls); (d) a control group of 14 mothers and their $\pm$ four-year old children who remained at home with their non-working mothers for the greater part of the day (7 boys, 7 girls).

The variables of socio-economic status and intactness of the families were controlled, i.e., all were middle-class white families; none of the parents were divorced, separated, unmarried or widowed.

It was decided to control for ordinal position in the family in order to minimize possible emotional conflict and turmoil that often results in a child when a younger child is introduced into the family. Focusing on the youngest or only child also usually assures maximum mother-child interaction as compared to the interaction between a mother and a more independent and individuated older sibling. Forty-four of the subjects were the youngest in the family and eleven were only children. Three of the home group were only children, two of the children attending day-care from the age of three were only children, and six of the children attending day-care from one year of age were only children. The ages of the children when observed ranged from 40 to 67 months. Mean age was 52.09 months.

The nursery-school and day-care centres were all of approximately equal middle-class standing. Staff-child ratios varied between one caretaker - 19 children and one caretaker - 10 children. Most of the day-care centres

ran half-day nursery-school programmes for the children three years and older.

6.2 Instruments

6.2.1 The Porter Parental Acceptance Scale (PPAS)

The present study focused on one parenting factor, acceptance, which is viewed as the chief measure of the quality of the mother-child relationship as elucidated in Chapter IV.

The PPAS sets about specifically to examine the parent's ability to accept the child in four equally important ways:-

- (a) The parent "regards his child as a person with feelings and respects the child's right and need to express these feelings". The definition includes parental tolerance and understanding in the face of negative expressions which are necessary for the maintenance of the child's mental health; the ability to convey to the child that it is permissible to have certain feelings without feeling guilty; the ability to communicate with and listen to the child's perception of conflict and admit one's fault.
- (b) The parent "values the unique make-up of his child and does what he can to foster that uniqueness within the limits of healthy personal and social adjustment". This definition includes parental tolerance for differences between his/her child and others, parental active encouragement and aid in the child's particular interests and assets, with acceptance of the child's limitations and without attempting to force the child

towards the parent's own preferred aspirations. This aspect also includes evaluation of the child in terms of its own growth patterns rather than by comparison with other children.

- (c) The parent "recognizes the child's need to differentiate and separate himself from his parents; to become an autonomous individual". This definition includes parental encouragement of the child's growth in independence, and sense of responsibility. It also includes allowing the child to experience failure and to learn from mistakes, and allowing the child to identify with other adult models without feelings of rejection engendered on the parent's behalf.
- (d) The parent "loves the child unconditionally", (Porter, 1954, p.176). This definition includes parental love and support at all times (following the child's success and failure), physical affection, criticism of certain behaviours rather than of the child him/herself, and a willingness to spend time and energy to be with the child. This aspect also includes never using love withdrawal as a means of discipline.

The PPAS consists of forty, five-optioned, multiple choice items, ten directed at each qualitative form of acceptance. The first ten items measuring the parents unconditional love for the child were of a different format, adapted from Jenkins (1941), Wang (1932) and Young (1940) (cited in Porter, 1954), requiring an indication of the parent's degree of affection felt toward the child in various situations. The five-point rating scale ranged from "much more than usual" to "much less than usual".

The following thirty items, consisting of fifteen items repeated, required an indication of the parent's feelings and probable behaviour in each situation. The total score of the PPAS and the individual scores of the four categories of acceptance were used in the computation of results.

6.2.2 Reliability

A significant reliability coefficient of 0.766 ($p < 0.00$) was obtained by Porter (1954) who used a split-half method with a sample of forty-three male and fifty-seven female respondents. In order to provide an estimate for all forty items of the PPAS the Spearman-Brown prophecy formula was applied which gave a coefficient of 0.865. Hawkes, Burchinal, Gardner and Porter (1956) provided support for Porter's (1954) findings with their split-half reliability coefficient of 0.666, using a bigger sample of 512 mothers and fathers. Similarly Burchinal (1958) reported a split-half reliability coefficient of 0.79 for forty-nine fathers and 0.78 for fifty mothers. Overall, it can therefore be concluded that the PPAS is considerably reliable and it would be possible to generalize results substantially.

6.2.3 Validity

In order to determine whether the PPAS validly measured acceptance, Porter (1954) used the ratings of five judges who were academically and/or clinically experienced. As the parents did their own ratings on the first ten items, the judges were asked to mark the five statements which comprised the choices within each of the

thirty items. They ordered the choices of a scale of one to five, with one indicating low acceptance and five indicating high acceptance. Overall not less than three out of the five judges agreed on all ratings. Forty-six per cent received full concurrence from the judges, 26% from four out of five judges and 28% from three out of five judges. In only 18.67% was the marking difference as much as two scale points. Therefore, overall the validation of the PPAS is good. Nevertheless the validity measure is an internal reference for the scoring of the scale and does not provide a measure of the level of parental acceptance as judged by raters compared with the level indicated by responses on the scale.

However, Porter outlines the method of selection of items to boost the validity of the PPAS. The items chosen were based on an operational definition of parental acceptance which was embedded within a conceptual framework. The criteria taken from the framework when selecting the items were that they should reflect salient aspects of the parents' feelings, eliminate attitudes of some acceptance but which in reality are not accepting, e.g., indulgence, reflect the actual feelings and behaviour of the parents, refer to the parents' natural child and be applicable to all ages in the child's development.

Burchinal, Hawkes and Gardner (1957) assessed the degree of internal consistency of the PPAS. Two groups of respondents were selected from the respondents within the highest and lowest quantities of total scores. The mean

scores of the items of the test were then compared in an attempt to discriminate between high and low scoring groups. All the items, except for one, showed a significant ($p < .001$) ability to discriminate the high and low groups with sixty-four respondents in each group. This validity measure indicates a high degree of homogeneity in the test.

The construct validity of the PPAS remains questionable (Brownlee, 1980) and an external validation is required. However, it does have a high level of homogeneity and internal validity within a definitional and conceptual framework and thereby can be regarded as consistently measuring the same construct. Subsequent to the present study, Brownlee (1980) found that, the PPAS correlated significantly with an observational measure of Autonomy-Control rather than Acceptance-Rejection. This provided a severe limitation in the measurement of the quality of mothering in the present research. Future research must take heed in employing the PPAS due to the apparent revelation that acceptance is not the sole factor being examined.

6.2.4. The Observational Rating Scales of Acceptance and Responsiveness

Due to the unsure construct validity of the PPAS and because of the frequently enumerated limitations of pencil and paper tests (Anastasi, 1968; Kerlinger, 1973) observational ratings of maternal acceptance and responsiveness were conducted.

Acceptance was defined as:- the mother does not show disturbance at hearing negative feelings expressed by her child, i.e., indicates to the child that all his/her feelings are understandable; the mother does not judge the child's underachievements but accepts him/her at his/her own pace; the mother does not overprotect the child or block his/her attempts at independence. This definition corresponds with two of Porter's (1954) definitions of the concept of acceptance: the parent "regards the child as a person with feelings and respects the child's right and need to express these feelings" and the parent "recognizes the child's need to differentiate and separate himself from his parents; to become an autonomous individual." Acceptance and rejection have been described by Becker (1964) and by Schaefer (1965) as bipolar opposites. Therefore rejection was used as the other pole of the scale and was defined as: the mother pushes the child to act according to her wishes rather than at the child's own pace (directiveness); maternal open hostility to and criticism of the child. The actual five-point scale ranged from: "very accepting; no attempts to direct or criticize the child's actions or verbalizations", to, "little or no acceptance, mother is very directive, critical or overprotective" (see Appendix).

Responsiveness was defined as: a readiness of the mother to respond to the child's needs and demands. Unresponsiveness was defined as: the mother shows little interest in the child's thoughts and activities;

Acceptance was defined as:- the mother does not show disturbance at hearing negative feelings expressed by her child, i.e., indicates to the child that all his/her feelings are understandable; the mother does not judge the child's underachievements but accepts him/her at his/her own pace; the mother does not overprotect the child or block his/her attempts at independence. This definition corresponds with two of Porter's (1954) definitions of the concept of acceptance: the parent "regards the child as a person with feelings and respects the child's right and need to express these feelings" and the parent "recognizes the child's need to differentiate and separate himself from his parents; to become an autonomous individual." Acceptance and rejection have been described by Becker (1964) and by Schaefer (1965) as bipolar opposites. Therefore rejection was used as the other pole of the scale and was defined as: the mother pushes the child to act according to her wishes rather than at the child's own pace (directiveness); maternal open hostility to and criticism of the child. The actual five-point scale ranged from: "very accepting; no attempts to direct or criticize the child's actions or verbalizations", to, "little or no acceptance, mother is very directive, critical or overprotective" (see Appendix).

Responsiveness was defined as: a readiness of the mother to respond to the child's needs and demands. Unresponsiveness was defined as: the mother shows little interest in the child's thoughts and activities;

she is primarily concerned with her own activities and prefers not to be bothered by the child; the mother ignores the child's demands. The five-point scale ranged from: "mother responds immediately"; "mother seems to anticipate, at times, the child's need to be responded to from non-verbal cues" to, "the mother ignores the child or responds only after many demands by the child." The distinctions were drawn from Fein and Clarke-Stewart's (1973) concept of being "tuned in" to the child's needs, and Ainsworth and Bell's (1974) concept of maternal sensitive responsiveness to the child's cues. The Acceptance and Responsiveness scores were computed separately and in combination as an index of the quality of mothering.

6.2.5 Reliability

In order to obtain a measure of reliability for the scales, two raters were used throughout the observations. Their concordance rates were high with a correlation of .90 ($p < 0.01$). When the ratings differed the mean values were used.

6.2.6 Validity

The strongest limitative effect of observational rating scales is the degree of subjective interpretation required by the observer (Kerlinger, 1973). In order to reduce this effect, the scales used category ratings, i.e., condensed descriptions of the different degrees of behaviour (see Appendix). In addition, both acceptance and responsiveness were defined within a theoretical,

conceptual framework thereby lessening the diffuseness of the bipolar extremes.

6.2.7 The Frustration Tolerance Scale

The scale measuring frustration tolerance consisted of three five-point sub-scales: task endurance, emotional reaction and reference to mother or interviewer (help-seeking). The format of a category rating scale was used, the categories comprising condensed descriptions of behaviour. The task endurance sub-scale ranged from - "keeps trying consistently until convinced piece will not fit" (high frustration tolerance), to, "if piece does not fit the first time, child abandons the piece or task" (low frustration tolerance). The emotional reaction sub-scale ranged from - "no apparent emotional reaction (anger, distress)", (high frustration tolerance) to, "extreme emotional reaction, enough to abandon task, or aggressive attacks on the task, or verbalizations of anger or distress" (low frustration tolerance). The reference to mother or interviewer sub-scale ranged from - "even if angered or distressed the child keeps to the task on his/her own" (high frustration tolerance), to, "the child almost immediately calls for help and won't continue task till helped for most of the time" (low frustration tolerance).

6.2.8 Reliability

The two observers ratings were highly concordant (0.95, $p < 0.01$). The scores for each sub-scale were added to give an overall index of frustration tolerance.

conceptual framework thereby lessening the diffuseness of the bipolar extremes.

6.2.7 The Frustration Tolerance Scale

The scale measuring frustration tolerance consisted of three five-point sub-scales: task endurance, emotional reaction and reference to mother or interviewer (help-seeking). The format of a category rating scale was used, the categories comprising condensed descriptions of behaviour. The task endurance sub-scale ranged from - "keeps trying consistently until convinced piece will not fit" (high frustration tolerance), to, "if piece does not fit the first time, child abandons the piece or task" (low frustration tolerance). The emotional reaction sub-scale ranged from - "no apparent emotional reaction (anger, distress)", (high frustration tolerance) to, "extreme emotional reaction, enough to abandon task, or aggressive attacks on the task, or verbalizations of anger or distress" (low frustration tolerance). The reference to mother or interviewer sub-scale ranged from - "even if angered or distressed the child keeps to the task on his/her own" (high frustration tolerance), to, "the child almost immediately calls for help and won't continue task till helped for most of the time" (low frustration tolerance).

6.2.8 Reliability

The two observers ratings were highly concordant (0.95, $p < 0.01$). The scores for each sub-scale were added to give an overall index of frustration tolerance.

6.2.9 Validity

The three measures used as an index of frustration tolerance can be regarded as highly valid as they each are drawn from substantiated theoretical and empirical frameworks.

Persistence and endurance in problem-solving situations have been found to be indicative of healthy ego-development (Maier and Ellen, 1959; Sears, 1972; Feiring and Lewis, 1979; Bandura, 1973). To be able to overcome the obstacles often present in day-to-day situations and to cope with the impatience of and frustration with delayed success and gratification, persistency and endurance are essential attributes. The tolerance of frustration demands "staying power" which was thus measured by the task endurance subscale.

If one is to cope effectively with frustrating tasks, control of one's emotional expression is also necessary (Block and Martin, 1958; Matas, 1977). Inability to moderate anger and distress in the face of frustration results in cognitive disorganization resulting in diminished problem-solving strategies (Main and Londerville, 1978, cited in Ainsworth, 1979; Matas et al., 1978). Hence rating of the child's emotional reaction to frustration was used as a measure of frustration tolerance.

Reliance on another's contribution to solve one's problems entirely, reflects an inability to take responsibility for one's situation, over-dependence and an evasion of any attempt to cope with delayed gratification, i.e.,

frustration (Matas et al., 1978). This would therefore indicate poor frustration tolerance, and the child's degree of help-seeking was thus included in the frustration tolerance scale.

6.2.10 The Separation and Stranger Anxiety Scales

A modified version of the Ainsworth and Wittig (1969) Strange-Situation Procedure, developed by Tizard and Tizard (1971) was used to assess a child's reaction to separation from and reunion with the mother and the reaction to a stranger, in the presence of the mother.

Ainsworth and Wittig (1969) developed the procedure detailed in Chapter I, in order to assess the quality of attachment and its effects on separation and stranger reactions as well as on exploratory behaviour and the ability to use the mother as a secure base. The procedure has been severely criticized by Belsky and Steinberg (1978) who have stated that the unnatural, stressful laboratory setting cannot evoke valid and generalizeable reactions of the child to separation and strangers. Nevertheless many employers of the method have reported that the Strange-Situation Procedure validly and reliably differentiates anxiously from securely attached infants and children with subsequent differentiation of well-adjusted and maladjusted separation, stranger and exploratory play reactions and ability to use the mother as a secure base (Ainsworth et al., 1978; Sroufe and Waters, 1977; Waters, 1978; Connell, 1976). Ainsworth et al. (1978) compared Strange Situation reactions and home-based reactions of

one-year-old children to the same procedure and found that the patterning of behaviour in the home paralleled that occurring in the strange-situation. Therefore, although intensity and the exact forms of behaviour may vary in the two settings, it can be conclusively stated that the Strange-Situation Procedure is valid and reliable and can be put to continued use.

Quality of attachment, exploratory behaviour and the ability to use the mother as a secure base were not used in the present study as dependent variables. Therefore, Tizard and Tizard's (1971) version of the Strange-Situation Procedure was selected for use as it chiefly examines children's separation and stranger reactions, two of the dependent variables of the present research.

The child's response to the mother's departure was rated on a four-point scale:-(1) child follows, looks miserable; (2) child follows, no emotion shown; (3) child stays, looks miserable; (4) child stays, no emotion shown. The two observers ratings concurred with a correlation of 0.88 ($p < 0.01$).

After three minutes the mother was asked to return and the child's reaction to reunion was rated on a five-point scale, ranging from - child ignores mother, continuing what he/she is doing, to, child moves onto mother's lap or holds onto her, or initiates close physical contact (see Appendix). Observers' ratings concurred significantly, with a correlation of 0.93 ($p < 0.01$).

Reunion behaviours have been found to be more reliably

indicative of the degree of separation anxiety evidenced by the child (Blehar, 1977; Ainsworth, 1977). Thus, separation and reunion reactions were examined separately and in combination in relation to the independent and other dependent variables.

The stranger anxiety/fear procedure was adapted from Ainsworth and Wittig's (1969) research, but was elaborated by Tizard and Tizard (1971) using Rheingold and Bayley's (1959) assessment scale.

To gauge stranger anxiety/fear, the interviewer, in the presence of the mother, made a series of standardized overtures to the child whose responses were rated on a seven-point scale for each of the three overtures. The interviewer first turned to the child, smiled and said "hello". She then opened a book and asked the child : "Would you like to come and look at it?" Finally, she smiled and asked the child : "Would you like to come over here and sit on my lap and see?" The seven-point ratings after each overture ranged from - child cries or runs away, to, smiles and vocalizes or approaches smiling. The scores for each episode were summed, a high score indicating low stranger anxiety/fear, a low score strong stranger anxiety/fear. Again the observers' ratings concurred highly with a correlation of 0.85 ($p < 0.01$).

6.2.11 Reliability

The high correlation found between the observers' ratings on both the separation anxiety indices and stranger anxiety scores suggests that the procedures employed have

a high rate of reliability. Tizard and Tizard (1971) similarly found their experimenters' ratings to be highly correlated, $r = 0.92-0.96$, ($p < 0.01$). As already noted, the basic Strange-Situation Procedure has been found to be a reliable method of assessing stranger and separation reactions among other behavioural systems, in infants and young children (Sroufe and Waters, 1977; Marvin, 1977; Maccoby and Feldman, 1972; Ainsworth et al., 1978; Feldman and Ingham, 1972; Connell, 1976; Main, 1973; Waters, 1978).

6.2.12 Validity

Ainsworth and Wittig (1969) and Ainsworth et al., (1978) have successfully used the Strange Situation Procedure to differentiate between anxiously and securely attached infants. From these findings they have been able to predict successfully the separation and stranger reactions of the different groups of children. The procedure can therefore be viewed as highly valid. Similarly, Tizard and Tizard (1971) were able to differentiate their two groups of residential and home-reared two-year olds through the patterns of attachment manifested and via the stranger and separation reactions of the children.

The correlation between stranger anxiety/fear and separation anxiety in the present study was 0.53 ($p < 0.05$). The correlation between the reactions to mother's departure and stranger reactions was 0.49 ($p < 0.05$) and between the reactions to mother's return and stranger

reactions was 0.05 ($p < 0.05$). Overall, therefore the validity of the measures used in the present study can be described as considerably valid.

6.2.13 The Fantasy Test

The fantasy test was administered to obtain a measure of the children's general ego-coping mechanisms. It consisted of 10 items requiring the child to imagine himself/herself in a specific situation. The child was then asked how he/she would cope with a particular problem. For example, "Do you remember Snow White? What would you do if you saw the wicked fairy godmother coming to you?" (See Appendix for complete questionnaire.) The responses were rated on a five-point scale ranging from an inability to cope (e.g., I'll cry/I don't know) to a self-directed solution (e.g., give her a poisoned apple/zoom past). Scores for all ten items were added, giving an overall index of coping ability.

The questionnaire and scoring system were devised by Shmukler and Skuy (1979) for use with five-year old nursery-schoolers. Reliability and validity measures were not available before the completion of the present dissertation.

6.2.16 Maternal Interview Schedule

The interview consisted of three questions concerning rearing difficulties experienced with the particular four-year-old child in the study, the child's ability to form friendships, and the mother's own preschool attendance/non-attendance. Between-group differences were then assessed.

CHAPTER VII
PROCEDURE

The experimenter visited ten day-care centres and seven nursery-schools situated in the Johannesburg vicinity. Lists of the $\pm$ four-year-old enrolled and wait-listed children from each were obtained. They were initially screened for ordinal position in the family, i.e. youngest or only child, intactness of the family, and part-time, full-time employment, and unemployment of the mother. Only nursery-school and wait-listed children with non-working mothers and day-care children with full-time working mothers were selected.

The mothers of the children were telephonically contacted. They were asked to participate in a university-run research project which was attempting to examine mother-child relationships as well as the effects of day-care centres and nursery-schools on young children. The mother and child were asked to come to the university for approximately one and a half hours. Several mothers refused to participate but eventually 56 mothers and their four-year-old children were recruited. A map and introductory letter were sent to each mother and a time for observation was set.

When each mother-child pair arrived at the experimental room (with a one-way mirror and observation room), they were introduced to the experimenter, interviewer and the two observers. The mother was then seated in the centre of the experimental room in close proximity to the interviewer.

ERRATUM

The final paragraph on page 133 should read as follows:

When each mother-child pair arrived at the experimental room (with a one-way mirror and observation room), they were introduced to the experimenter, interviewer and the two observers. In order to eliminate observer and interviewer bias, the observers and the interviewer were kept blind as to which preschool group (home, day-care, nursery-school) each mother-child pair belonged. The mother was ...

The child was asked to sit at a low table directly in front of the one-way mirror and was given the Frustration puzzle to do. As the child was attempting the puzzle, the interviewer asked the mother several questions about the child's past and present upbringing (see Chapter VI-6.2.16). The two observers rated the child's ability to tolerate frustration on three five-point scales (see Chapter VI-6.2.7).

Tizard and Tizard's (1971) modified version of Ainsworth and Wittig's (1969) Strange Situation Procedure was then instigated. The mother was asked to leave the room for five minutes and the child was left with the interviewer. The child's reaction to the mother's departure was rated by the observers on a four-point scale (see Chapter VI-6.2.10). When the mother returned the child's reaction to reunion was rated by the observers on a five-point scale.

In order to assess the child's stranger anxiety/fear, the interviewer then increased her proximity to the child 3 times (as noted in Chapter VI-6.2.10). The child's reaction to each of these approaches was rated by the observers on a seven-point scale. The mother was present throughout the stranger-approach procedure.

The interviewer then left the mother and child together with some toys and their interaction was observed for five minutes. Ratings were made of the mother's acceptance and responsiveness to the child by the two observers (see Chapter VI-6.2.4). Finally the mother was requested to complete the PPAS, keeping her four-year-old child

specifically in mind when responding to the items (see Chapter VI-6.2.1). Simultaneously, the child was asked by the interviewer to respond to the items on the fantasy questionnaire (see Chapter VI-6.2.13). If the child was apprehensive, shy, or refused to co-operate with the interviewer, the mother was asked to take over the inquiry.

When the father or other siblings accompanied the mother and child to the experimental setting, they were requested to wait in a separate room with magazines and toys. Distractions of the mother and child during the experimental procedure were therefore avoided.

Following the experimental procedure and administration of scales, the data were scored and transferred to punch cards. The Statistical Package for the Social Sciences (Nie, Bert and Hodlaihull, 1970) was used for the computation of results at the University of the Witwatersrand Computer Centre.

Having outlined the subject sample and the measuring instruments selected and the procedure followed, it is necessary to clearly state the hypotheses under investigation in the present study.

7.1. Hypotheses

- 1a. The quantity of mother-child interaction affects the separation and stranger anxiety, the frustration tolerance and the coping mechanisms exhibited by the child.
- 1b. A greater quantity of mother-child interaction results in lower levels of separation and stranger anxiety,

CHAPTER VIII

RESULTS

Hypothesis 1a has four sub-sections:-

- (i) The quantity of mother-child interaction affects the separation anxiety exhibited by the child;
- (ii) The quantity of mother-child interaction affects the stranger anxiety exhibited by the child
- (iii) The quantity of mother-child interaction affects the frustration tolerance exhibited by the child;
- (iv) The quantity of mother-child interaction affects the coping mechanisms exhibited by the child.

To determine whether these hypotheses were supported or refuted a one-way analysis of variance (ANOVA) was computed for each.

(i) The total score for separation anxiety was made up of the scores for the child's reaction to mother leaving and the scores for the child's reaction to her return. Three ANOVA's were therefore computed (Table 1):-

TABLE I

One-way ANOVA: Mother leaves X Group

Source of variation	Sum of Squares	DF	Mean Squares	F	Signif. of F
Between groups	872.770	3	290.923	2.431	0.076
Within groups	6223.176	52	119.676	-	-
Total	7095.945	55	129.017	-	-

No significant differences were found between the four preschool groups on the measure of separation anxiety, the child's reaction to mother's departure ($p < .076$).

The mean values of the reactions to mother leaving for each group reveals that there is a tendency for separation anxiety to increase with an increase in amount of time spent away from the mother (Group 1 = child at home with mother; Group 2 = child attends half-day nursery-school; Group 3 = child attends full-day centre from the age of three; Group 4 = child attends full-day centre from the age of one):-

Group 1	Group 2	Group 3	Group 4	(see
12.14	18.21	21.43	22.14	(Fig.1)

TABLE 2

One-way ANOVA: Mother Returns X Group

Source of variation	Sum of Squares	DF	Mean Square	F	Signif. of F
Between Groups	882.145	3	294.048	1.807	0.157
Within groups	8460.660	52	162.705		
Total	9342.802	55	169.869		

No significant differences were found between the pre-school groups on the measure of separation anxiety, the child's reaction to the mother's return ($p < 0.157$) (see Table 2).

The mean values of the reactions to mother's return for each group reveals a tendency for separation anxiety to increase with an increase in the time spent away from the mother:-

Group 1	Group 2	Group 3	Group 4	(see
20.00	23.21	28.21	30.00	(Fig.2)

Figure 1

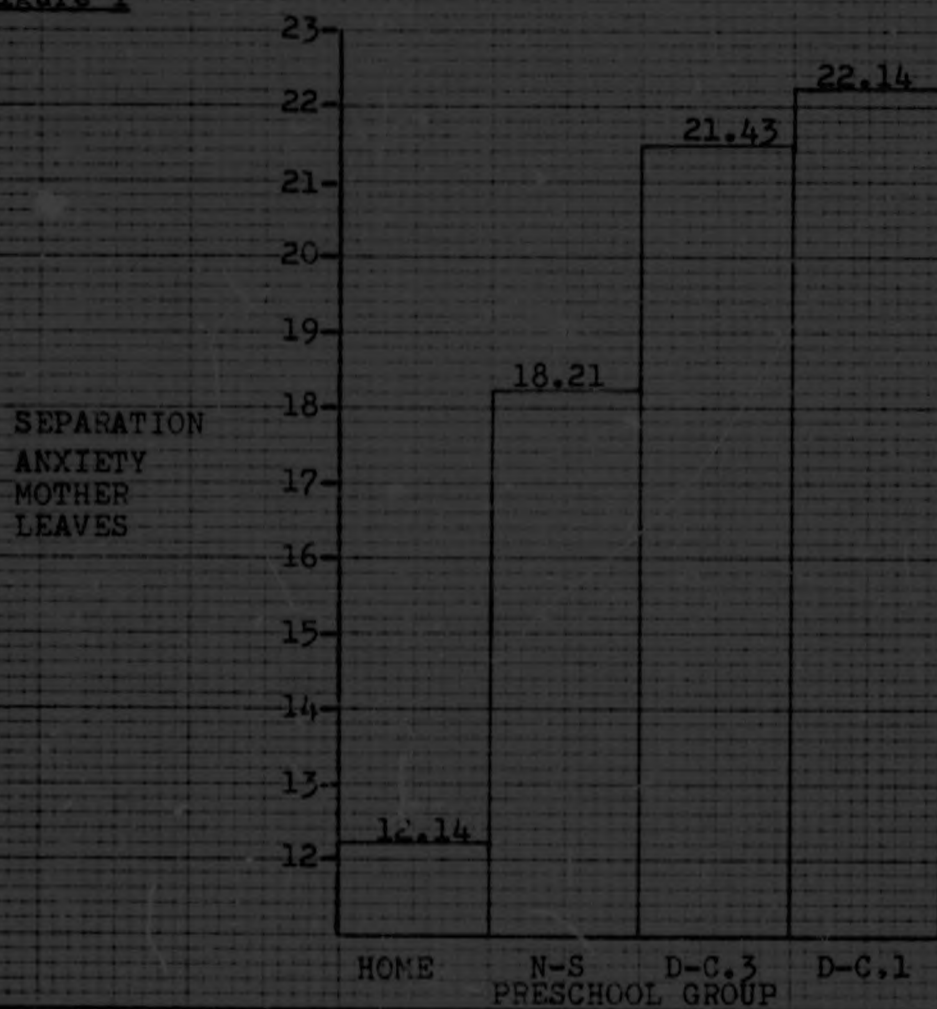


Figure 2

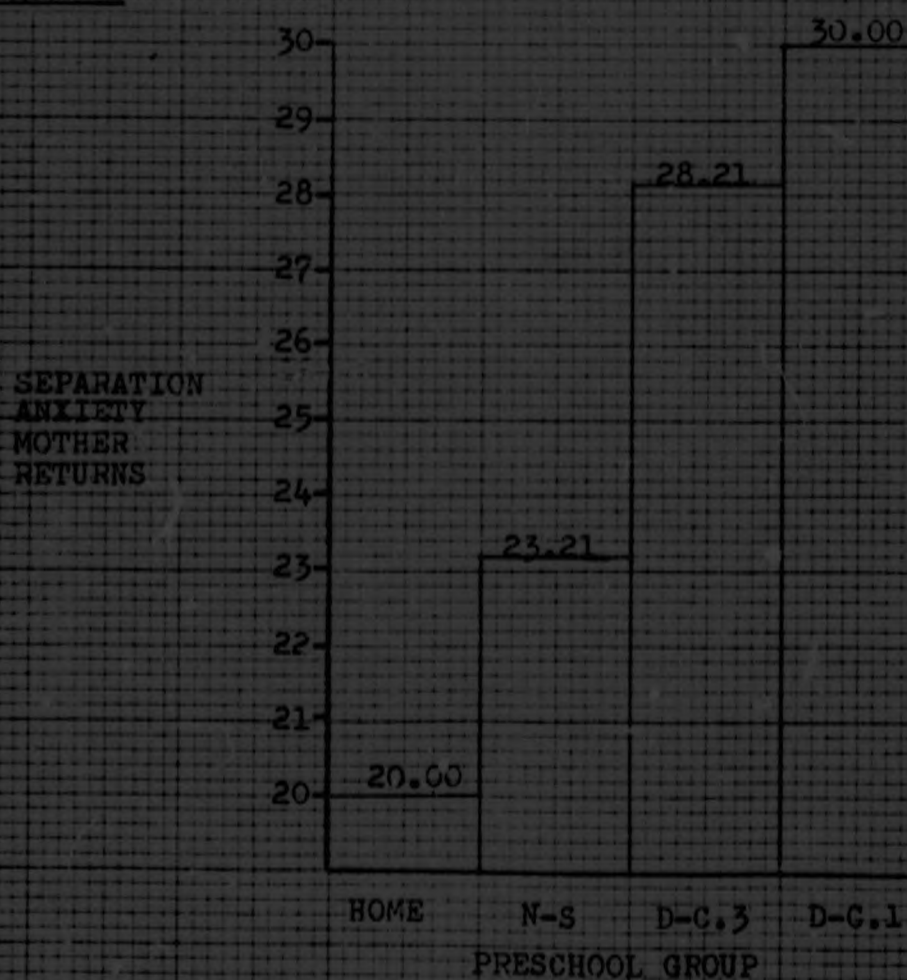


TABLE 3

One-way ANOVA : Total Separation Anxiety (Mother leaves and mother returns) X Group

Source of variation	Sum of Squares	DF	Mean Square	F	Signif. of F
Between groups	3433.484	3	1144.495	2.478	0.071
Within groups	2401	52	461.846		
Total	27449.508	55	499.082		

No significant difference was found between the pre-school groups on the measure of total separation anxiety ($p < 0.071$), (See Table 3).

The mean values of separation anxiety for each group exhibited a tendency for total separation anxiety to increase with an increase in time spent away from mother:

Group 1	Group 2	Group 3	Group 4
32.14	41.43	49.64	52.14

(see Fig.3)

TABLE 4

One-way ANOVA : Stranger Anxiety X Group

Source of variation	Sum of Squares	DF	Mean Square	F	Signif. of F
Between groups	5408.813	3	1802.938	0.794	0.503
Within groups	118095.750	52	2271.072		
Total	123504.563	55	2245.537		

No significant differences were found between the pre-school groups on the measure of stranger anxiety ($p < 0.503$), (see Table 4).

The mean values of stranger anxiety for each group indicated that the home group experienced the least stranger

FIGURE 3

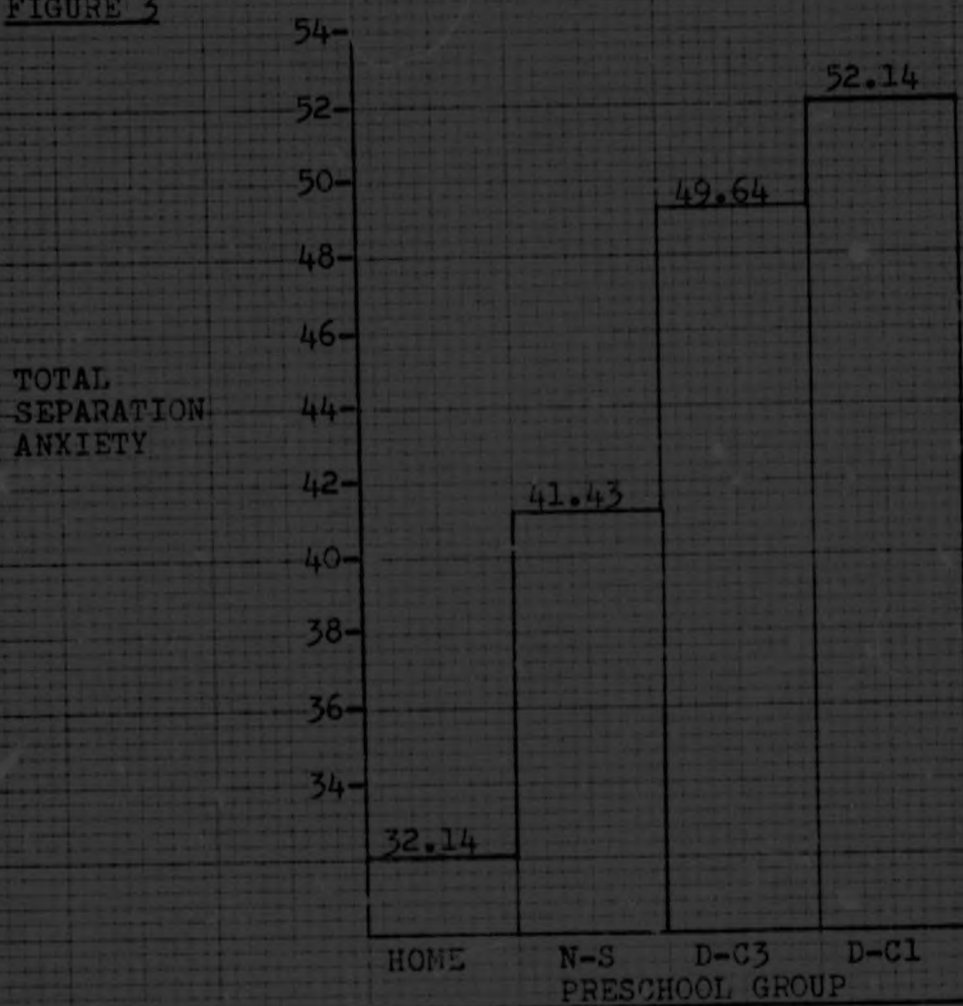


FIGURE 4



anxiety and the nursery-school group the greatest stranger anxiety.

Group 1	Group 2	Group 3	Group 4	(See
86.43	112.14	105.14	107.86	(Fig.4)

TABLE 5

One-way ANOVA : Frustration Tolerance X Group

Source of variation	Sum of Squares	DF	Mean Square	F	Signif. of F
Between groups	10129.910	3	3376.637	4.720	0.005
Within groups	37198.117	52	715.348		
Total	47328.027	55	860.510		

A significant difference between the preschool groups on the measure of frustration tolerance was found ($p < 0.005$), (See Table 5).

T-tests were computed in order to determine which groups differed significantly. The difference between groups 1 and 2 (home and nursery-school) was not significant ($p < 0.322$). The differences between group 1 and 3 (home and day-care from three years) and groups 3 and 4 (day-care from 3 and 1 year of age) were also not significant ($p < 0.143$ and $p < 0.30$). The difference between groups 1 and 4 (home and day-care from one year) was significant ($p < 0.023$), as was the difference between groups 2 and 3 (nursery-school and day-centre from three years), ($p < 0.020$) and between groups 2 and 4 (nursery-school and day-centre from one year), ($p < 0.003$).

The mean values of frustration tolerance for each group indicated that the nursery-school group had the

highest frustration tolerance, while the group attending day-care from the age of one, evidenced the poorest frustration tolerance:-

Group 1	Group 2	Group 3	Group 4
63.57	55.36	78.21	90.36

(see Fig.5)

TABLE 6

One-way ANOVA : Coping Mechanisms X Group

Source of variation	Sum of Squares	DF	Mean Square	F	Signif. of F
Between groups	171.768	3	57.256	0.874	0.461
Within groups	3408.351	52	65.545		
Total	3580.119	55	65.093		

No significant difference was found between the pre-school groups on the measure of coping mechanisms ($p < 0.461$), (see Table 6).

The mean values of coping mechanisms for each group indicated that the home group was slightly superior to the other groups:-

Group 1	Group 2	Group 3	Group 4
35.79	31.86	33.57	31.29

(see Fig.6)

Hypothesis 1b also had four subsections:-

- i) The home-reared children will exhibit less separation anxiety than the children attending half-day nursery-schools, who, in turn, will exhibit less separation anxiety than the children attending day-care from three years of age, who, in turn will exhibit less separation anxiety than the children attending day-care from one year of age.

FIGURE 5

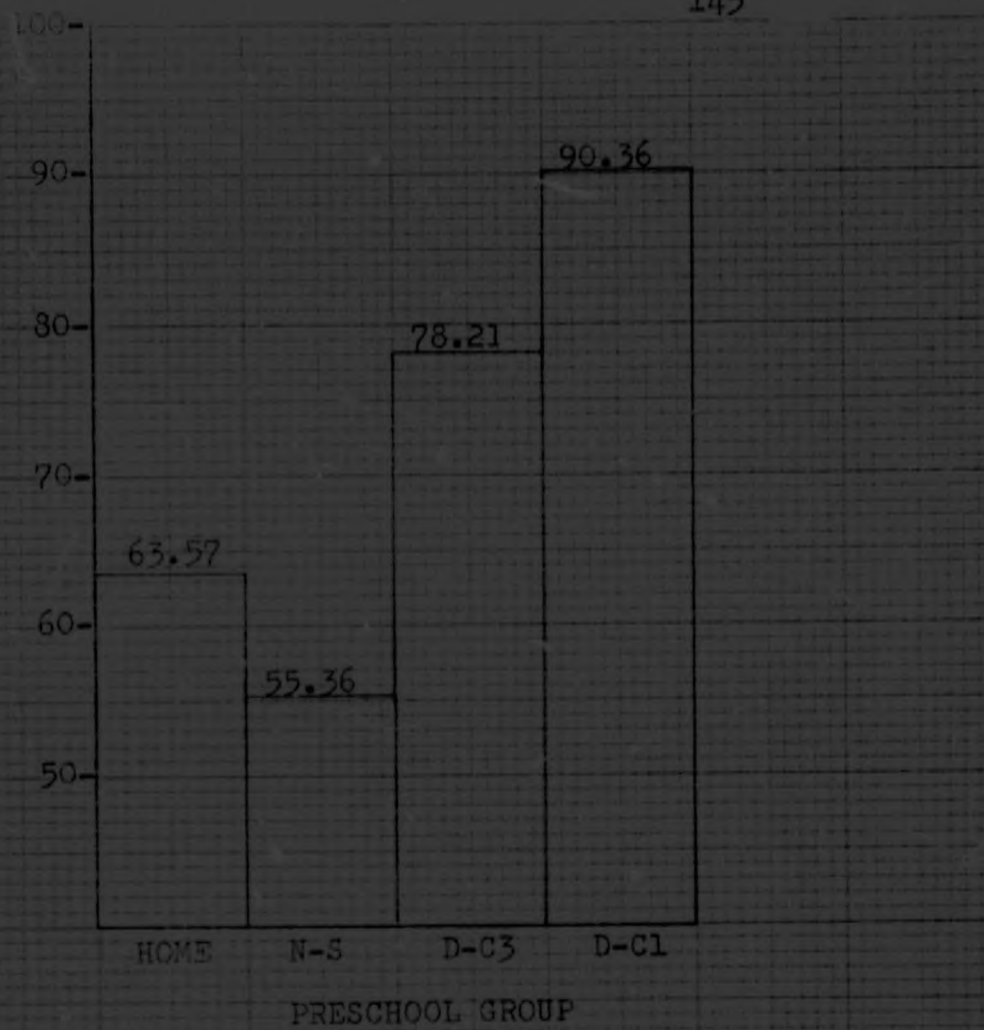
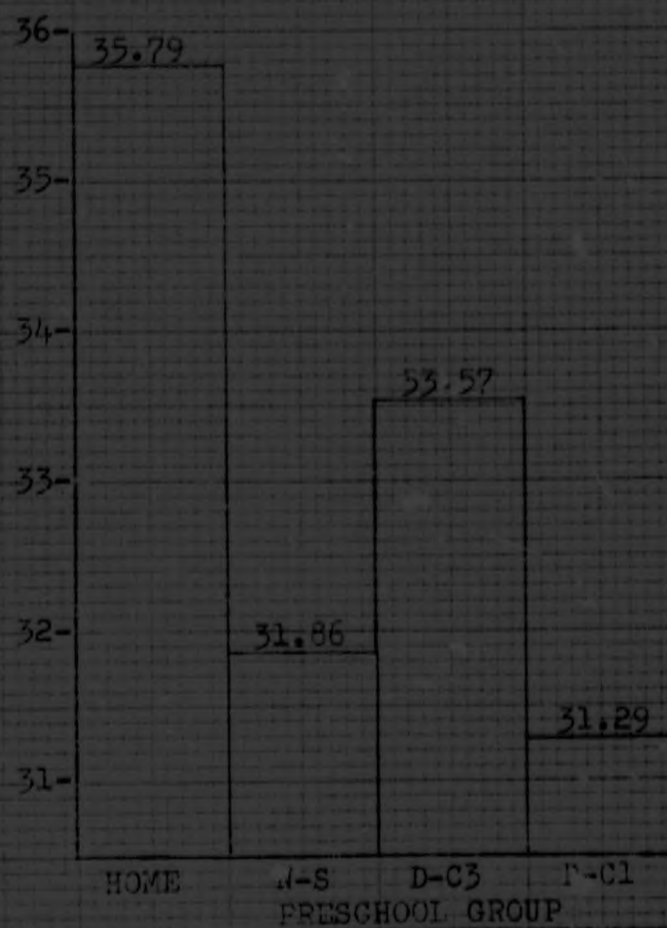
FRUSTRATION
TOLERANCE

FIGURE 6

CHILD'S
COPING
MECHANISMS

It can be seen from the mean values for the groups on separation anxiety, that this hypothesis was supported, despite the insignificance of the differences.

ii) The home-reared children will exhibit less stranger anxiety than the half-day nursery-school children who, in turn, will exhibit less stranger anxiety than the children attending a day-centre from three years of age, who, in turn, will exhibit less stranger anxiety than children attending a day-centre from one year of age.

It can be seen from the mean values of stranger anxiety for each group that this hypothesis was only partially supported. The home group evidenced less stranger anxiety, though not significantly, than the nursery-school group, and the group attending day-care from three years evidenced less stranger anxiety, but not significantly, than the group attending day-care from one year. However, the nursery-school group evidenced greater stranger anxiety than both the group attending day-care from three years and from one year of age.

iii) The home-reared children will exhibit greater frustration tolerance than the half-day nursery-school children, who, in turn, will exhibit greater frustration tolerance than the children attending a day-centre from three years of age, who, in turn, will exhibit greater frustration tolerance than the children attending a day-centre from one year of age.

It can be seen from the mean values of frustration tolerance for each group that this hypothesis was par-

tially supported. The nursery-school group evidenced greater frustration tolerance, though not significantly, than the home-reared group rather than vice-versa. The nursery-school group, however, were significantly superior to the group attending day-care from three years of age, who was, in turn, superior though not significantly, to the group attending day-care from one year of age.

iv) The home-reared group will exhibit more competent coping mechanisms than the group attending a half-day nursery-school, who, in turn, will exhibit more competent coping mechanisms than the group attending day-care from three years, who, in turn, will exhibit more competent coping mechanisms than the group attending day-care from one year of age.

This hypothesis was partially though insignificantly supported. The mean value for the home-reared group was slightly superior to that of the nursery-school group. The group attending day-care from three years was also superior to the group attending day-care from one year. However, the nursery-school group was inferior rather than superior to the group attending day-care from three years of age.

Hypothesis 2a, as with hypothesis 1a, has four subsections:-

- i) The quality of mothering affects the separation anxiety exhibited by the child;
- ii) The quality of mothering affects the stranger anxiety exhibited by the child;

iii) The quality of mothering affects the frustration tolerance exhibited by the child;

iv) The quality of mothering affects the coping mechanisms exhibited by the child.

To determine whether these hypotheses were supported or refuted Pearson product moment correlation coefficients were computed. First, the total PPAS scores as well as the four subscores were correlated with the dependent variables. Second, the combined and separate observed acceptance and responsiveness scores were correlated with the dependent variables (see Table 7).

TABLE 7

Pearson Correlation Co-efficients:-

(i) PPAS X Dependent Variables

	FRTOL	STANX	SEPAL	SEPAR	SEPANX	CHCMEC
PPAS	0.0170 p=0.462	0.0696 p=0.305	0.0653 p=0.316	0.1082 p=0.214	0.0963 p=0.240	-0.0309 p=0.411
PPASA	0.1676 p=0.108	0.0437 p=0.374	0.2241 p=0.048*	0.1849 p=0.086	0.2218 p=0.050*	-0.1128 p=0.204
PPASB	0.0292 p=0.415	0.1954 p=0.074	-0.0581 p=0.335	0.1199 p=0.189	0.0404 p=0.834	0.0150 p=0.456
PPASD	-0.0611 p=0.327	-0.1043 p=0.222	-0.1627 p=0.116	0.0715 p=0.300	-0.0410 p=0.382	-0.1344 p=0.162
PPASD	-0.0215 p=0.438	0.0795 p=0.280	0.1343 p=0.162	0.0110 p=0.468	0.0747 p=0.292	0.0861 p=0.264

*= Significant correlation; FRTOL = Frustration Tolerance; STANX = Stranger Anxiety; SEPAL = Separation Anxiety Mother Leaves; SEPAR = Separation Anxiety Mother Returns; SEPANX = Separation Anxiety; CHCMEC = Child Coping Mechanisms.

Only two correlations were significant. Separation anxiety measured by the child's reaction to the departure of the mother and the total separation anxiety expressed by the child were significantly correlated with the subscore of the PPAS measuring whether the parent "regards his child as a person with feelings and respects the child's right and need to express these feelings" (Porter, 1954, p.76), $p < 0.048$; $p < 0.050$).

TABLE 8

(ii) Observation scales X Dependent Variables

	FRTOL	STANX	SEPAL	SEPAR	SEPANX	CHCMEC
ARTOT	0.0491 p=0.360	-0.009 p=0.497	0.1825 p=0.089	0.0868 p=0.262	0.1434 p=0.146	0.0375 p=0.392
ACC	0.0528 p=0.349	0.1498 p=0.135	0.1674 p=0.109	-0.0642 p=0.319	0.0477 p=0.363	0.1138 p=0.202
RESP	0.0292 p=0.415	-0.1288 p=0.172	0.332 p=0.164	0.1856 p=0.085	0.1760 p=0.097	-0.0402 p=0.384
ARTOT = Acceptance and Responsiveness scores combined; ACC = Acceptance; RESP = Responsiveness.						

No significant relationships were found between the observed maternal acceptance and responsiveness measures and the child dependent variables (see Table 8). Therefore, Hypothesis 2a was only partially supported. Hypothesis 2b (high quality mother-child interaction-accepting, responsive-results in lower levels of separation and stranger anxiety, higher frustration tolerance and more competent coping mechanisms in the child, than mother-child interaction of poor quality-non-accepting, unresponsive, was not supported. The two

significant correlations, in fact, indicated that the more accepting the parent, the greater the child's separation anxiety.

TABLE 9

(iii) Pearson Correlation Coefficient : Age x Dependent

<u>Variables</u>		FRTOL	STANX	SEPAL	SEPAR	SEPANX	CHCMEC
AGE		-0.2637	-0.0104	-0.1860	-0.2250	-0.2258	0.2495
		p=0.025*	p=0.470	p=0.085	p=0.048*	p=0.047*	p=0.032*
* = Significant Correlations							

As can be seen from Table 9, Hypothesis 3 was supported in four of the six expected interactions. Age and Frustration tolerance were negatively and significantly correlated ($r = -0.2637$; $p < 0.025$), i.e., with increasing age, the child's frustration tolerance score decreases indicating better frustration tolerance. Age and the child's separation reaction in response to the mother's return as well as age and the total separation anxiety exhibited by the child were negatively and significantly correlated ($r = -0.2250$, $p < 0.048$; $r = 0.2258$, $p < 0.047$). The older the child, the less separation anxiety evidenced. Age and the child's coping mechanisms were positively and significantly correlated, ($r = 0.2495$, $p < 0.032$). With increasing age, the competence of the coping mechanisms used by the child improves.

Hypothesis 4 (children attending day-care centre: from approximately one year of age exhibit greater separation and stranger anxiety, lower frustration tolerance, and less

competent coping mechanisms than children attending a day-care centre from approximately three years of age), was supported but the differences were not significant. The mean values for the two groups on each variable were computed:-

TABLE 10

Group 3/4 x Dependent Variables

	FRTOL	STRANX	SEPAL	SEPAR	SEPANX	CHCMEC
GROUP 3	78.21	105.14	21.43	28.21	49.64	33.57
GROUP 4	90.36	107.86	22.14	30.00	52.14	31.29
GROUP 3 = children attending day-centre from three years.						
GROUP 4 = children attending day-centre from one year						

Group 3 evidenced higher frustration tolerance, lower separation and stranger anxiety and more competent coping mechanisms, than Group 4 (see Table 10).

Hypothesis 5, the degree of separation and stranger anxiety, frustration tolerance and the nature of the coping mechanisms exhibited by the child is different for males and females, was not supported. T-tests were computed for the interaction between sex and each dependent variable. Males did not differ significantly from females in frustration tolerance ($p < 0.973$), stranger anxiety ($p < 0.231$), separation anxiety measured by the child's reaction to the mother's departure ($p < 0.806$), separation anxiety measured by the child's reaction to the mother's return ($p < 0.313$),

total separation anxiety ($p < 0.476$), and child's coping mechanisms ($p < 0.170$).

Hypothesis 6, separation anxiety, stranger anxiety, frustration tolerance and the development of coping mechanisms are inter-related behavioural systems, was partially supported (see Table 11):-

TABLE 11

Pearson Correlation Coefficients : Dependent
Variables X Dependent Variables

	FRTOL	STANX	SEPAL	SEPAR	TOTAL SEPANX	CHCMEC
FRTOL	1.000 $p=0.0$					
STANX	0.1613 $p=0.118$	1.000 $p=0.0$				
SEPAL	0.2856* $p=0.016$	0.4500* $p=0.0$	1.000 $p=0.0$			
SEPAR	0.2586* $p=0.027$	0.4625* $p=0.0$	0.6761* $p=0.0$	1.000 $p=0.0$		
TOTAL SEPANX	0.2961* $p=0.013$	0.4986* $p=0.0$	0.9029* $p=0.0$	0.9272* $p=0.0$	1.000 $p=0.0$	
CHCMEC	-0.0970 $p=0.238$	-0.0201 $p=0.413$	-0.1755 $p=0.098$	-0.2252* $p=0.048$	-0.2206 $p=0.051$	1.000 $p=0.0$

FRTOL = Frustration Tolerance, STANX = Stranger Anxiety;
SEPAL = Separation Anxiety (Mother leaves); SEPAR =
Separation Anxiety (Mother returns); TOTAL SEPANX = Total
Separation Anxiety; CHCMEC = Child Coping Mechanisms; * =
Significant Correlations

Frustration tolerance correlated significantly and positively with total separation anxiety ($r = 0.2961$; $p < 0.013$),

with separation anxiety measured by mother leaving ($r = 0.2856$; $p < 0.016$), and by mother returning ($r = 0.2586$; $p < 0.027$).

Stranger anxiety correlated significantly and positively with total separation anxiety ($r = 0.4986$; $p < 0.0$), with separation anxiety measured by mother leaving ($r = 0.4500$; $p < 0.0$) and by mother returning ($r = 0.4625$; $p < 0.0$).

Separation anxiety measured by mother leaving correlated significantly and positively with separation anxiety measured by mother's return ($r = 0.6761$; $p < 0.0$) and with total separation anxiety ($r = 0.9029$; $p < 0.0$).

Separation anxiety measured by mother's return correlated significantly and positively with total separation anxiety ($r = 0.9272$; $p < 0.0$) and negatively with child's coping mechanisms ($r = -0.2252$; $p < 0.048$).

Total separation anxiety correlated significantly and negatively with child's coping mechanisms ($r = -0.2206$; $p < 0.051$).

Overall, it can be seen that frustration tolerance and separation anxiety are inter-related behavioural systems, as are separation anxiety and stranger anxiety, and separation anxiety and coping mechanisms.

Description of Interview Responses

It was decided to consider the mother's interview responses in a descriptive fashion, i.e., a notation of the distribution of the varied responses, rather than subjecting this data to specific computerized statistical procedures. This is due to the lack of standardization and scoring of the interview schedule which would prevent the results from

being considered significant (see Table 12 for the distribution of responses).

TABLE 12

Distribution of Responses from Maternal Interviews

	DAY-CARE (1 year)	DAY-CARE (3 years)	NURSERY- SCHOOL	HOME
GENERAL PROBLEMS	9	11	8	8
SOCIAL DIFFICULTY	2	5	1	6
CLOSE FRIENDS	5	3	6	6
CASUAL FRIENDS	4	8	4	3
CLOSE & CASUAL FRIENDS	4	1	2	4
DO NOT KNOW	1	2	2	1
PARTICULAR/ "SPECIAL" FRIEND	10	6	8	5

In response to the query concerning problems encountered in the rearing of the child, nine of the fourteen mothers who had children in day-care from the age of one reported some difficulty. The problems reported included : temper tantrums (five children), aggression (one child), hyperactivity (one child), retarded toilet training (one child), and a milk allergy (one child). Eleven of the 14 mothers with children attending day-care from the age of three reported

problems : temper tantrums (two children), aggression (two children), discipline problems (one child), stress (one child), stubbornness (one child), attention demanding (one child), epilepsy and hyperactivity (one child), asthma (one child), retarded weaning (one child).

Eight of the 14 mothers with children attending nursery-school reported difficulties : tantrums (2 children), enuresis (1 child), insecurity (1 child), feeding problems and clingy behaviour (one child), feeding difficulty (1 child), hypersensitivity (1 child), illness (1 child). Eight of the 14 mothers with children at home reported problems : tantrums and frustration (one child), nervousness and frustration (one child); social difficulties, aggression and enuresis (one child), stubbornness (one child), sensitivity and insecurity (one child), enuresis (two children), sleep refusals and separation anxiety (one child). Overall, there is not much difference between the groups in type of problem encountered nor the frequency of occurrence.

In response to the question directed at the ease with which the children interact socially, only two of the 14 children attending day-care from the age of one were reported as having difficulty in mixing socially and making friends; five of the 14 children attending day-care from the age of three were reported as having problems socially; and only one of the 14 children attending nursery-school had such problems; and six of the 14 children at home with their mothers had social problems.

Asked whether their children's friendships were casual or close, five mothers with children attending day-care from

the age of one reported that their children's friendships were close in nature, four children's friendships were casual, four children's friendships were both casual and close, and one mother did not know the nature of her child's friendships.

Within the group of children attending day-care from the age of three, three children were reported to have close friends; eight had casual friends; one had both casual and close friends; and two mothers did not know the nature of their children's friendships.

Within the group attending nursery-school, six children were reported as having close friendships; four had casual friendships; two had both casual and close friendships; and two mothers did not know the nature of their children's friendships.

Within the group of children at home with their mothers, six children were reported as having close friendships; three had casual friendships; four had both close and casual friendships; and one mother did not know the nature of her child's friendships.

The last question asked concerning the children's socializing patterns was whether the children had one particular "special" friend with whom they spent most of their time. Within the group attending day-care from the age of one, ten of the 14 children were reported as having a particular friend with whom they spent most of their time; six of the 14 children attending day-care from three had such a friend; eight of the 14 children attending nursery-school had such a

friend, and five of the 14 children at home with their mothers had a friend of this nature.

The final question directed at the mothers was in connection with the type of preschool centre that they themselves had attended. Nine of the 14 mothers, whose children attended a day-care centre from the age of one, had stayed at home with their mothers during their preschool years, two had attended nursery-school and only one had attended a day-care centre. Of the 14 mothers whose children attended a day-care centre from the age of three, 11 had stayed home with their mothers, one had attended nursery-school and two had attended a day-care centre. Five of the 14 mothers, whose children attended nursery-school, had stayed home with their mothers, eight had attended nursery-school and only one had frequented a day-care centre. Finally, of the 14 mothers whose children stayed at home with them, seven had also stayed at home with their mothers, and seven had attended nursery-school. For a summary of these findings see Table 13.

TABLE 13

Preschool Attendance : Comparison of Mothers and Children

	Mothers of day- care (1-yr) children	Mothers of day- care (3-yrs) children	Mothers of nursery- school children	Mothers of children at home
STAYED HOME WITH MOTHER	9	11	5	7
ATTENDED NURSERY-SCHOOL	2	1	8	7
ATTENDED DAY- CARE CENTRE	1	2	1	-

friend, and five of the 14 children at home with their mothers had a friend of this nature.

The final question directed at the mothers was in connection with the type of preschool centre that they themselves had attended. Nine of the 14 mothers, whose children attended a day-care centre from the age of one, had stayed at home with their mothers during their preschool years, two had attended nursery-school and only one had attended a day-care centre. Of the 14 mothers whose children attended a day-care centre from the age of three, 11 had stayed home with their mothers, one had attended nursery-school and two had attended a day-care centre. Five of the 14 mothers, whose children attended nursery-school, had stayed home with their mothers, eight had attended nursery-school and only one had frequented a day-care centre. Finally, of the 14 mothers whose children stayed at home with them, seven had also stayed at home with their mothers, and seven had attended nursery-school. For a summary of these findings see Table 13.

TABLE 13

Preschool Attendance : Comparison of Mothers and Children

	Mothers of day- care (1-yr) children	Mothers of day- care (3-yrs) children	Mothers of nursery- school children	Mothers of children at home
STAYED HOME WITH MOTHER	9	11	5	7
ATTENDED NURSERY-SCHOOL	2	1	8	7
ATTENDED DAY- CARE CENTRE	1	2	1	-

CHAPTER IX

DISCUSSION

9.1 Discussion of results

Due to the lack of standardization of the interview questions, definitions and scoring code, nothing conclusive can be gleaned from the mothers' responses. There were no marked between-group differences; however, a few trends may be tentatively suggested.

It appears that the children attending day-care centres from the age of three evidence the highest frequency of problematic behaviour, a third of whom experience social difficulties. They tend to form casual peer relationships in general but just under half do have a particular friend with whom they spend a lot of time, and therefore do seem to be able to maintain one-to-one relationships.

The children attending day-care centres from the age of one seem to replace their mothers with a particular peer with whom they spend most of their time. On the surface they do not seem to experience many social difficulties and form casual and close relationships. However, this apparent social adjustment may be due to the achievement of premature independence from their parents.

The nursery-school children seemed to be superior in general social adjustment. Only one child was reported as experiencing difficulty and most were able to form casual and/or close relationships with a capacity to form a special attachment to one other child.

The children at home with their mothers were reported as having the most social difficulties. They generally appear to cope more successfully in one-to-one relationships rather than in groups, which is probably due to the lack of group exposure that the other three groups of children have from the age of three.

In terms of preschool centre attended, the number of children and mothers attending and who had attended nursery-school and the number of children and mothers staying and who had stayed at home with their mothers, corresponded for half the two groups. Surprisingly however, most of the mothers of the children attending day-care centres from the age of one or three had stayed at home with their mothers. One can merely hypothesise as to the reason for this lack of correspondence between mothers and children. The most likely reason is financial necessity in these families resulting in a higher incidence of working mothers. Day-care centres have only become popular during approximately the last 15 years and were probably not very available when the mothers themselves were preschoolers.

As already noted, nothing conclusive can be extracted from the interviews with the mothers. A suggestion for future research would be to use standardized problem behaviour and social behaviour checklists. In addition, the motivation of the mothers for sending their children to day-centres, nursery-schools or for keeping them at home, should have been far more thoroughly investigated.

Hypothesis 1

Although the quantity of mothering was not found to have a significant effect on the degree of separation anxiety exhibited by a child, the between group mean differences evidenced a definite trend. Children who stayed home with their mothers experienced less separation anxiety than children attending nursery-school, who in turn, experienced less separation anxiety than children attending day-care from the age of three, who experienced less separation anxiety than children attending day-care from the age of one. This lends support to hypothesis 1b, that a greater quantity of child-mother interaction results in less separation anxiety than do lesser amounts of interaction.

These findings seem to indicate that non-continuous mothering does indeed affect the security of the child-mother bond as Hinde and Spencer-Booth (1971), Bowlby (1973) and Blehar (1974; 1977) reported. The present results differ from the findings of Blehar and Kearsley et al. (1975) who reported that the children separated at about three years of age exhibited more anxiety, protest, proximity-seeking and ambivalence than the children experiencing separations at one year of age. The latter tended to exhibit detachment rather than anxious attachment. These researchers' findings are more in accord with the expected cognitive development of young children, i.e. the three-year-old has established object-permanence and can therefore experience a sense of loss; the one-year old's development of object permanence is still relatively unstable. However, one

may argue that the older child is better able to anticipate the return of the mother-figure and is therefore reassured. The younger child on the other hand remains in the immediate unpleasant awareness of the mother-figure absence, hence the more intense protest and resulting greater insecurity exhibited.

The present results run contrary to Braun and Caldwell (1973), Portnoy, (1977), Portnoy and Simmons (1978), Doyle (1975), Caldwell et al. (1976) and Ragozin (1980) who reported that repeated daily separations do not harm the child-mother attachment relationship.

As Ainsworth (1977) and Blehar (1977) emphasized, a child's reaction to both the mother's departure and return can be used as indices of separation anxiety. The correlation between the two reactions in the present study was high ($r = 0.6761$; $p < 0.001$). It is therefore valid to combine the two measures to give a total separation anxiety measure.

The quantity of mother-child interaction was not found to significantly affect the degree of stranger anxiety evidenced by a child. The children who stayed at home with their mothers evidenced the least stranger anxiety followed by the children at day-care from three years, followed by the children at day-care from one year, followed by the nursery-school children who evidenced the greatest stranger anxiety. The finding that the home-children were the least anxious or fearful in the presence of a stranger contradicts Moore (1971) and Ricciuti's (1974) findings that children at home with their mothers till about five years were over-

sensitive, timid and particularly fearful of strangers. The present results support Blehar's (1974) finding that home-reared children were significantly less fearful of strangers than day-care children. This observation also supports Hypothesis 1b.

The present findings also lend support to the theoretical contention that continuous mothering fosters security and hence exploration of strange objects and persons (Bretherton and Ainsworth, 1974; Main, 1973; Ricciuti, 1969, Bronson, 1972; Sroufe, 1977, Bischof, 1975; Waters et al., 1975). Availability of the mother-figure allows the child to use her as a secure base from which to explore novel stimuli.

The observation that nursery-school children evidenced the greatest stranger anxiety was unexpected. One would rather expect that half-day nursery-school attendance provides a perfect situation for the three to six year-old who still needs his mother around for much of the time but who is beginning to enhance and expand his social encounters and relationships. A possible explanation for this unexpected finding is that the nursery-school offers many opportunities for peer interaction but not for adult-directed interaction. Therefore when confronted by a strange adult in an unfamiliar setting the nursery-school child shows more wariness than a day-care child who is used to several changing adult caretakers. The fact that the nursery-school group showed greater stranger anxiety than the day-care group partially

refutes Hypothesis 1b that greater mother-child interaction diminishes the child's stranger anxiety.

The quantity of mother-child interaction was found to have a significant effect on the frustration tolerance exhibited by the child. The home-reared children had a significantly higher tolerance for frustration when compared to the children in day-care from one year of age. This observation supports the finding of Schwarz et al. (1974) who also found that home-reared children coped more successfully with frustration than did their day-care reared counterparts. These results are in contrast to Macrae and Herbert-Jackson's (1976) findings of no difference in frustration tolerance between home and day-care reared children.

The nursery-school children were found, in the present study, to be significantly more tolerant of frustration when compared to the children attending day-care from three years and from one year of age. The differences between the home and nursery-school groups, between the home children and those attending day-care from three years, and between the children attending day-care from three years and from one year, were not significant. To summarize, the nursery-school children exhibited the highest frustration tolerance, followed by the home group, the group attending day-care from three years of age, and lastly the group attending day-care from one year who exhibited the poorest frustration tolerance. These results tend to support the contention that group care results in a retardation in the acquisition of adult-reality-based skills and values (Schwarz et al., 1974). Not only

does day-care diminish the modelling possibilities of a constant mother-figure, but it may also result in anger, aggression and a heightened baseline of frustration experienced by the young child of one to five years. Therefore, early exposure to frustration resulting from a delay in gratification which the staff-child ratio of day-care centres often presents, seems to lead to a diminished tolerance of frustration rather than to superior handling of frustration.

The quantity of mother-child interaction was not found to significantly affect the coping mechanisms exhibited by the child. The home-reared groups were marginally superior, followed by the children attending day-care from three, nursery-school group and finally the children attending day-care from one year of age. Although not at all significant, it is interesting that the home group tended to cope most effectively and the day-care group from one year, the least competently. It appears that parents who believe that day-care offers their children early independence, individuation and superior coping ability are at fault. The opposite, in fact, seems to hold.

Hypothesis 1b (a greater quantity of mother-child interaction results in higher frustration tolerance and more competent coping mechanisms in the child, than lesser amounts of interaction) was partially supported. The children experiencing the least mother-child interaction (attending day-care) evidenced the poorest frustration tolerance. The children attending day-care from one year evidenced the poorest coping ability, the home-reared group the most

effective coping. In three out of the four dependent variables the children at home with their mothers proved to be at the greatest advantage while the children attending day-care from one year of age seemed the worst off.

These findings indicate that a high level of availability of the mother-figure does not result in the "spoiling" of an individual child. On the contrary, it results in a more secure, outgoing and competent child. Early placement in day-care does not, from the above findings, result in an independent, competent, secure child as commonly held; rather the early interference introduced to the mother-child bond and relationship fosters in the child insecurity, anxiety and a poor ability to cope effectively in an independent fashion. It must however, be noted that the results of the present study are by no means conclusive. Several other variables that will be dealt with shortly may well have contributed to the findings here noted.

Hypothesis 2

Only the total PPAS score and one subsection of the PPAS measuring the quality of mothering in terms of acceptance were found to be significantly and positively correlated with total separation anxiety as measured by the child's reaction to the mother leaving. The significant form of acceptance was defined in terms of whether the mother regards the child "as a person with feelings and respects the child's right and need to express these feelings" (Porter, 1954, p. 76).

The fact that these correlations were positive,

i.e., the more accepting the mother, the greater the child's separation anxiety, was extremely unexpected as most of the research points in the opposite direction. Stayton and Ainsworth (1973) emphasized the form of maternal acceptance defined above as crucial in the foundation of maternal understanding and support in relation to the wide range of rational and irrational fears and feelings that children express. They and Porter (1954) have identified acceptance as a prerequisite for sensitivity and responsiveness to a child's needs.

Possible reasons for this unexpected finding are : (a) that the child feels too safe and protected by the mother who accepts everything he feels and expresses, whereas if the child interacts with others some of his feelings, thoughts or expressions may be unacceptable and thereby lead to rejection; (b) that the mother, in supporting and accepting all that the child brings to her, somehow colludes with and reinforces his fears without comforting and encouraging the child to overcome his anxieties, e.g., an over-possessive mother who does not want her child to separate from her. An over-protective mother would equally discourage the independent resolution of the child's anxieties through her need to take-over from the child in an insecure situation preventing the child from using his own initiative and coping ability. Whether these explanations are actually correct in the present study is only a matter of conjecture.

The extremely low and insignificant inter-correlations of the total PPAS and the four sub-definitions imply that,

to a certain extent, the effect of the quality of mothering (acceptance) on a child's separation anxiety, stranger anxiety, frustration tolerance and coping mechanisms was not effectively investigated in the present study. This paucity of information is strongly regretted as past research has often emphasised the effect of quality rather than quantity in mother-child interaction. For example, Yarrow and Goodwin (1965) reported a high correlation between maternal acceptance and the child's ability to cope with stress. Stayton and Ainsworth (1973) found that frequent separation protest in the child was related to maternal rejection in terms of insensitivity to and ignoring of the child's signals. Ainsworth's (1977) study of attachment patterns and quality of mothering reported that the infants attached in an anxious-ambivalent manner, who evidenced substantial separation and stranger anxiety, poor frustration tolerance and coping mechanisms, had mothers who were insensitive, unresponsive and fairly rejecting. Matas (1978) also found these infants to be intolerant of frustration and Connell (1974) reported them to be ineffectual in a problem-solving situation. The anxious-avoidant infants with very rejecting, insensitive mothers, tended to express their separation and stranger anxiety via an increase in exploratory play and aggression but with a decrease in competence and genuine spontaneous interest (Connell, 1976; Main, 1977; Main and Londerville, 1978, cited in Ainsworth, 1979; Matas, 1978).

In contrast to these two groups of infants, the securely attached children had mothers who were accepting, co-operative

and sensitively responsive. These infants exhibited high frustration tolerance, adaptive, effective, coping mechanisms, and were more affectively positive in situations evoking separation and stranger anxiety (Ainsworth et al., 1978; Main, 1973, 1977; Matas, 1978; Matas et al., 1978; Waters, 1978; Waters et al., 1979; Arend et al., 1979).

To summarize, the PPAS as a measure of maternal acceptance has been found to be strongly invalid. As Brownlee (1980) found, the four dimensions defined as forms of acceptance do not seem to be measuring the dimension isolated by Porter (1974) and Burchinal et al. (1957).

The observation scale ratings of acceptance and responsiveness similarly were found to have an insignificant effect on the dependent variables. However, this is more likely to be a result of inadequacies in the design of this section of the study, rather than in the rating scales or observer reliability themselves. A longer observation period should have been employed to gain a more thorough index of mother-child acceptance and responsiveness.

The significant positive correlations between the total and two subsections of the PPAS with the observation scales (total PPAS with observed acceptance, "an acceptant parent is one who regards his child as a person with feelings and respects the child's right and need to express these feelings" with total observed acceptance and responsiveness, "an acceptant parent is one who loves his child unconditionally" with observed acceptance), attributed some validity to the PPAS' definitions of acceptance or rather indicate what the PPAS is actually measuring.

The first correlation suggests that overall the PPAS did measure acceptance, however, it does not isolate the more accurate sub-definitions from those that are less accurate or valid. The second correlation indicates that this PPAS sub-definition is measuring more than just acceptance, i.e., whether the mother not only accepts the child's feelings and expressions but also responds to them in true dynamic interaction. The third correlation suggests that the definition of observed acceptance as "the mother does not judge the child's underachievements but accepts him/her at his/her own pace", corresponds to the PPAS definition encompassing unconditional love rather than to the PPAS definition encompassing the recognition by the mother of the child's need to differentiate and separate as was suggested in Chapter 6.2.4.

The sub-definition of the PPAS that did not appear significant in relation to either the dependent or independent variables, i.e., "an acceptant parent is one who values the unique make-up of his child and does what he can to foster that uniqueness within the limits of healthy personal and social adjustment", should be removed from the scale which purports to measure parental acceptance. It would be more appropriate to label this quality conventionality versus individuality in parenting.

Hypothesis 3

With increasing age a child's frustration tolerance improves significantly. This finding supports the results of Feiring and Lewis (1979) that with increasing age a

child's stress and fretting diminishes when confronted with a frustrating task, to be replaced by more mature and effective coping responses. The older a child the more he will be able to delay gratification.

With increasing age, the degree of separation anxiety experienced by a child decreases significantly, as measured both by the child's reaction to the mother's return and by total separation anxiety observed. Age does not here refer to the time when the initial separation occurred but rather to the range of children's ages at the time of the present observations. The present results support those of Prugh et al. (1953) and Moore (1964, 1969) who found that the three year-olds and younger were far more distressed at separations than four to six year olds. As mentioned in Chapter Two, the preschooler is in the process of developing a consolidated internal representation of the mother and greater independence followed by a stronger tolerance for separation. The overall security or insecurity of the individual in separating from loved-ones in later life may be discerned from more subtle reactions, e.g., manifestations of anxiety such as checking behaviour (telephoning frequently), inhibition, withdrawal, agitation, etc.

Age was found to be positively and significantly correlated with the child's coping mechanisms. With increasing age, the effectiveness of the coping mechanisms employed by the child increases. This is in line with the increased frustration tolerance found in relation to increasing age. As a child learns to delay immediate gratification, he is

able to use his energies for constructive problem-solving rather than for aggression or regression (Maier and Ellen, 1959; Feiring and Lewis, 1979; Matas et al., 1978).

Age and stranger anxiety were not found to be significantly correlated. However the correlation was negative indicating a decrease in stranger anxiety with increasing age, which is to be expected. With increasing age a child receives greater exposure to novel persons and stimuli and improves his social interchanges and initiation. In later life stranger anxiety may be identified by the degree of shyness or sociability exhibited by the individual.

Hypothesis 4

Whether children attending day-care centres from the age of one exhibit greater separation and stranger anxiety, lower frustration tolerance and less competent coping mechanisms than children attending a day-care centre from three years of age, has been partially dealt with concerning Hypothesis 1. For each dependent variable the group attending day-care from three years exhibited healthier development than the group commencing at one year - the former evidenced less separation and stranger anxiety, better frustration tolerance and more competent coping mechanisms than the latter. However, the differences were not significant.

Nevertheless it would appear that mothers should be discouraged from placing their children in full-time daily care before the age of three. Much naturally depends on the circumstances in which the mother finds herself in the home environment, the stability of the marriage, the quality of

the day-care centre, financial considerations, etc. Until approximately three years of age, a child's world still consists primarily of the mother-figure and nuclear family set-up. Social relationships with peers and adults outside the family only begin to be initiated after three years - first via parallel play leading to full interpersonal interchanges. To place a child who is still extremely dependent on the mother-figure in a strange environment without one-to-one interaction on a substantial basis, must, as noted in the present and previous research (Blehar, 1974; 1977; Kearsley et al., 1975; Bowlby, 1973; Ainsworth, 1979), be avoided as far as possible.

Hypothesis 5

Sex differences for all four dependent variables were not significant. These findings run contrary to Portnoy (1977) who reported that day-care males cried more when separated from their mothers and resisted and avoided the stranger to a greater extent than the day-care females. The present findings are also in contrast to Moskowitz et al. (1977) and Cornelius and Denney's (1975) results indicating greater independence of the day-care males in the presence of their mothers compared to the home-care males.

The present lack of significant sex differences in stranger anxiety does not help to clarify, but only adds to the general inconsistency and contradiction of past research. However, the majority of the researchers have reported stronger and more frequent stranger anxiety/wariness in girls than in boys (Ternes and Lampl 1964;

Schaffer, 1966; Robson et al., 1969; Lewis and Weinraub, 1973; Décarie, 1974).

The insignificant relationship found in the present study between sex and frustration tolerance runs counter to Goldberg and Lewis' (1969) finding that boys cope more successfully with frustration than girls. It also differs from the studies by Jacklin et al. (1973), Van Lieshout (1975), Maccoby and Feldman (1972) and Feiring and Lewis' (1979) who reported that negative outbursts are more frequent and decline at a slower rate in boys than in girls and that girls employ maturer instrumental action and language than boys when confronted with a frustrating task. From the present study it can be stated that there are no differences between males' and females' frustration tolerance and coping mechanisms.

Hypothesis 6

All four behavioural systems were not found to be inter-related. Frustration tolerance was significantly inter-related with separation anxiety, but not with stranger anxiety or coping ability. The quality of the attachment relationship largely determines the degree to which a child feels secure enough to separate from the mother and venture into new areas (Ainsworth et al., 1978; Sroufe, 1979). By negotiating novel objects and persons, the child's environmental manipulation, cognition and sociability develop resulting in ego-control, independence and ability to delay gratification (tolerate frustration). Therefore, the ability to separate and the handling of frustration

interact and are developmentally co-ordinated. This finding is in accord with Matas et al. (1978) who found that the securely attached infants who were able to separate, at two years, exhibited more enthusiasm, less frustration and greater positive affect in problem-solving. The insecurely attached infants who had difficulty maintaining separations were more negativistic, distressed and gave up on frustration tasks more quickly.

It was surprising that frustration tolerance was not significantly correlated with coping ability. One would hypothesize that in order to cope effectively, a good tolerance for frustration is necessary.

Stranger anxiety was positively correlated with total separation anxiety as well as with the two separation subscores. As Tennes and Lampl (1966), Prugh et al. (1953), Moore (1969), Hinde and Spencer-Booth (1971), Heinicke and Westheimer (1966) and Bowlby (1973) have found, separation and stranger anxiety are closely linked and have a common determinant-fear of object loss. The use of the mother as a secure base in the process of separating fosters exploration and the ability to initiate contact with novel objects and persons. Anxious-resistant attachment was found to result in strong separation anxiety and high stranger anxiety (Ainsworth et al., 1977; Stayton and Ainsworth, 1973). Similarly Bretherton and Ainsworth (1974), Main (1973), Ricciuti (1969) and Bronson (1972) found that when the mother was present the infant would use her as a secure base and explore the stranger, but if the mother

was absent the infant would respond negatively and fearfully to the stranger.

Total separation anxiety, separation anxiety as measured by the child's reaction to the mother's departure and to her return were all correlated significantly and positively as has already been noted.

Total separation anxiety and separation anxiety as measured by the child's reaction to the mother's return was significantly and negatively correlated with the child's coping mechanisms. That is, the stronger the child's separation anxiety indicated by the child's need for close proximity to the mother, the less competent the coping ability exhibited by the child. This finding is consistent with the theoretical and empirical reports enumerated in Chapter I. Waters et al. (1979), Arend et al. (1979), Matas (1978) and Main (1973) found that two to four year-olds who were securely attached and could separate easily were more competent in exploration and social play, more enthusiastic when confronted with tasks, and they evidenced greater ego-strength, control and resiliency. If a child is able to tolerate separation, his energy will be free to be directed at constructive problem-solving. The child's full attention and interest can be focused on the social or cognitive novel stimuli to which he is exposed.

To summarize, it can be stated conclusively from the present findings, that the handling of developmental tasks such as separation, frustration, problem-solving and

confrontation with strangers, by young children, takes place within a matrix of inter-related behavioural systems/developments, with the security of the mother-child relationship forming the cornerstone of later social, cognitive and emotional success. Sufficient support for Sroufe's (1977, 1979) theoretical proposals and his co-workers' research evidence therefore has been established.

9.2 Limitations of the present study and suggestions for future research

Limitations existed in the present study in terms of sample size, psychometric measurements and observations used, and in terms of factors that should have been included. First, a larger sample size would allow for greater generalization of the findings.

Second, as already noted, the interview with the mothers was not at all standardized and therefore nothing conclusive could thereof be obtained. Standardized problem behaviour and social behaviour checklists should be used in future research. Third, in addition to psychometric and interviewing techniques, field observations should be included, i.e., observations of the children's social and general coping behaviour at nursery-school, in the day-care centres and in their own homes. The observation period of the mother-child play activities prior to the Strange Situation Procedure should be extended in order to obtain a more valid and thorough index of their relationship.

Fourth, the motivation of the mothers for sending their preschoolers to nursery-school, a day-care centre

or for keeping them at home should be thoroughly investigated. Fifth, the approaches of the individual nursery-schools and day-care centres in dealing with initial or ongoing separation anxiety expressed by the children should be noted. In addition, the sensitivity to and training of the staff in perceiving behavioural and affective problems in the children should be investigated, i.e., a closer check of the quality of care available at different centres and schools should be included.

Sixth, the quality of mothering should be measured by taking into account several dimensions (besides acceptance and responsiveness). Such dimensions should include control-autonomy, permissiveness-restrictiveness and overprotection. Finally, the emotional stability of the families should be assessed via observation, interview or psychometric measurement or via a combination of the three.

CHAPTER X

SUMMARY AND CONCLUSIONS

Mother-child attachment has been the focus of much theoretical and empirical attention for several decades. John Bowlby (1958, 1961, 1969, 1973, 1979) formulated an ethologically based conceptual system incorporating psychoanalytic features (e.g., instinct theory, defense mechanisms), evolutionary concepts (survival of the species, via proximity, attachment behaviours) and cognitive developments (the development of object constancy, perceptual-motor development (Piaget, 1952)) to explain the process by which a child becomes affectionally attached to a particular mother-figure.

The research propagated by Bowlby's theoretical system of attachment revealed an enormous degree of inconsistency and contradiction regarding the behavioural indices supposed to reflect the existence and development of attachment (Lamb, 1974; Masters and Wellman, 1974).

Sroufe (1976, 1979) and his colleagues overcame the immobility that attachment research had come up against by postulating a new way of conceptualizing attachment. Sroufe and Waters (1977) began to view attachment as an organizational construct, i.e., attachment viewed as one of the basic behavioural organisations that is inter-related with later developing behavioural systems. By examining the quality of attachment in the first few years, one could then predict how the child would cope with further developmental tasks, such as separation, problem-solving,

ERRATUM

The final paragraph on page 178 should read as follows:

Sroufe (1976, 1979) and his colleagues overcame the immobility that attachment research had come up against by postulating a new way of conceptualizing attachment. Sroufe and Waters (1977) began to view attachment as an organizational construct, i.e. attachment viewed as one of the basic behavioural organisations that is inter-related with later developing behavioural systems. Consequently, Sroufe and his co-workers postulated that by examining the quality of attachment in the first few years, one could predict how the child would cope with further developmental tasks such as separation, problem-solving, socialization, frustration, etc. According to Sroufe and Waters (1977), the conceptualization of attachment as an organizational construct would also allow the reverse to follow: by examining the way a child deals with environmental tasks, one may gain an indication of the quality of the first relationship he/she had with the mother-figure.

socialization, frustration, etc. The reverse would also follow : by examining the way a child deals with developmental tasks, one may gain an indication of the quality of the first relationship he/she had with the mother-figure.

The quality of mothering is naturally the most influential factor concerning the quality of child-mother attachment. Ainsworth (1973, 1979), Blehar et al. (1977) and Sroufe (1979) identified three maternal qualities as essential in the development of healthy attachment. These are - sensitivity, responsiveness and acceptance. Research has borne out the importance of these qualities (Cooper-smith, 1967; Baumrind, 1967; Ainsworth and Bell, 1974; Ainsworth et al., 1978; Matas et al., 1978).

In addition to the quality of mothering the quantity of mother-child interaction has been found to be of paramount importance for healthy psychological development (Rutter, 1979; Bowlby, 1951; Yarrow, 1961; Woods, 1972; Nye and Hoffman, 1963; Hoffman, 1979). The adverse effects of a minimum amount of mothering found in institutions have long been documented (Dennis and Najarian, 1957; Goldfarb, 1943; Tizard and Tizard, 1977; Rutter, 1979). Since the Second World War the increasing number of working mothers has led to the establishment of day-care centres. The focus of research therefore shifted to this less severe form of diminishment in mother-child interaction.

The results of studies examining the effects of working mothers, day-care centres and nursery-schools on children

have been contradictory and inconclusive (Hoffman, 1963, 1974; Etaugh, 1979). Much of the research has focused on the effects of diminished mother-child interaction on separation anxiety, stranger anxiety, coping, problem-solving behaviour and frustration (Blehar, 1977; Ainsworth, 1973; Kearsley et al., 1975; Portnoy, 1977; Caldwell et al., 1970). These were the dependent variables used in the present study.

In the examination of the research investigating the above dependent variables in relation to quality and quantity of mother-child interaction, two secondary independent variables emerged. These were:- the sex of the child, and the age of the child at initial separation when entering day-care or nursery-school. They were therefore also included in the present study.

The aims of the present research were:-

1. To determine whether a part-time (nursery-school attendance), and a full-time (day-care attendance) quantitative disruption in mother-child interaction affects the child's separation anxiety, stranger anxiety/fear, frustration tolerance and general coping mechanisms.
2. To determine whether the quality of mothering, i.e., the degree of maternal acceptance and responsiveness, affects the child's separation anxiety, stranger anxiety/fear, frustration tolerance and general coping mechanisms.
3. To determine whether there are sex differences in

children's ability to cope with separation, stranger confrontation and frustration, and in their general coping mechanisms.

4. To determine whether age of the child influences the development of separation anxiety, stranger anxiety/fear, frustration tolerance and coping mechanisms.
5. To determine whether there is a relationship between a child's separation anxiety, stranger anxiety, frustration tolerance and general coping mechanisms.

The subject population consisted of 56 four-year old children who were the youngest or only children in their intact families, and their mothers. There were 14 children and mothers in each of the four groups:- a group of children who stayed at home with their non-working mothers; a group of children who attended nursery-school; a group of children who had attended a day-care centre from the age of three; a group of children who had attended a day-care centre from the age of one.

Each mother-child unit was brought to the University of the Witwatersrand where they underwent the experimental procedure. This procedure involved:- (1) the observation of the mother and child playing, by two raters to obtain measures of maternal acceptance and responsiveness; (2) the application of a modified version of the Ainsworth-Wittig Strange Situation Procedure, during which the raters observed the children's reactions to separation and a stranger; the administration of a problem-solving task and a fantasy questionnaire to each child to gain measures of

frustration tolerance and general coping mechanisms; the administration of a parental acceptance questionnaire to the mothers; an interview with the mothers concerning rearing difficulties, the socialization pattern of their children and the preschool centre the mothers themselves had attended.

The following statistical procedures were computed:- Pearson product moment correlation co-efficients, one way analyses of variance, and t-tests.

The results were as follows:-

1. There were no significant differences between the preschool groups in separation anxiety, i.e., a decrease in the quantity of mother-child interaction did not result in an increase in separation anxiety exhibited by the child. However, a trend was discernible: the more time spent away from the mother, the greater the separation anxiety exhibited by the child, i.e., the children attending day-care from the age of one had the strongest separation anxiety, the children at home with their mothers had the least separation anxiety.
2. There were no significant differences between the groups in stranger anxiety/fear, i.e., a decrease in the quantity of mother-child interaction does not result in an increase in stranger anxiety exhibited by the child.
3. There was a significant difference between the groups

in frustration tolerance, i.e., a decrease in the quantity of mother-child interaction is commensurate with diminished frustration tolerance exhibited by the child.

4. There was no significant difference between the groups in general coping mechanisms, i.e., a decrease in the quantity of mother-child interaction does not result in a decrease in the success of the coping mechanisms exhibited by the child.
5. Separation anxiety was partially significantly but negatively correlated with maternal acceptance, i.e., the more accepting the mother, the stronger the child's separation anxiety.
6. Stranger anxiety, frustration tolerance and coping mechanisms exhibited by the child were not related to the degree of maternal acceptance or responsiveness, i.e., the quality of mothering, in terms of acceptance and responsiveness, did not affect the stranger anxiety, frustration tolerance or coping mechanisms of the child.
7. There were significant relationships between age of the child and the separation anxiety, coping mechanisms and frustration tolerance exhibited by the child, i.e., with increasing age there is a decrease in separation anxiety, an increase in frustration tolerance and the child's coping mechanisms. There was no significant relationship between age and stranger anxiety exhibited by the child.

8. There were no significant differences between males and females in separation and stranger anxiety, frustration tolerance and coping mechanisms exhibited by the child.
9. Frustration tolerance and separation anxiety are inter-related behavioural systems, as are separation anxiety and stranger anxiety, and separation anxiety and coping mechanisms.
10. Nothing conclusive could be obtained from the interview with the mothers due to a lack of standardization and scoring procedure.

Limitations of the present study were described and suggestions for future research were offered.

In conclusion, two points of advice are offered to mothers of infants and pre-schoolers. First, if possible, they should avoid placing their children in a day-care centre before the age of three, as the group of children who had attended day-care from the age of one showed the overall poorest adjustment. Second, if unavoidable, extreme care must be taken in terms of which day-care centre is chosen. A thorough investigation into the qualifications of the staff and the stimulation and structured programmes available at the centre should be undertaken. Training in child development and the symptomatology of maladjustment in young children should be made compulsory for all staff at child care centres.

REFERENCES

- Ainsworth, M.D.S. Object Relations, dependency, and attachment: A theoretical review of the infant-mother relationship. Child Development, vol. 40, no.4, Dec., 1969.
- Attachment and dependency: A comparison. In: J.L. Gevirtz (ed.), Attachment and dependency. Washington, D.C. : V.H. Winston, 1972.
- The development of infant-mother attachment. In: B.M. Caldwell and H.N. Ricciuti (eds.), Review of child development research, vol. III. Chicago : The University of Chicago Press, 1973.
- Infant-mother attachment. American Psychologist, vol. 34, no.10: 932-937, Oct., 1979.
- Attachment as related to mother-infant interaction. In: J.S. Rosenblatt, R.A. Hinde, C. Beer and M.C. Busnel (eds.), Advances in the study of behaviour, Volume 9. New York: Academic Press, 1979.
- Infancy in Uganda: Infant care and the growth of love. Baltimore: John Hopkins Press, 1967.
- Infant development and mother-infant interaction among Canada and American families. In: P.H. Leiderman and S. Tuckin (eds.) Culture and infancy : Variations on the human experience. New York : Academic Press, 1977.
- Ainsworth, M.D.S. and Bell, S.M. Attachment, exploration and separation: Illustrated by the behaviour of one-year-olds in a strange situation. Child development, 41 : 49-67, 1970.
- Some contemporary patterns of mother-infant interaction in the feeding situation. In : A. Ambrose (Ed.), Stimulation in early infancy. London and New York : Academic Press, 1969.
- Mother-infant interaction and the development of competence. In : K.J. Connolly and J. Bruner (eds.), The Growth of Competence. London and New York : Academic Press, 1974.
- Ainsworth, M.D.S., Bell, S.M. and Stayton, D.J. Individual differences in strange situation behaviour of one-year olds. In: H.R. Schaffer (ed.), The origins of human social relations. London and New York : Academic Press, 1971.

- Ainsworth, M.D.S., Bell, S.M. and Stayton, D.J. Individual differences in the development of some attachment behaviours. Merrill-Palmer Quarterly, 18 : 123-143, 1972.
-
- Infant-mother attachment and social development : socialisation as a product of reciprocal responsiveness to signals. In : M.P.M. Richards (eds.), The integration of a child into a social world. London : Cambridge University Press, 1974.
- Ainsworth, M.D.S., Blehar, M.C., Waters, E. and Walls, S. Patterns of attachment : A psychological study of the strange situation. New Jersey : Lawrence Erlbaum Associates, Inc., 1978.
- Ainsworth, M.D.S. and Wittig, B.A. Attachment and exploration behaviour of one-year-olds in a strange situation. In : B.M. Foss (ed.), Determinants of infant behaviour IV. London : Methuen, 1969.
- Alloway, T., Pliner, P. and Kramer, L. (eds.). Attachment Behaviour. New York and London : Plenum Press, 1977.
- Ambrose, J.A. The development of the smiling response in early infancy. In : B.M. Foss (ed.), Determinants of infant behaviour I. London : Methuen, 1961.
- Anastasi, A. Psychological Testing. New York : MacMillan, 1968.
- Anderson, C.W. Attachment in daily separations : reconceptualizing day-care and maternal employment issues. Child Development, 51 : 242-245, 1980.
- Andrus, R. and Horowitz, E.L. The effect of nursery-school training : insecurity feelings. Child Development, 9 : 169-184, 1938.
- Angel, K. The role of the internal object and external object in object relationships, separation anxiety, object constancy and symbiosis. International Journal of Psycho-Analysis, 53 : 541, 1972.
- Antonovsky, H.F. A contribution to research in the area of the mother-child relationship. Child Development, 30 : 37-51, 1959.
- Arend, R. Gove, F.L. and Sroufe, L.A. Continuity of individual adaptation from infancy to kindergarten : A predictive study of ego-resiliency and curiosity in preschoolers. Child Development, 50 : 950-959, 1979.

- Ausubel, D.P. Theory and problems of child development.
New York : Grune and Stratton, 1958.
- Baldwin, A.L. Changes in parent behaviour during childhood.
American Psychologist, 2 : 425-426, 1947.
- _____ The effect of home environment on nursery-school behaviour. In : W.E. Martin, and R.B. Stendler, Readings in Child Development. New York : Harcourt, Brace and Company, 1954.
- Balint, M. Early developmental states of the ego. Primary object-love. International Journal of Psychoanalysis, 30 : 265-278, 1949.
- Bandura, A. Aggression, a social-learning analysis.
U.S.A. : Prentice-Hall, 1973.
- Barchal, R.M. A comparison of parent-infant attachment and interaction patterns in day-care and non-day-care family groups. Dissertation Abstracts International, 38 (11-B) : 5639, 1978 (May).
- Barker, R., Dembo, T. and Lewin, K. Frustration and regression : an experiment with young children.
Univ. Ia. Stud. Child Welfare, 1941.
- Bateson, P.P.G. and Hinde, R.A. (eds.). Growing points in ethology. Great Britain : Cambridge Univ. Press, 1976.
- Baumrind, D. Effects of authoritative parental control on child behaviour. Child Development, 37 : 887-907, 1966.
- _____ Authoritarian vs. authoritative parental control. Adolescence 3 (11) : 255-272, 1968.
- _____ Current patterns of parental authority. Developmental Psychology, vol. 4 (1, Pt.2) : 1-103, 1971 (Jan.).
- _____ Will a day-care center be a child development center? Young Children, Vol. 28 (3) : 154-169, 1973 (Feb.).
- Baumrind, D. and Black, A.E. Socialization practices associated with dimensions of competence in preschool boys and girls. Child Development, 38(2) : 291-327, 1967.
- Becker, W.C. Consequences of different trends of parental discipline. In : M.C. Hoffman and L.W. Hoffman (eds.), Review of Child development research. New York : Russell Sage Foundation, 1964.

- Becker, W.C., Peterson, D.R., Luria, Z., Shoemaker, D.S. and Hellmer, L.A. Relations of factors derived from parent interview ratings to behaviour problems of five-year-olds. Child Development, 38 : 509-535, 1967.
- Beckwith, L. Relationship between attributes of mothers and their infants' I.Q. scores. Child Development, 42 : 1083-1097, 1971.
- Bee, H.L. Parent-child interaction and distractibility in nine-year-old children. Merrill-Palmer Quarterly, 13 (3) : 175-190, 1967.
- Bell, R.Q. Contributions of human infants to caregiving and social interaction. In : M. Lewis and L.A. Rosenblum (eds.), The Effects of the Infant on its Caregivers. New York : Wiley, 1974.
- Bell, S.M. The development of the concept of the object and its relationship to infant-mother attachment. Child Development, 41 : 291-312, 1970.
- Bell, S.M. and Ainsworth, M.D.S. Infant crying and maternal responsiveness. Child Development, 43 : 1171-1190, 1972.
- Beller, E.K. Dependence and independence in young children. Journal of Genetic Psychology, 87 : 25-35, 1955.
- Belsky, J. and Steinberg, L.D. The effects of day-care : A critical review. Child Development, 49 : 929-949, 1978.
- Benedek, T. Toward the biology of the depressive constellation. Journal of the American Psychoanalytic Association, 4 : 389-427, 1956.
- Benjamin, J.D. Some developmental observations relating to the theory of anxiety. Journal of The American Psychoanalytic Association, 9 : 652-668, 1961.
- _____ Further comments on some developmental aspects of anxiety. In : H.S. Gaskill (Ed.), Counterpoint, International Univ. Press, New York, 1963.
- Beres, D. and Obers, S. Effects of extreme deprivation in infancy on psychic structure in adolescence. The Psychoanalytic study of the child, 5 : 212-235, 1950.
- Bischof, N. A system's approach toward the functional connections of attachment and fear. Child Development, 46 : 801-817, 1975.
- Blanchard, M. and Main, M. Avoidance of the attachment figure and social-emotional adjustment in day-care infants. Developmental Psychology, Vol. 15 : 445-446, 1979.

Blehar, M.C. Attachment and day-care. Dissertation Abstracts International, Vol. 34 (1-B) : 386-387, 1973 (Jul.).

----- Anxious attachment and defensive reactions associated with day-care. Child Development, 45 : 684-692, 1974.

----- Mother-child interaction in day-care and home-reared children. In : Roger, A. Webb (ed.), Hyman Blumberg Symposium : Social development in childhood : Day-care, programs and research. Baltimore and London : John Hopkins University Press, 1977.

Block, J. and Martin, B. Predicting the behaviour of children under frustration. In : J.M. Seidman (ed.), The child : A book of readings. New York : Rinehart and Co. Inc., 1958.

Blomart, J. Attitudes maternelles et reactions à l'entrée au jardin d'enfants. Acta Psychologica, 21 : 75-99, 1963.

Blurton-Jones, N. (Ed.). Ethological studies in child behaviour. Cambridge University Press, 1972.

Bonney, M.E. and Nicholson, E.L. Comparative social adjustments of elementary school pupils with and without preschool training. Child Development, 29, no.1 : 125-133, March, 1958.

Bowlby, J. Forty-four juvenile thieves : their characters and home life. International Journal of Psychoanalysis, 25 : 19-52; 107-127, 1944.

----- Some pathological processes set in train by early mother-child separation. Journal of Mental Science, Vol. 99 : 265-272, 1953.

----- The nature of a child's tie to his mother. International Journal of Psychoanalysis, 39 : 350, 1958.

----- Grief and Mourning in infancy and early childhood, Psychoanalytic study of the child, 15 : 9-53, 1960.

----- Separation anxiety. The International Journal of Psychoanalysis, vol. 41, Parts 2-3, 1960.

----- Separation anxiety : A critical review of the literature. Journal of Child Psychology and Psychiatry, 1 : 251-269, 1961.

----- Processes of mourning. International Journal of Psychoanalysis, 42 : 317-340, 1961.

- Bowlby, J. Pathological mourning and childhood mourning. Journal of the American Psychoanalytic Association, 11 : 500-541, 1963.
- Attachment and Loss. vol.1. London : The Hogarth Press, 1969.
- Attachment and Loss, vol.2: Separation : Anxiety and Anger. London: Penguin, 1973.
- The making and breaking of affectional bonds. London : Tavistock Publications, 1979.
- Bowlby, J., Ainsworth, M., Boston, M. and Rosenblum, D. The effects of mother-child separation : A follow-up study. British Journal of Medical Psychology, 29 : 211-247, 1956.
- Braun, S.J. and Caldwell, B.M. Emotional adjustment of children in day-care who enrolled prior to or after the age of three. Early Child Development and Care, vol.2 : 13-21, 1973.
- Brazelton, T.B. Infants and mothers. New York : Delacorte Press, 1970.
- Bretherton, I. and Ainsworth, M.D.S. Responses of one-year-olds to a stranger in a strange situation. In : M. Lewis and L.A. Rosenblum (eds.), The origins of fear. New York : Wiley, 1974.
- Brody, S. and Axelrod, S. Anxiety and ego-formation in infancy. New York : International Univ. Press, 1970.
- Maternal stimulation and social responsiveness of infants. In : H.R. Schaffer (ed.), The origins of human social relations. London : Academic Press, 1971.
- Bronfenbrenner, U. The Psychological costs of quality and equality in education. In : A. Lightfoot (ed.), Inquiries into the social foundations of education : schools in urban setting. Chicago : Rand McNally, 1973.
- The origins of alienation. Scientific American, 231 (2) : 53-61, 1974.
- Bronson, G.W. The development of fear in man and other animals. Child Development, vol.39, no.2 : 409-431, 1968.
- Infants' reactions to unfamiliar persons and novel objects. Monographs of the Society for Research in Child Development, vol.37, no.3 (serial no.148), 1972.

- Brooks, J. and Lewis, M. Attachment behaviour in thirteen-month-old opposite-sex twins. Child Development, 45(1) : 243-247, 1974 (Nov.)
- Brossard, M.D. The infant's conception of object permanence and his reactions to strangers. In : T.G. Décarie (Ed.), The Infant's Reaction to Strangers. New York : International Universities Press, Inc., 1974.
- Brown, A. W. and Hunt, R. G. Relationships between nursery-school attendance and teacher's ratings of some aspects of children's adjustment in kindergarten. Child Development, 32 : 585-596, 1961.
- Brownlee, E.K. The effects of parent-training programmes upon maternal attitudes to child-rearing, maternal behaviour and the child's behaviour. University of the Witwatersrand, Johannesburg, 1980.
- Burchinal, L.G., Hawkes, G.R. and Gardner, B. The relationships between parental acceptance and adjustment of children. Child Development, vol.28, no.1, 1957 (March).
- Burchinal, L.G. and Rossman, J.E. Relations among maternal employment indices and developmental characteristics of children. Marriage and Family Living, 23 : 334, 1961 (Nov.)
- Burlingham, D. and Freud, A. Infants without families. London : Allen and Unwin, 1944.
- Burton, R.V., Maccoby, E.E. and Allinsmith, W. Antecedents of resistance to temptation in four-year-old children. Child Development, 1961, 32: 689-710.
- Buss, A.H. Insurmountability of aggression, feedback, and frustration as determinants of physical aggression. Journal of Personality and Social Psychology, 3(2) : 153-162, 1966.
- Cairns, R.B. Attachment behaviour of mammals. Psychological Review, 72 : 409-426, 1966.
- Caldwell, B.M. Can young children have a quality life in day-care. Young Children, vol.28 : 208, 1973.
- Caldwell, B.M. and Richmond, J.B. Programmed day-care for the very young child - A preliminary report. Journal of Marriage and the Family: 418-438, 1964 (Nov.).
- Caldwell, B.M., Wright, C.M., Honig, A.S. and Tannenbaum, J. Infant day-care and attachment. American Journal of Orthopsychiatry, 40(3), 1970 (Apr.).

- 2
- Campbell, J.D. Peer relations in childhood. In : M.L. Hoffman and L.W. Hoffman, Review of child development research, Vol.I. New York : Russel Sage Foundation, 1964.
- Casler, L. Maternal deprivation : A critical review of the literature. Monographs of the Society for Research in Child Development, Vol.26, no.2, 1961.
- Chasdi, E.F. and Lawrence, M.S. Aggression and frustration in doll play. In : J.M. Seidman (ed.), The child : A book of readings. New York : Rinehart and Co. Inc., 1958.
- Chorost, S. Parental child-rearing attitudes and their correlates in adolescent hostility. Genetic Psychology Monographs, 1962, 66, 53-82.
- Chu , Cheng-ping. A study of the effects of Maternal employment for the preschool children in Taiwan. Acta Psychologica Taiwanica, Vol.12: 80-100, 1970 (Nov.).
- Chapp, W.F. Dependence and competence in children : Parental treatment of four-year-old boys. Dissertation Abstracts International, 28(13): 1703, 1967.
- Clarke, A.M. and Clarke, A.D.B. Early experience : Myth and evidence. New York : The Free Press, 1976.
- Clarke-Stewart, K. Interactions between mothers and their young children: Characteristics and consequences. Dissertation Abstracts International, Vol.33(5-13) : 2315, 1972(Nov.).
- Clarke-Stewart, K.A., Vander Stoep, L.P. and Killian, G.A. Analysis and replication of mother-child relations at two-years of age. Child Development, 50: 777-793, 1979.
- Coates, B. Anderson, F.P., and Hartup, W.W. The stability of attachment behaviours in the human infant. Developmental Psychology, 6: 231-237, 1972.
- Cochran, M.M. A comparison of group day and family child-rearing problems in Sweden. Child Development, 48: 702-707, 1977.
- Cohen, L.J. The operational definition of human attachment: Psychological Bulletin, vol.81, no.4, 1974(April).
- Cohen, L.J. and Campos, J.J. Father, mother, and stranger as elicitors of attachment behaviour in infancy. Developmental Psychology, 10: 146-154, 1974.

- Cohen, S. An examination of frustration-aggression relations in boys during middle childhood. Journal of Genetic Psychology, vol.118(1): 129-140, 1971(Mar.).
- Cohen, S.E. Maternal employment and mother-child interaction. Merrill-Palmer Quarterly, vol.24(3): 189-197, 1978(Jul.).
- Collins, S.W. The effects of maternal employment upon adolescent personality adjustment. Graduate Research in Education and Related Disciplines, vol.8(1): 5-44, 1975(Sept.).
- Coopersmith, S. The antecedents of self-esteem. San Francisco: Freeman, 1967.
- Cornelius, S.W. and Denney, N.W. Dependency in day-care and home-care children. Developmental Psychology, vol.11, no.5: 575-582, 1975.
- Corter, C.M. A comparison of the mother's and stranger's control over the behaviour of infants. Child Development, 44: 705-713, 1973.
- Corter, C.M. The nature of the mother's absence and the infant's response to brief separations. Developmental Psychology, vol.12(5): 428-434, 1976.
- Corter, C.M., Rheingold, H.Z. and Eckerman, C.O. Toys delay the infant's following of his mother. Developmental Psychology, 6: 138-145, 1972.
- Corter, C.M., Zucker, K.J. and Galligar, R.F. Patterns in the infant's search for mother during brief separation. Developmental Psychology, vol.16(1): 62-69, 1980 (Jan.).
- Cox, F.N. and Campbell, D. Young children in a new situation with and without their mothers. Child Development, 39: 123-131, 1968.
- Cummings, E.M. Caregiver stability and day-care. Developmental Psychology, vol.16, 1: 31-37, 1980.
- _____ The effect of stability of caregivers on social development in infant day-care. Dissertation Abstracts International, 38 (10-A): 6005-6006, 1978 (Apr.).
- Davis, K. Final note on a case of extreme isolation. American Journal of Sociology, 52: 432-437, 1947.
- Dennis, W. Children of the crèche. New York, N.Y.: Appleton-Century-Crofts, 1973.

- Dennis, W. and Najarian, I. Infant development under environmental handicap. Psychological Monographs, 71 (7 whole no.436), 1957.
- Décarie, T.G. The infant's reaction to strangers. New York : International Universities Press, Inc., 1974.
- Dits, A. and Combier, A. L'absence de la mère lors du retour de l'enfant de l'école. Enfance, 1: 99-111, 1966.
- Donoghue, C.D. Interrelatedness of parent characteristics and independence and dependence in children. Dissertation Abstracts International, 35(8-B): 4167, 1975(Feb.).
- Douglas, J.W.B. Early hospital admissions and later disturbances of behaviour and learning. Developmental Medicine and Child Neurology, 17 : 456-480, 1975.
- Douglas, J.W.B. and Ross, J.M. The later educational progress and emotional adjustment of children who went to nursery-schools or classes. Educational Research, 2 : 73-80, 1964.
- Doyle, A. Infant development in day-care. Developmental Psychology, vol.11, no. 5 : 655-656, 1975.
- Dunn, J. How far do early differences in mother-child relations affect later development. In P.P.G. Bateson and R.A. Hinde (Eds.), Growing points in ethology. Great Britain : Cambridge University Press, 1976.
- Dupan, R.M. and Roth, S. The psychologic development of a group of children brought up in a hospital-type residential nursery. Journal of Pediatrics, 47: 124-129, 1955.
- Edelstan, H. Separation and anxiety in young children : A study of hospital cases. Genetic Psychology Monographs, 28: 3-95, 1943.
- Emde, R., Gaensblauer, T. and Harman, R. Emotional expression in infancy : a biobehavioural study. Psychological Issues, 10 (1, Whole No.37), 1976.
- Etaugh, C. Effects of maternal employment on children : A review of recent research. Merrill-Palmer Quarterly, vol.20 : 71-98, 1974.
- Effects of nonmaternal care on children. American Psychologist, vol.35, no.4 : 309-319, 1980 (Apr.).

- Fagin, C.M.R.N. The effects of maternal attendance during hospitalization on the post-hospital behaviour of young children : A comparative study. Philadelphia : F.A.Davis, 1966.
- Fagin H. Social behaviour of young children in the kibbutz. Journal of Abnormal and Social Psychology, 56: 117-129, 1958.
- Fairbairn, W.R.D. The war Neuroses : Their nature and significance. In W.R.D. Fairbairn, Psychoanalytic studies of the personality. London : Tavistock/Routledge, 1952.
- _____ A critical evaluation of certain basic psychoanalytical conceptions. British Journal of Philosophy and Science, 7 : 49-60, 1956.
- Falender, C.A. and Mehrabian, A. The effects of day-care on young children : An environmental psychology approach. The Journal of Psychology, 101 : 241-255, 1979.
- Farley, J. Maternal employment and child behaviour. Cornell Journal of Social Relations, vol.3, no.2: 58-71, 1968.
- Farran, D.C. and Raney, C.T. Infant day-care and attachment behaviours toward mothers and teachers. Child Development, 48:1112-1116, 1977.
- Fein, G.C. and Clarke-Stewart, A. Day-care in context. John Wiley and Sons, U.S.A., 1973.
- Feiring, C. and Lewis, M. Sex and age differences in young children's reactions to frustration : A further look at the Goldberg and Lewis subjects. Child Development 50 : 848-853, 1979.
- Feldman, S.S. and Ingham, M.E. Attachment behaviour : A valuation study in two age groups. Child Development, 46 : 328-330, 1975.
- Field, T. and Pawlby, S. Early face-to-face interactions of British and American working and middle-class mother-infant dyads. Child Development, 51 : 220-253, 1980.
- Fleener, P.E. and Cairns, R. Attachment behaviours in human infants : Discriminative vocalizations on maternal separations. Developmental Psychology, 2 : 215-223, 1970.
- Fox, N. Attachment of kibbutz infants to mother and meta-pelet. Child Development, 48 : 1728-1239, 1977.

Freedman, D.G. The infant's fear of strangers and the flight response. Journal of Child Psychology and Psychiatry, 2 : 242-248, 1961.

————— Hereditary control of early social behaviour. In : B.M. Foss, Determinants of Infant Behaviour, vol.3. London: Methuen, 1965.

Freud, A. Some remarks on infant observation. Psychoanalytic Study of the Child, 8 : 9-19, 1953.

————— Discussion of Dr John Bowlby's Paper. Psychoanalytic Study of the Child, 15 : 53-62, 1960.

Freud, S. Instincts and their vicissitudes. SE14 : 117-140, 1915.

————— Mourning and Melancholia, SE14 : 243-258, 1917.

————— Inhibitions, Symptoms and Anxiety, SE20 : 87-172, 1926.

Gardner, D.B., Hawkes, G.P. and Burchinal, L.G. Non-continuous mothering in infancy and development in later childhood. Child Development, 32 : 225-234, 1961.

Gelman, R. Preschool thought. American Psychologist, vol.34, no.10 : 900-905, 1979(Oct.).

George, E.E. and Thomas, M.A. Comparative study of children of employed mothers and unemployed mothers. Psychological Studies, 12 : 32-38, 1967.

Gesell, A. The first five years of life. London : Methuen and Co., Ltd.

Gesell, A., Ilg, F.L. and Ames, L.B. Infant and child in the culture of today. London : Hamish Hamilton, 1974.

Gewirtz, J.L. Mechanisms of social learning : Some roles of stimulation and behaviour in early human development. In : D.A. Goslin (Ed.), Handbook of Socialization Theory and Research. Chicago : Rand McNally, 1969.

————— A learning analysis of the effects of normal stimulation, privation and deprivation on the acquisition of social motivation and attachment. In : B.M. Foss (Ed.), Determinants of infant behaviour I. London : Methuen, 1961.

————— Attachment and Dependency. Washington, D.C: V.H. Winston, 1972.

Gewirtz, J.L. On the selection and use of attachment and dependence indices. In : J.L. Gewirtz (Ed.), Attachment and Dependency. Washington D.C. : V.H. Winston, 1972.

Attachment, dependence and a distinction in terms of stimulus control. In : J.L. Gewirtz (Ed.), Attachment and Dependency. Washington D.C. : V.H. Winston, 1972.

Glaser, K. and Eisenberg, L. Maternal deprivation. Pediatrics, 18 : 626-642, 1956.

Glass, N. Eating, sleeping and elimination habits of children attending day-nurseries and children cared for at home by mothers. American Journal of Orthopsychiatry, 19 : 697-711, 1948.

Glueck, S. and Glueck, E. Working mothers and delinquency. Mental Hygiene, 41 : 327-352, 1957.

Gold, D. and Andres, D. Developmental comparisons between ten-year-old children with employed and non-employed mothers. Child Development, 49 : 75-84, 1978.

Relations between maternal employment and development of nursery-school children. Canadian Journal of Behavioural Science, 10 : 116-129, 1978.

Developmental comparison between adolescent children with employed and non-employed mothers. Merrill-Palmer Quarterly, 24 : 243-254, 1978.

Gold, D., Andres, D. and Glorieux, J. The development of Francophone nursery-school children with employed and non-employed mothers. Canadian Journal of Behavioural Science, 11 : 169-173, 1979.

Goldberg, S. Social competence in infancy : a model of parent-infant interaction. Merrill-Palmer Quarterly, vol.23, no.3, 1977.

Goldberg, S. and Lewis, M. Play behaviour in the year-old infant : Early sex differences. Child Development, 40 : 21-31, 1969.

Goldfarb, W. Infant rearing and problem behaviour. American Journal of Orthopsychiatry, 13 : 249-265, 1943.

Effects of psychological deprivation in infancy and subsequent stimulation. American Journal of Psychiatry, 1(2) : 18-33, 1945.

- Goldfarb, W. Psychological privation in infancy and subsequent adjustment. American Journal of Orthopsychiatry, 15 : 247-255, 1945.
- Goodall, J. Chimpanzees of the Gombe Stream Reserve. In : I. Devore (Ed.), Primate Behaviour. New York and London : Holt Rinehart and Winston, 1965.
- Gornicki, B. The development of children in the family and in day-care centres in Poland. In : Care of children in day-centres. WHO, Geneva, 1964.
- Gray, P.H. Theory and evidence of imprinting in human infants. The Journal of Psychology, 46 : 155-166, 1958.
- Graybill, D. Relationships of maternal child-rearing behaviour to children's self-esteem. The Journal of Psychology, 100 : 45-47, 1978.
- Greenberg, D.J., Hillman, D. and Grice, D. Infant and stranger variables related to stranger anxiety in the first year of life. Developmental Psychology, vol.9 : 207-212, 1973.
- Hand, M.B. Working mothers and maladjusted children. Journal of Educational Sociology, 30 : 245-246, 1957.
- Hanly, C. A critical consideration of Bowlby's ethological theory of anxiety. Psychoanalytic Quarterly, vol.47 (3) : 364-380, 1978 (Jul.).
- Harlow, H.F. The maternal affectional system. In : B.M. Foss (Ed.), Determinants of infant behaviour II. London : Methuen, 1963.
- Harlow, H.F. and Harlow, M.K. The affectional systems. In : M.A. Schrier, H.F. Harlow and F. Stollnitz (Eds.), Behaviour of Non-human Primates, vol.2, New York and London : Academic Press, 1965.
- Harlow, H.F. and Zimmerman, R.R. Affectional responses in the infant monkey. Science, 130 : 421, 1959.
- Harper, C.L. New evidence on impact of day-care centres on children's social-psychological development. Child welfare, vol.57(8) : 527-531, 1978 (Sept.-Oct.).
- Harrell, J.E. and Ridley, C.A. Substitute child care, maternal employment and the quality of Mother-child interaction. Journal of Marriage and Family, 37 : 556-565, 1975 (Aug.).
- Hartup, W.W. Nurturance and nurturance-withdrawal in

relation to the dependency behaviour of preschool children. Child Development, vol.29, no.2, 1958 (June).

Hartup, W.W. Dependence and independence. In : H.W. Stevenson (ed.), Child Psychology. The 62nd. year-book of the National Society for the Study of Education, Part I. Chicago : Univ. of Chicago Press, 1963.

Hartup, W.W. and Himero, Y. Social isolation vs. interaction with adults in relation to aggression in preschool children. Journal of Abnormal and Social Psychology, 59(1) : 17-22, 1960.

Hatcher, B.A. A study of the cognitive, affective and psychomotor development of children attending half-day and full-day state-supported kindergarten. Dissertation Abstracts International, 39(11-A): 6525-6526, 1979(May).

Hatfield, J.S., Ferguson, L.R. and Alpert, R. Mother-child interaction and the socialization process. Child Development, 38, 1967.

Hattwick, B.W. The influence of nursery-school attendance upon the behaviour and personality of the preschool child. Journal of Experimental Education, 5 : 180-190, 1936.

Hattwick, B.W. and Stowell, M. The relation of parental over-attentiveness to children's work habits and social adjustments in kindergarten and the first six grades of school. Journal of Educational Research, 30 : 169-176, 1936.

Hawkes, G.R., Burchinal, L.G., Gardner, B. and Porter, B.M. Parents' acceptance of their children. Journal of Home Economics, vol.48 : 195-200, 1956.

Heathers, G. Acquiring dependence and independence : A theoretical orientation. The Journal of Genetic Psychology, 87 : 277-291, 1955.

Hebb, D.O. On the nature of fear. Psychological Review, 53: 205-275, 1946.

Heinicke, C.M. Some effects of separating two-year old children from their parents. Human Relations, 9 : 103-234, 1956.

Heinicke, C.M. and Westheimer, I.J. Brief Separations. London : Longmans, Green and Co., Ltd., 1966.

- Hopkins, J. Development of independence in early childhood. Nursing Mirror, 1978 (May, 4).
- Horowitz, E.L. Child-adult relationships in the preschool years. The Journal of Social Psychology, 11 : 41-58, 1940.
- Horowitz, E.L. and Smith, R.B. Social relationships and personality patterning in preschool children. Journal of Genetic Psychology, 54 : 337-352, 1939.
- Howell, M.C. Employed mothers and their families. Pediatrics, 52 : 252, 1973.
- Howells, J.G. and Layng, J. Separation experiences and mental health. The Lancet, 2 : 285-288, 1955.
- _____ The effect of separation experiences on children given care away from home. Medical officer, vol.95 : 345-347, 1956.
- Hunt, J. Mc.V. Intrinsic motivation and its role in psychological development. Nebraska Symposium on motivation, 1965.
- Hurst, V.F. Children's occupational and educational aspirations and expectations : An exploration of the effects of maternal employment. Dissertation Abstracts International, 39(6-A) : 3866-, 1978 (Dec.).
- Isaacs, S. The educational value of the nursery-school. University of London Press Ltd., 1952.
- Ispa, S.M. Familiar and unfamiliar peers as "havens of security" for Soviet nursery two-year-olds. Dissertation Abstracts International, 37(10-B) : 5436-5437, 1977 (Apr.).
- Ispa, J. The reactions of Soviet nursery day-care and boarding-care children to a strange situation. Developmental Psychology, vol.13, no.4 : 421-422, 1977.
- Irvine, E.E. Observations on child-rearing in communal settlements in Israel. Human Relations, 5 : 247-273, 1952.
- Jacklin, E.N., Maccoby, E.E. and Dick, A.E. Barrier behaviour and toy preference : sex differences (and their absence) in the year-old child. Child Development, 44 : 196-200, 1973.
- James, W. Principles of psychology. New York : Holt, 1890.

- Jersild, A.T. and Fite, M.D. Children's social adjustments in nursery-school. Journal of Experimental Education, vol.6, no.2 : 161-166, 1937.
- Joël, W. The influence of nursery-school education upon behaviour maturity. Journal of Experimental Education, vol.8 : 164-165, 1939.
- Joffe, W.C. and Sandler, J. Notes on pain, depression and individuation. Psychoanalytic study of the child, 20: 394-424, 1965.
- Johnson, R.L. Social and non-social behaviour of three-year old children in day-care and home settings. Dissertation Abstracts International, 38(4-A) : 1983, 1977 (Oct.).
- Social behaviour of three-year old children in day-care and home settings. Child Study Journal, vol.9, no.2, 1979.
- Kaffman, M. Evaluation of emotional disturbance in 403 Israeli kibbutz children. American Journal of Psychiatry, 117 : 732-738, 1961.
- Kagan, J. On the meaning of behaviour : Illustrations from the infant. Child Development, 40 : 1121-1134, 1969.
- The determinants of attention in the infant. American Scientist, 58 : 298-306, 1970.
- Kagan, J. and Moss, H.A. Birth to maturity : The I is study of psychological development. New York : Wiley, 1962.
- Kagan, J. and Whitten, P. Day-care can be dangerous. Psychology Today, vol.4(7) : 36-39, 1970(Dec.).
- Kaufman, I.C. and Rosenblum, L.A. Depression in infant monkeys separated from their mothers. Science, 55 : 1030-1031, 1967.
- Kearsley, R.B., Zelazo, P.R., Kagan, J. and Hartmann, R. Separation protest in day-care and home-reared infants. Pediatrics, 55 : 171-175, 1975.
- Kerlinger, F.N. Foundations of behavioural research (2nd ed.). New York : Holt, Rinehart and Winston, 1973.
- Klein, M. Contributions to Psychoanalysis 1921-1945. London : Hogarth, 1952.

- Lieberman, A.F. Preschoolers' competence with a peer: relations with attachment and peer experience. Child Development, 48 : 1277-1287, 1977.
- Lirtzman, A.M. Relationship between maternal attitudes and behaviour and children's ability to approach a feared object. Dissertation Abstracts International, 58 (8-B): 3892, 1978 (Feb.).
- Littenberg, R., Turkin, S.R., and Kagan, J. Cognitive components of separation anxiety. Developmental Psychology, vol. 4, no. 3 : 387-388, 1971.
- Lowenfeld, H. Notes on frustration. Psychoanalytic Quarterly, 44(1) : 127-138, 1975 (Jan.).
- Lytton, H. Observation studies of parent-child interaction : A methodological review. Child Development, 42 : 651-684, 1971 (Dec.).
- Maccoby, E.E. and Feldman, S.S. Mother-attachment and stranger-reactions in the third year of life. Monographs of the Society for Research in Child Development 37 (1, serial no. 146), 1972.
- Maccoby, E.E. and Jacklin, C.N. The psychology of sex differences. Stanford, Calif. : Stanford Univ. Press, 1974.
- Maccoby, E.E. and Masters, J.C. Attachment and Dependency. In : P.H. Mussen (ed.), Carmichael's Manual of Child Psychology (third edition). New York and London : John Wiley, 1970.
- Macrae, S.W. and Herbert-Jackson, E. Are behavioral effects of infant day-care program specific? Developmental Psychology, vol. 12, no. 3 : 269-270, 1976.
- Mahler, M.S. On sadness and grief in infancy and childhood. Psychoanalytic study of the child, 16 : 332-351, 1961.
- Maier, N.R.F. Frustration theory : Restatement and extension. Psychological Review, 63 : 370-388, 1956.
- Maier, N.R.F. and Ellen, P. The integrative value of concepts in frustration theory. Journal of Consulting Psychology, vol. 23, no. 3, 1959.
- Main, M. Exploration, play, and level of cognitive functioning as related to child-mother attachment. Unpublished doctoral dissertation, John Hopkins University, 1973.

- Main, M.B. Exploration, play and cognitive functioning as related to child-mother attachment. Dissertation Abstracts International, vol.34 (11-B) : 5718-5719, 1974 (May).
- Main, M. Analysis of a peculiar form of reunion behaviour seen in some day-care children : Its history and sequelae in children who are home-reared. In : R. Webb (Ed.), Social development in day-care. Baltimore : John Hopkins University Press, 1977.
- Martin, B. Parent-child relations. In : F.D. Horowitz (ed.), Review of child development research, vol.4. Chicago : The University of Chicago Press, 1975.
- Martin, B. and Hetherington, E.M. Family interaction and aggression, withdrawal and nondeviancy in children. Progress report, 1971. In : F.D. Horowitz (ed.), Review of child development research, vol.4. Chicago : The University of Chicago Press, 1975.
- Marvin, R.S. An ethological-cognitive model for the attenuation of mother-child attachment behaviour. In : T.M. Alloway, L. Krames and P. Miner (Eds.), Advances in the study of communication and affect, vol.5. The Development of Social Attachments. New York: Plenum, 1977.
- Maslow, A.H. Dependence, threat and frustration. Psychological Review, 48 : 364-366, 1941.
- Masters, J.C. and Wellman, H.M. The study of human infant attachment : A procedural critique. Psychological Reports, vol.81, no.4 : 218-237, 1974.
- Matas, L. The mother-child relationship and the development of competence during the second year of life. Dissertation Abstracts International, vol.39 (1-B) : 362, 1978 (Jul.).
- Matas, L. Arend, R.A. and Sroufe, L.A. Continuity of adaptation in the second year : The relationship between quality of attachment and later competence. Child Development, 49 : 547-556, 1978.
- McCandless, B.R. The socialization of the individual. In : E. Schopler and R.S. Reichler (eds.), Psychopathology and Child Development, Research and Treatment. New York: Plenum Press, 1976.
- McCord, J., McCord, W. and Thurber, E. Effects of maternal employment on lower-class boys. Journal of Abnormal and Social Psychology, 67 (2) : 177-182, 1963.

- McCord, J. and Verden, P. Familial and behavioural correlates of dependency in male children. Child Development, 33 (2) : 313-326, 1962.
- McCord, W., McCord, J. and Howard, A. Familial correlates of aggression in non-delinquent male children. Journal of Abnormal and Social Psychology, 62 : 79-93, 1961.
- McCutcheon, B. and Calhoun, K.S. Social and emotional adjustment of infants and toddlers to a day-care setting. American Journal of Orthopsychiatry, 46 (1), 1976 (Jan.).
- McRae, H.W. An investigation of the elementary school performance of day-care participants. Dissertation Abstracts International, vol. 35 (11-A) : 7112, 1975 (May).
- Mead, M. A cultural anthropologist's approach. In : Deprivation of Maternal Care, W.H.O., Geneva, 1962.
- Menzies, H.F. Children in day-nurseries with special reference to the child under two-years old. The Lancet, 251 : 499-501, 1946.
- Mikelat, P.J. An examination of patterns of social participation of children in a day-care center. Dissertation Abstracts International, 39 (6-A) : 3335, 1978 (Dec.).
- Milner, P.J. The effects of day-care intervention during the first year of life on maternal attitudes and mother-infant interaction patterns of developmentally high-risk infants. Dissertation Abstracts International, vol. 35 (8-A) : 5175, 1975 (Feb.).
- Moore, J.E. Antecedents of dependency and autonomy in young children. Dissertation Abstracts International, 26 (3) : 1766, 1965.
- Moore, T.W. Effects on the children. In : S. Yudkin and A. Holme (Eds.), Working Mothers and their children. London : Michael Joseph, 1965.
- Children of full-time and part-time mothers. International Journal of Social Psychiatry, Special Congress Issue no.2, 1964.
- Effects on the children. In : S. Yudkin and A. Holme (eds.), Working mothers and their children. Second Edition. London : Sphere Books, 1969.
- Moore, T. Stress in Normal Childhood. Human Relations, vol. 22, no. 3 : 235-250, 1969.

- Moore, T.W. Exclusive early mothering and its alternatives. Scandinavian Journal of Psychology, 16 : 256-272, 1975.
- Morgan, P. Child care sense and fable, London : Pemple Smith 1975.
- Morgan, G.A. and Ricciuti, H.N. Infants' responses to strangers during the first year. In : B.M. Foss (Ed.), Determinants of Infant Behaviour IV. London : London : Methuen, 1969.
- Moskowitz, D.S., Schwarz, J.C. and Corsini, D.A. Initiating day-care at three years of age : effects on attachment. Child Development, 48 : 1271-1276, 1977.
- Moss, H.A. Methodological issues in studying mother-infant interaction. American Journal of Orthopsychiatry, 35 : 482-486, 1965.
- Sex, age and state as determinant of mother-infant interaction. Merrill-Palmer Quarterly, 13 : 19-36, 1967.
- Moss, H.A., Robson, K.S. and Pedersen, F. Determinants of maternal stimulation of infants and consequences of treatment for later reactions to strangers. Developmental Psychology, vol.1, no.3 : 239-246, 1969.
- Moustakas, C.E. Personality studies conducted in nursery-schools. Journal of Educational Research, vol.XLVI, no.3 : 161-177, 1952 (Nov.).
- Nolan, F.L. Effects on rural children. In : F.I. Nye and L.W. Hoffman (eds.), The employed mother in America. Chicago : Rand McNally, 1963.
- Nye, F.I. The adjustment of adolescent children. In : F.I. Nye and L.W. Hoffman (Eds.), The employed Mother in America. Chicago : Rand McNally, 1963.
- Nye, F.I. and Hoffman, L.W. (Eds.). The employed mother in America. Chicago : Rand McNally, 1963.
- Nye, F.I., Perry, J.B., Jr., and Ogles, R. Anxiety and antisocial behaviour in preschool children. In : F.I. Nye and L.W. Hoffman (Eds.), The Employed Mother in America. Chicago : Rand McNally, 1963.
- O'Connor, N. The evidence for the permanently disturbing effects of another child separation. Acta Psychologica, 12 : 174-191, 1956.
- Osofsky, J.D. and Connors, K. Mother-infant interaction : An integrative view of a complex system. In : J.D. Osofsky (ed.), Handbook of Infant Development. New York: John Wiley & Sons, 1979.

- Parness, E.S. Antecedents of attachment : infants in day-care centers; A theoretical review of the issues. Dissertation Abstracts International, vol.37 (3-B) : 1412, 1976 (Sept.).
- Pease, D. and Gardner, D.B. Research on the effects of non-continuous mothering. Child Development, 29, no.1, 1958.
- Perry, J.B. The mother substitutes of employed mothers : An exploratory inquiry. Marriage and Family Living, 23 : 262, 1961 (Nov.).
- Peterson, T.J. A preliminary study of the effect of previous nursery-school attendance upon five-year old children entering kindergarten. University of Iowa Studies in Child Welfare, 14, no.1 : 197-248, 1938.
- Piaget, J. The origins of Intelligence in children. New York : International Universities Press, 1952.
- Porter, B.M. Measurement of parental acceptance of children. Journal of Home Economics, 46 : 176-182, 1954.
- Portnoy F.C. Attachment as measured by the strange situation procedure for three and one half-year olds with three child rearing histories. Dissertation Abstracts International, 37 (7-B): 1935, 1977.
- Portnoy, F.C. and Simmons, C.H. Day-care and attachment. Child Development, 49 : 239-242, 1978.
- Powell K.S. Personalities of children and child-rearing attitudes of mothers. In F.I. Nye and L.W. Hoffman, The Employed Mother in America. Chicago : Rand McNally and Company, 1963.
- Poznanski, E. Maxey, A, and Marsden, G. Clinical Implications of maternal employment. Journal of the American Academy of Child Psychiatry, vol.9 : 741-761, 1970.
- Provence, S. Naylor, I. and Patterson, J. The challenge of day-care. London, Yale University Press, 1977.
- Prugh, D.G. and Harlow, R.G. "Masked deprivation" in infants and young children. In : Deprivation of Maternal Care, W.H.O., Geneva, 1962.
- Prugh, D.G., Straub, E.M., Sands, H.H., Kirschbaum, R.M. and Lenihan, E.A. A study of the emotional reactions of children and families to hospitalization and illness. American Journal of Orthopsychiatry. 23 : 70-106, 1953.

- Rabin, A.I. Personality maturity of kibbutz (Israeli collective settlement) and non-kibbutz children as reflected in Rorschach findings. Journal of Projective Techniques and Personality Assessment, 21 : 148-153, 1957.
- Ragozin, A.S. Attachment behaviour of young children in day-care. Dissertation Abstracts International, 37 (7-B) : 3584-3585, 1977 (Jan.).
- Attachment behaviour of day-care children : Naturalistic and laboratory observations. Child Development, 51 : 409-415, 1980.
- Ramey, C.T. and Mills, P.S. Social and intellectual consequences of day-care for high-risk infants. In : Roger, A. Webb (Ed.), Hyman Blumberg Symposium : Social Development in childhood : Day-care Programs and Research. Baltimore and London : The John Hopkins University Press, 1977.
- Rank, O. The trauma of birth. London : Kegan Paul, 1924.
- Raph, J.B., Thomas, A., Chess, S. and Korn, S.J. The influence of nursery-school on social interactions. American Journal of Orthopsychiatry, 38 : 144-152, 1968.
- Resch, R.C. Separation : Natural observations in the first three years of life in an infant day-care unit. Dissertation Abstracts International, vol.36 (4-B) : 1907-1975 (Oct.).
- Rheingold, H.L. The measurement of maternal care. Child Development, 31 : 565-573, 1960.
- The effect of environmental stimulation upon social and exploratory behaviour in the human infant. In : B.M. Foss (Ed.), Determinants of infant behaviour I. London : Methuen, 1961.
- The effect of a strange environment on the behaviour of infants. In : B.M. Foss (Ed.), Determinants of infant behaviour IV. London : Methuen, 1969.
- Rheingold, H.L. and Bayley, N. The later effects of an experimental modification of mothering. Child Development, 30 : 363-372, 1959.
- Rheingold, H.L. and Eckerman, C.O. Fear of the stranger : A critical examination. In : H.W. Reese (Ed.), Advances in Child Development and Behaviour, vol.8, London : Academic Press, 1973.

- Ricciuti, H.N. Social and emotional behaviour in infancy : Some developmental issues and problems. Merrill-Palmer Quarterly, 14, 82-100, 1968.
- _____ Fear and the development of social attachments in the first year of life. In : M. Lewis and L.A. Rosenblum (Eds.), The origins of Fear. New York: Wiley, 1974.
- Robertson, J. Some responses of young children to loss of maternal care. Nursing Times, 40, 1953 (April, 13).
- _____ Hospitals and children : A parents' eye view. London : Gollancz, 1963.
- Robertson, J., and Bowlby, J. Responses of young children to separation from their mothers : Courr. Cent. Int. Enfance, 2 : 131-142, 1952.
- Robertson, J. and Robertson, J. Young children in brief separation. Psychoanalytic Study of the Child, 26 : 264-315, 1971.
- Robinson, H. and Robinson, H. Longitudinal development of very young children in a comprehensive day-care program : The first two years. Child Development, 42 : 1673-1683, 1971.
- Robson, K.S., Pedersen, F.A. and Moss, H.A. Developmental observations of diadic gazing in relation to the fear of strangers and social approach behaviour. Child Development, 40(2) : 619-627, 1969.
- Rochlin, G. The dread of abandonment. Psychoanalytic Study of the child, 16 : 451-471, 1961.
- Roe, A. Early determinants of vocational choice. Journal of Counselling Psychology, 4 : 212-217, 1954.
- Roopnarine, J.L. and Lamb, M.E. The effects of day-care on attachment and exploratory behaviour in a strange situation. Merrill-Palmer Quarterly 24(2) : 85-95, 1978 (April).
- Rosenblum, L.A. Infant attachment in monkeys. In : H.R. Schaffer (ed.), The Origins of human social relations. London : Academic Press, 1971.
- Rosenthal, M.K. The generalization of dependency behaviour from mother to stranger. Journal of Child Psychology and Psychiatry, 8 : 117-133, 1967.
- _____ Effects of a novel situation and of anxiety in two groups of dependency behaviours. British Journal of Psychology, 58, nos.3,4 : 357-364, 1967.

- Rosenthal, M.K. "Attachment and mother-infant interaction : Some research impasses and a suggested change in orientation". Journal of Child Psychology and Psychiatry, 14 : 201-207, 1973.
- Rosenzweig, S. Need persistence and ego defensive reactions to frustration as demonstrated by an experiment on repression. Psychological Review, 48 : 347-349, 1941.
- Rouman, J. School - children's problems as related to parental factors. Journal of Educational Research, 50 : 105-112, 1957.
- Rubenstein, J.L. Maternal attentiveness and subsequent exploratory behaviour in the infant. Dissertation Abstracts, 28(5-A) : 1904, 1967.
- Rubenstein, J.L. and Howes, C. Caregiving and infant behaviour in day-care and in homes. Developmental Psychology, vol.15, no.1 : 1-24, 1979.
- Rubenstein, J.L., Pedersen, F.A. and Yarrow, L.J. What happens when mother is away : A comparison of mothers and substitute caregivers. Developmental Psychology, vol.13, no.5 : 529-530, 1977.
- Rutter, M. Parent-child separation : Psychological effects on the children. Journal of Child Psychology and Psychiatry, 12 : 233-260, 1971.
- Maternal deprivation reassessed. Penguin, 1972.
- Maternal deprivation, 1972-1978 : New findings, new concepts, new approaches. Child Development, 50 : 283-305, 1979.
- Ruttle, K.L. The continuity of attachment between the ages of one and three. Dissertation Abstracts International, 38 (5-B) : 2348-2349, 1977 (Nov.).
- Sander, L. The longitudinal course of early mother-child interaction-cross-case comparison in a sample of mother-child pairs. In : B.M. Foss (Ed.), Determinants of Infant Behaviour IV. New York : John Wiley, 1969.
- Sanders, M.M. Some aspects of day-care on infants' emotional and personality development. Dissertation Abstracts International, 33 (4-B) : 1805, 1972 (Oct.).
- Saxe, R.M. and Stollack, G.E. Curiosity and the parent-child relationships. Child Development, 42 : 373-384, 1971.

- Schaefer, E.S. A circumplex model for maternal behaviour. Journal of Abnormal and Social Psychology, 59 : 226-235, 1959.
- A configurational analysis of children's report of parent behaviour. Journal of Consulting Psychology, vol.29, no.6 : 552-557, 1965.
- Schaefer, E.S. and Bayley, N. Maternal behaviour, child behaviour, and their intercorrelations from infancy through adolescence. Monographs of the Society for Research in Child Development, serial no.87, vol.28, no.3, 1965.
- Schaffer, H.R. Objective observations of personality development in early infancy. British Journal of Medical Psychiatry, 31 : 174-183, 1958.
- Some issues for research in the study of attachment behaviour. In : B.M. Foss (Ed.), Determinants of infant behaviour II. London : Methuen, 1963.
- The onset of fear of strangers and the incongruity hypothesis. Journal of Child Psychology and Psychiatry, 7 (2) : 95-106, 1966.
- Schaffer, H.R. (ed.). The origins of human social relations. London : Academic Press, 1971.
- Schaffer, H.R. and Callender, W.M. Psychological effects of hospitalization in infancy. Pediatrics, 24 : 528-539, 1959.
- Schaffer, H.R. and Emerson, P.E. The development of social attachment in infancy.. Monographs of The Society for Research in Child Development, 29 (3, whole no.94), 1964.
- The effects of experimentally administered stimulation on developmental quotients of infants. British Journal of Social and Clinical Psychology, 7 (1) : 61-67, 1968.
- Schaller, G. The behaviour of the mountain gorilla. In : I Devore (Ed.), Primate Behaviour. New York and London : Holt, Rinehart and Winston, 1965.
- Schooler, C. Childhood family structure and adult characteristics. Sociometry, vol.35 (2) : 255-269, 1972 (June).
- Schubert, J.B., Bradley-Johnson, S. and Nuttal, J. Mother-infant communication and maternal employment. Child Development, 51 : 246-249, 1980

- Schur, M. The ego and the id in anxiety. Psychoanalytic study of the child, 13 : 190-220, 1958.
- Schwarz J.C. Fear and attachment in young children. Merrill-Palmer Quarterly, vol.14 : 313-322, 1968.
- Schwarz, J.C., Krolick, G. and Strickland, R.G. Effects of early day-care experience on adjustment to a new environment. American Journal of Orthopsychiatry, 43 : 340-346, 1973 (Apr.).
- Schwarz, J.C., Strickland, R.G. and Krolick, G. Infant day-care : behavioural effects at preschool age. Developmental Psychology, vol.10, no.4 : 502-506, 1974.
- Sears, R.R. A theoretical framework for personality and and social behaviour. American Psychologist, 6 : 476-483, 1951.
- Relation of early socialization experiences for aggression in middle childhood. Journal of Abnormal and Social Psychology, vol.63, no.3 : 466-492, 1961.
- Relation of early socialization experiences to self concepts and gender role in middle childhood. Child Development, 41 : 267-239, 1970.
- Attachment, dependency and frustration. In : J.L. Gewirtz(Ed.), Attachment and dependency. Washington: Winston and Sons, 1972.
- Sears, R.R., Maccoby, E.E. and Levin, H. Patterns of child rearing. U.S.A. : Row, Petersen and Company, 1957.
- Sears, R.R., Whiting, J.M., Nowlis, V. and Sears, P.S. Some child-rearing antecedents of aggression and dependency in young children. Genetic Psychology Monographs, 47 : 135-234, 1953.
- Seidman, J.M. The child : A book of readings. U.S.A.: Holt, Rinehart and Winston, 1958.
- Shain, R.A. A study of selected factors in separation distress during the latter half of the first year of life. Dissertation Abstracts International, 37 (4-B): 1929, 1976 (Oct.).
- Shirley, M. and Poyntz, I. The influence of separation from the mother on children's emotional responses. The Journal of Psychology, 12 : 251-282, 1941.
- Shmukler, D. and Skuy, M. Nursery-school project. 1978/1979, unpublished, University of the Witwatersrand.

- Siegel, A.E. and Haas, M.B. The working mother : A review of research. Child Development, 34 : 513-542, 1963.
- Siegel, A.E., Stolz, D.M., Hitchcock, P.N., and Adamson, B.F. Dependence and independence in children of working mothers. Child Development, 30 : 533-547, 1959.
- Siegelman, M.A. College-student personality correlates of early parent-child relationships. Journal of Consulting Psychology, 22 : 558-564, 1965.
- Sigel, I.E. Developmental theory and preschool education : Issues, problems and implications. In : I.G. Gordon (ed.), Early Childhood Education. The 71st yearbook of the National Society for the study of education, Part II. Chicago : University of Chicago Press, 1972.
- Singer, R.D. and Singer, A. Psychological development in children. U.S.A. : W.B. Saunders, 1969.
- Sjölin, S. Care of children in day centres. In : Care of children in Day-Centres. W.H.O., Geneva, 1964.
- Sjölund, A. Day-care institutions and children's development. England : Saxon-House, D.C. Heath, Ltd., 1969.
- Skarin, K. Cognitive and contextual determinants of stranger fear in six- and eleven-month-old infants. Child Development, 48 : 537-544, 1977.
- Skeels, H.M., Updegraff, R., Wellman, B.L. and Williams, H.M. A study of environmental stimulations. An orphanage preschool project. University of Ia. Studies in Child Welfare, 15 : 7-191, 1938.
- Slater, P.E. Parent behaviour and the personality of the child. Journal of Genetic Psychology, 101 : 53-68, 1962.
- Smith, L. Effects of brief separations from parent on young children. Journal of Child Psychology and Psychiatry, 16 : 245-254, 1975.
- Solomon, G.R. Infants and strangers : A reply to Sroufe and a plea for accuracy. Child Development, 51 : 258-259, 1980.
- Spencer-Booth, Y. and Hinde, R.A. The effects of separating Rhesus monkey infants from their mothers for six days. Journal of Child Psychology and Psychiatry, 7 : 179-197, 1967.
- Spitz, R.A. Anaclitic Depression. Psychoanalytic Study of the Child, 2 : 313-342, 1946.

- Vaughn, B., Waters, E., Egeland, B. and Sroufe, L.A. Individual differences in infant-mother attachment at 12 and 18 months : Stability and change in families under stress. Child Development, 50 : 971-975, 1979.
- Von Mering, F.H. Professional and non-professional women as mothers. Journal of Social Psychology, 42 : 21-34, 1955.
- Wallston, B. The effects of maternal employment on children. In : S. Chess, M.D. (eds.), Annual Progress in Child Psychiatry and Child Development. New York : Bruno Ithazel Publishers, 1975.
- Walsh, B.A. Parental rejecting attitudes and control in children. Journal of Clinical Psychology, 24 : 185-186, 1968.
- Walters, J. and Stinnett, N. Parent-child relationships : A decade review of research. Journal of Marriage and the Family, 33 : 70-111, 1971.
- Warshaw, R. The effects of working mothers on children. Xerox University Micro Films, Ann Arbor, Michigan, 1976.
- Waters, E.E. The stability of individual differences in infant-mother attachment. Dissertation Abstracts International, vol.38 (10-B) : 4996, 1978 (Apr.).
- Waters, E. The reliability and stability of individual differences in infant-mother attachment. Child Development, 49 : 483-494, 1978.
- Waters, E., Matas, L. and Sroufe, L.A. Infants' reactions to an approaching stranger : Description, validation, and functional significance of wariness. Child Development, 46 : 348-356, 1975.
- Waters, E., Vaughn, B.E. and Egeland, B.R. Individual differences in infant-mother attachment relationships at age one : Antecedents in neonatal behaviour in an urban-economically disadvantaged sample. Child Development, 51 : 208-216, 1980.
- Waters, E., Wippman, J. and Sroufe, L.A. Attachment, positive affect and competence in the peer group : Two studies in construct validation. Child Development, vol.50 (3) : 821-829, 1979 (Sept.).
- Webb, R.A. (Ed.). Hyman Blumberg Symposium : Social Development in Childhood: Day-care Programs and Research. Baltimore and London : The John Hopkins University Press, 1977.

- Weinraub, M., Brooks, J. and Lewis, M. The social network : A reconsideration of the concept of attachment. Human Development, 20 : 31-47, 1977.
- Wexler, D., Mendelson, J., Liederman, P.H. and Solomon, P. Sensory deprivation. A-MA-Arch. Neurol. Psychiat., 79 : 225-233, 1958.
- Wilcox, B.M., Staff, P. and Romaine, M.F. A comparison of individual with multiple assignment of caregivers to infants in day-care. Merrill-Palmer Quarterly, vol. 26, no.1, 1976.
- Williams, T.M. Infant development and supplemental care : A comparative review of basic and applied research. Human Development, 20 : 1-30, 1977.
- Winder, C.L. and Rau, L. Parental attitudes associated with social deviance in preadolescent boys. Journal of Abnormal and Social Psychology, 64 : 418-424, 1962.
- Winefield, A.H. Frustration-instigated behaviour and learned helplessness. The Journal of Psychology, 102 : 267-274, 1979.
- Winett, R.A., Fuchs, W.L., Moffatt, S.A. and Nerviano, V.J. A cross-sectional study of children and their families in different child care environments : some data and conclusions. Journal of Community Psychology, 5 : 149-159, 1977.
- Woods, M.B. The unsupervised child of the working mother. Developmental Psychology, vol.6, no.1, 14-25, 1972.
- Wright, M.E. Constructiveness of play as affected by group organization and frustration. Character and Personality, 11 : 40-49, 1942.
- _____ The influence of frustration upon the social relationships of young children. Character and Personality, 12 : 111-122, 1943.
- Wyatt, L.R. Differential consequences of part-time versus full-time day-care attendance for aspects of object relations. Dissertation Abstracts International, vol. 38 (2-A) : 696, 1977 (Aug.).
- Yarrow, L.J. Maternal deprivation : Toward an empirical and conceptual re-evaluation. Psychological Bulletin, vol.58, no.6 : 459-490, 1967.
- Yarrow, M.R. Maternal employment and child rearing. Children, vol. 8 : 223-228, 1961.

- Yarrow, L.J. Separation from parents during early childhood. In : M.L. Hoffman and L.W. Hoffman. Review of child development research, vol.1. New York : Russel Sage Foundation, 1964.
- _____. Attachment and dependency : A developmental perspective. In : J.L. Gewirtz (Ed.), Attachment and Dependency. Washington, D.C. : V.H. Winston, 1972.
- _____. Emotional Development. American Psychologist, vol.34, no.10 : 951-957, 1979 (Oct.).
- Yarrow, L.J. and Goodwin, M.S. The immediate impact of separation. In : L.J. Stone, H.T. Smith and L.B. Murphy (Eds.), The competent infant : A handbook of readings. New York : Basic Books, 1963.
- _____. Some conceptual issues in the study of mother-child interaction. American Journal of Orthopsychiatry, 35 : 473-481, 1965.
- Yarrow, M.R., Scott, P. De Leeuw, L. and Heining, C. Child-rearing in families of working and non-working mothers. Sociometry, 25 : 122-140, 1962.
- Young, J.M. and Smith, A.B. Dependency behaviour as related to separation in a day-care setting. Dissertation Abstracts International, 38 (5-B) : 3210, 1977 (Sept.).
- Yudkin, S. and Holmes, A. Working mothers and their children. London : Joseph, 1963.
- Zander, A.F. A study of experimental frustration. Psychological Monographs, vol.56, no.3, 1944.

Adenda to References:

- Armentrout, J. A. Parental child-rearing attitudes and preadolescents' problem behaviour. Journal of Clinical and Consulting Psychology, 37 : 278-285, 1971.
- Bayley, N. and Schaefer, E.S. Correlation of maternal and child behaviours with the development of mental abilities: data from the Berkeley Growth Study. Monographs of the Society for Research in Child Development, 29 (6, serial no.97), 1964.
- Bettelheim, B. The children of the Dream. Great Britain: Paladin, 1971.
- Bishop, B.M. Mother-child interaction and the social behaviour of children. Psychological Monographs, 65 (11, whole no.328), 1951.

- Blehar, M., Lieberman, A. and Ainsworth, M. Early face-to-face interaction and its relation to later infant-mother attachment. Child Development, 48: 182-194, 1977.
- Caldwell, B.M. What is the optimal learning environment for the young child? American Journal of Orthopsychiatry, 37(1) : 8-21, 1967.
- Connell, H.M. Depression in childhood. Child Psychiatry and Human Development, vol.4(2) : 71-85, 1973 (Win.).
- Connell, D. Individual differences in attachment : an investigation into stability, implications and relationships to early language development. Unpublished doctoral dissertation, Syracuse University, 1976.
- David, H. Work, women and children. In : E. Ginsberg (Ed.), The nation's children. New York : Colombia University Press, 1960.
- David, M. and Appel, G. A study of nursing care and nurse-infant interaction. In : B.M. Foss (Ed.), Determinants of Infant Behaviour I. London : Methuen, 1961.
- Dawson, F. An analytical study of the effects of maternal employment of same-sex chum denial in pre-adolescence and of residential mobility on self-actualization achievement in a sample of adolescents. Dissertation Abstracts International, vol.31(3-A) : 925, 1979, (Sept.).
- Engel, G. Attachment behaviour, object relations and the dynamic-economic points of view: critical review of Bowlby's Attachment and Loss. International Journal of Psychoanalysis, 52 : 183-196, 1971.
- Erikson, E.H. Childhood and society. New York : Norton, 1950.
- Etzel, B.C. and Gewirtz, J.L. Experimental modification of caretaker-maintained high role operant crying in a six and a 12-week-old infant : Extinction of crying with reinforcement of eye contact and smiling. Journal of Experimental Child Psychology, 5 : 303-317, 1967.
- Hebb, D.O. A Textbook of Psychology (2nd Edition). Philadelphia : W.B. Saunders, 1966.
- Honig, A.S. The developmental needs of infants : how can they be met in a day-care setting. In : R. Elardo and B. Pagan (Eds.), Perspectives on infant day-care. Little Rock, Ark : Southern Association on Children under six, 1976.

- Hunt, S.V. A comparison of normal infants and children with Down's Syndrome (Mongolism) on free play behaviour and galvanic skin response. Dissertation Abstracts, 26(7) : 40-90, 1966.
- Katkovsky, W., Crandall, V.C. and Good, S. Parental antecedents of children's beliefs in internal-external control of reinforcements in intellectual achievement situations. Child Development, 38(3) : 765-776, 1967.
- Levy, T.M. Gaze behaviour, repression-sensitization and social approach and avoidance. Dissertation Abstracts International, vol.33(9-B): 4544-4545, 1973 (March).
- Osofsky, J.D. Children's influences upon parental behaviour: An attempt to define the relationship with the use of laboratory tasks. Genetic Psychology Monographs, 83 : 147-149, 1971.
- Popper, K.R. Conjectures and refutations. London : Routledge and Kegan Paul, 1963.
- Roussel, C.H. and Edwards, C.N. Some developmental antecedents of psychopathology. Journal of Personality 39 : 362-377, 1971.
- Roy, P. Adolescent roles : Rural-urban differentials. In : F.I. Nye and L.W. Hoffman (Eds.), The Employed Mother in America. Chicago: Rand McNally, 1963.
- Sander, L.W., Stechler, G., Burns, P. and Julia, H. Early mother-infant interaction and 24 patterns of activity and sleep. Journal of the American Academy of Child Psychiatry, 9(1) : 103-125, 1970.
- Schaffer, H.R. (Ed.) Studies in mother-infant interaction London : Academic Press, 1977.
- Schulman, R.E., Shoemaker, D.J. and Moelis, I. Laboratory measurement of parental behaviour. Journal of Consulting Psychology, 26 : 109-114, 1962.
- Stern, D.A. A micro-analysis of mother-infant interaction. In : M. Lewis and L. Rosenblum (Eds.), The origins of behaviour, vol.1 The effect of the child on its caretaker. New York : Wiley, 1973.
- Stern, G.G., Caldwell, A.C., Herscher, B., and Richmond, S. A factor analytic study of the mother-infant dyad. Child Development, 40(1): 163-181, 1969.
- Tizard, B. Do social relationships affect language development? In : K.J. Connolly and J.M. Bruner (Eds.), The growth of competence. London and New York : Academic Press, 1974.

- Tizard, B. The effects of early institutional rearing on the behaviour problems and affectional relationships of four-year old children. Journal of Child Psychology and Psychiatry, 16 : 61-73, 1975.
- Van der Eyken, W. The preschool years. London : Penguin, 1974.
- Weikart, D.D. A comparative study of three preschool curricula. In : J. Frost (ed.), Disadvantaged child (2nd ed.). New York : Houghton-Mifflin, 1970.
- Weikart, D.P. and Wiegerink, R. Initial results of a comparative preschool curriculum project. Proceedings of the 76th Annual Convention of the American Psychological Association, 3 : 597-598, 1968.
- Winnicott, D.W. Playing and Reality. England : Penguin, 1974.
- Wolff, P.H. Observations on the early development of smiling. In : B.N. Foss (ed.), Determinants of Infant Behaviour, II. New York : Wiley, 1963.

APPENDIXSCALES FOR FRUSTRATION TOLERANCE, STRANGER ANXIETY AND SEPARATION ANXIETYRater:Name:I. - FRUSTRATION TOLERANCEa) - Task Endurance

1	2	3	4	5
Keep trying consistently until convinced piece will not fit.	Tries for a while but then goes on to next piece to which child applies equal effort.	May start by trying one piece for some time but following pieces are tried for shorter and shorter periods.	Tries one piece briefly - if does not fit may try once more but then gives up	If does not fit first time child abandons piece/tasks.

b) - Emotional Reaction

1	2	3	4	5
No apparent emotional reaction (anger, distress)	Signs of slight distress/anger but continues task.	Definite emotional reaction but continues task.	Above average emotional reaction enough to disrupt task completion for a while but then continues becoming more and more frustrated with shorter attempts.	Extreme emotional reaction to abandon task - aggressive attacks on task or verbalizations of anger/distress.

c) - Reference to Mother/Interviewer (seek help) -

1	2	3	4	5
Even if angered or distressed keeps to task on own.	Glances at or calls mother/interviewer once but carries on task.	Keeps demanding mother/interviewer's help but carries on trying.	Demands help and stops task or seems stuck till help given.	Almost immediately calls for help and won't continue task till helped for most of the time

II - STRANGER ANXIETY

	Smiles 'hello'	Come look	Come sit lap see
1. Child cries or runs away			
2. Turns head away (definite avoidance) or clings to mother.			
3. Sobers or stares solemnly.			
4. No response.			
5. Looks coy or half-smiles or comes reluctantly with urging.			
6. Definitely smiles or comes straight away without smiling.			
7. Smiles and vocalizes or approaches smiling			

III - SEPARATION ANXIETY

The mother is asked to leave the room for three minutes. The child is left with the interviewer. Child's reaction :

1. Child follows mother, looks miserable or cries.
2. Child follows, no emotion.
3. Child stays, looks miserable or cries.
4. Child stays, no emotion.

MOTHER RETURNS. RECORD:

1	2	3	4	5
Child ignores mother continuing what he/she is doing.	Child glances briefly at mother and resumes activity.	Child continues activity but continually looks to mother	Child looks at mother and moves towards her	Child moves onto mother's lap or holds onto her - close physical contact

FANTASY TESTName:Group:

Briefly outline the story for the child particularly if (s)he is not familiar with it. Write down his/her spontaneous response to the question.

- (1) Do you know the story of the three bears? Remember when Baby Bear comes back from his walk and finds his porridge all eaten up by Goldilocks. What would you do if you were Baby Bear and found your porridge all eaten up?
- (2) Do you remember the story of Cinderella? What would you do if you were Cinderella and you had no dress for the ball and there was no fairy godmother?
- (3) Do you remember Snow White? What would you do if you saw the wicked fairy godmother coming to you?
- (4) Remember Little Red Riding Hood? What would you do if you were going to see your grandmother and you met the wicked wolf who said "Where are you going"?
- (5) Do you know Hansel and Gretel? What would you do if you were Hansel and Gretel and your stepmother left you alone in the forest?
- (6) What would you do if your mommy sent you to buy a loaf of bread and the shoemaker said he had no more bread?
- (7) What would you do if the child you liked best to play with said she/he didn't want to play with you today?

- (8) What would you do if your teacher asked you to draw a beautiful house and you found you couldn't do it?
- (9) What would you do if you went to the shops with your mommy and you suddenly couldn't find her?
- (10) What would you do if your best toy got broken/lost?

UNIVERSITY OF THE WITWATERSRAND

SCHOOL OF PSYCHOLOGY

BASIC SCORING GUIDE TO FANTASY TEST

1. I'll cry/I don't know/no response

2. Ask for an external support. I'll ask my mommy, I would cry till my fairy godmother came. Tell my mommy, run, runaway, go back home, tell my teacher. Ask my teacher to do it, tell my mommy and daddy. Ask everyone if they've seen my mother.

(neutral)

3. is basic acceptance of the situation. I couldn't eat/I won't have, I'll stay in cottage/I wouldn't go/I'd go into my house/I wouldn't open the door/I'd ask what are you going to do./I'd go home/I'd be sad/I wouldn't get any/I won't draw/I'll stay where I was, I'd sleep. /I've got lost/I'd chuck it in the dustbin.

4. A coping solution with some support, aggression
I'd ask my mother/smack her/chase her/eat her/I'd be very cross/call my father/kill her/hide/take a short cut/run to granny/wouldn't let them/kill him, find the police/ask my mommy if I can go to another shop/I won't play with her/run outside/ask teacher/wouldn't shop/would tell my mommy to buy a new one.

5. Self-directed solution - I'd make one/buy a dress/fetch another one/wouldn't have apple/give her a poisoned apple./zoom past/wouldn't tell him/ask him why he wanted to know/I would find my way home/I find a new stepmother/build another house/buy bagels/I'd say next time get some bread/play with someone else/do something else, I'd try/call taxi/drive home/ go to car/remember address/play/to fix it.

INTERVIEW SCHEDULE

Name: Child's name: Interviewer:

1. All parents have difficulties in raising children. What problems have there been in bringing up this particular child? (e.g., feeding problems, excessive clinging behaviour, tantrums, aggressive attacks, bed-wetting, etc.)

2. Does your child mix easily with other children? Does he/she make friends easily? Has he/she got many casual friends or a few close friends? Has he/she one particular friend with whom he/she spends a lot of time?

3. What preschool centre did you yourself attend? (Nursery school, crèche, at home with mother, at home with sister/brother/maid/other.)

INTUITIVE RATING OF QUALITY OF MOTHERING

Name: Child's Name: Assessor:

1a. Acceptance: Mother does not show disturbance at hearing negative feelings expressed by her child, i.e. indicates to child that all his/her feelings are understandable; mother does not judge child's underachievements but accepts him/her at his/her own pace; mother does not over-protect child or block his/her attempts at independence.

b. Rejection: Mother pushes child to act according to her wishes rather than at child's own pace (directiveness): open hostility to and criticism of child.

2a. Responsiveness: Readiness of the mother to respond to the child's needs and demands.

b. Unresponsiveness: Mother shows little interest in child's thoughts and activities. She is primarily concerned with her own activities and prefers not to be bothered by the child; mother ignores child's demands.

1. Acceptance/Rejection:

1	2	3	4	5
Little or none. Mother is very directive, critical or over-protective	Some acceptance but below average.	Moderate acceptance.	Above average acceptance; few efforts to direct or criticize child	Very accepting. No attempts to direct or criticize child's actions or verbalization

2. Responsiveness/Unresponsiveness:

1	2	3	4	5
Ignores or responds only after many demands by child	Needs to be prodded or asked more than once	Responds adequately to child's request	Responds quickly to child's overt demands	Responds immediately. Seems to anticipate at times child's need to be responded to from non-verbal cues

10. Ages of children (to nearest birthday)

Ages of boys _____; _____; _____; _____;

Ages of girls _____; _____; _____; _____;

BE SURE AND REFER ONLY TO YOUR YOUNGEST CHILD WHILE
ANSWERING THE QUESTIONS

11. Is this child your: (circle one) Own child stepchild
adopted child

INFORMATION ABOUT YOUR CHILD

Many parents say that their feeling of affection toward
or for their child varies with his behavior and with
circumstances. Will you please read each item carefully
and place a check in the column which most nearly describes
the degree of feeling of affection which you have for your
child in that situation.

Check One Column For Each Item Below	Degree of Feeling of Affection				
	Much more than usual	A little more than usual	The same	A little less than usual	Much less than usual
1. When he is obedient					
2. When he is with me					
3. When he misbehaves in front of special guests					
4. When he expresses unsolicited affection. "You're the nicest mommy (daddy) in the world."					
5. When he is away from me					

Author Ross A

Name of thesis An investigation into the importance of the quantity and quality of the mother-child relationship in preschool children 1981

PUBLISHER:

University of the Witwatersrand, Johannesburg

©2013

LEGAL NOTICES:

Copyright Notice: All materials on the University of the Witwatersrand, Johannesburg Library website are protected by South African copyright law and may not be distributed, transmitted, displayed, or otherwise published in any format, without the prior written permission of the copyright owner.

Disclaimer and Terms of Use: Provided that you maintain all copyright and other notices contained therein, you may download material (one machine readable copy and one print copy per page) for your personal and/or educational non-commercial use only.

The University of the Witwatersrand, Johannesburg, is not responsible for any errors or omissions and excludes any and all liability for any errors in or omissions from the information on the Library website.