

## A study of the pattern of non-adjustment reactions of the newly admitted children in the laboratory day care centre

■ KHWAIRAKPAM SHARMILA AND SARITA SAINI

See end of the paper for authors' affiliations

Correspondence to:

**KHWAIRAKPAM SHARMILA**

Department of Human Development,  
Punjab Agricultural University,  
LUDHIANA (PUNJAB)  
INDIA  
chankhwai@gmail.com

### ABSTRACT

The investigation entitled aimed at studying the non-adjustment reactions of children in the Laboratory Day Care Centre. The study was based upon a sample of 32 (15 male and 17 female) children admitted in two consecutive sessions (April, 2009 & April, 2010) in Laboratory Day Care Centre, Department of Human Development, PAU, Ludhiana. Observation-cum-interview method was used for the collection of data for the study. Based on their non-adjustment reactions, the children were divided into two categories, viz., 'Early Adjusting Children' and 'Late Adjusting Children'. For this segregation an opinion survey was conducted in the five 'Early Childhood Care Centres' in Ludhiana City. As per the results of the opinion survey 3 weeks time was found to be average normal time for adjustment of the children. The subjects displayed non-adjustment reactions in varying frequencies and intensities. 'Eating problems' were the first to fade out and 'Unwillingness to come to the centre' the last. The non-adjustment reactions which strongly persisted beyond 3 weeks time period were 'Unwillingness to come to the centre', 'Over attachment with care provider' and 'Over attachment with mother'. 'Temper tantrums' and 'Withdrawn behaviour' were also displayed moderately up to 9<sup>th</sup> week of entry to Laboratory Day Care Centre.

**KEY WORDS:** Laboratory day care centre, Care providers, Non-adjustment reactions, Early adjusting children and late adjusting children

**How to cite this paper:** Sharmila, Khwairakpam and Saini, Sarita (2011). A study of the pattern of non-adjustment reactions of the newly admitted children in the laboratory day care centre. *Asian J. Home Sci.*, 6 (2) : 258-264.

**Article chronicle:** Received: 15.09.2011; Revised: 15.09.2011; Accepted: 20.11.2011

When babies are less than 7 months of age they are willing to share their smiles with everyone and are happy to be comforted by almost any caring and loving individual. After 7 months however, infants are more aware of their dependence on their primary care givers and begin forming very strong relationship with them. At this stage a once care-free child can all of sudden become much attached and increasingly more upset at the notion of being left at day care centre. Stepping out of the house can be a very exciting time, but it can also be a stressful time for kids and parents alike. Taking a child to a day care for the first time can be easy if the parents can prepare their child as well as themselves for the big day. This includes both emotional preparation as well as physical preparation for the changed environment, routine and people. Most often the children are withdrawn or refused to engage themselves in activities initially or after attending day care for a few days or more. Shyness, isolation, fear and bed-wetting were the major problems of this age followed by the problem of dependence. Both male and female were seen exhibiting similar type and extent of problems (Duhan and Kaur, 2000). The family was

determined to be the main source of child's formation of behaviour patterns. Newcomers often appeared hesitant and non-assertive in initial interactions with classmates and in attempts to join ongoing activities. Wariness is a common response of young children confronted with an unfamiliar or potentially threatening situation (Bronson and Pankey, 1977). Children need time to differentiate between what goes on outside home and what goes on at home. Once a child feels secure with new friends and care givers, chances are that he will begin to let it go. It may take time for a child to develop that trust.

Each newcomer to the Laboratory Day Care Centre passes through this transitory phase and reacts to the demands posed by the newly found environment. As children seek to understand and craft relations with the care providers in the Laboratory Day Care Centre, they encounter certain amount of anxiety and distress. Sudden change in environment, expectations, competencies required and demand during entry to kindergarten are some of the reasons cited in recent research publications for the maladjustments of children in pre-schools especially among children from low socio-economic status

(Gutman *et al.*, 2003).

Separation anxiety behaviours are wide-ranging and can be expressed in as simple a behaviour as crying when a parent leaves and can be as severe as a child becoming physically sick. Some of the behaviours that children may exhibit are: crying and clinging at drop off time as well as transition times throughout the day, such as outside time or nap time; carrying a security item throughout the day; and sometimes crying at pick up time because it reminds them of how they felt when the parent dropped them off. Some children resist their parents' departure. Other children withdraw or refuse to engage themselves in activities initially or after attending the day-care centre for a few days or more. Indeed, the children need time to differentiate between what goes on in the day-care centre and what goes on at home. We may also see some separation anxiety in children after an illness, a vacation, or even a long weekend, where they have become accustomed to being at home for a long period of time. It is quite natural and expected, but if the period of non-adjustment lingers on too long, it causes concern. The situation becomes disturbing for the child as well as the parents, and also hampers the quality of the programme at the centre causing distress to the other children and staff. Thus, this is an important developmental stage where babies suddenly become wary of strangers and both concerned and anxious when familiar people leave the room or house. The main objectives of the present study were: to study the non-adjustment patterns of the newly admitted children in the Laboratory Day Care Centre and to compare the strength and intensity of the non-adjustment reactions across two genders and the two groups *viz.*, Early and Late adjusting children.

**Hypothesis:**

There will not be any significant difference in the

non-adjustment reactions exhibited by the children joining the Laboratory Day Care Centre.

**RESEARCH METHODS**

**Selection of sample:**

The sample for the study was drawn from the Laboratory Day Care Centre, Department of Human Development, Punjab Agricultural University, Ludhiana. Fresh admissions are made during the month of April of each year and the sample was drawn out of the children admitted during two consecutive sessions, *viz.*, April 2009 and April 2010. In April 2009, 17 children (9 males and 8 females) and in April 2010, 15 children (6 males and 9 females) were admitted to the Laboratory Day Care Centre. The total sample of the study comprised 32 subjects (15 males and 17 females). All the children were carefully observed from the first day of their joining till three weeks to investigate the time differentials in their adjustment in the Laboratory Day Care Centre as per the pre-decided parameters of adjustment. Subsequently, on the basis of non-adjustment reactions shown by the children, they were categorized into two groups, *viz.*, 'Early Adjusting Children (EAC)' and 'Late Adjusting Children (LAC)'. The dividing line for categorization of 'Early and Late adjustment' was a set criteria on the basis of an opinion survey (Table a) conducted in Ludhiana City in the five 'Early Childhood Care Centres'. For this purpose, the supervisors working in these centres were interviewed to seek their opinion based on their working experience as to whom they considered 'Early Adjusting or Late Adjusting Children'.

In line with the results of the opinion survey, the demarcating line between 'Early Adjusting and Late Adjusting Children' in the present study was drawn at 3 weeks. Although some foreign research studies are also available on this aspect, but the culturally appropriate

**Table a: Information obtained from the care providers regarding adjustment pattern (in weeks) of the newly admitted children**

| Name of the early childhood care centre →     | Laboratory Day Care Centre, PAU |                |                | Laboratory Nursery School, PAU |                | Magic Year Child Development Centre |                |                | Pumpkins       | Penguin Castle Pre-school | Average weeks of adjustment (n=11) |          |
|---|---------------------------------|----------------|----------------|--------------------------------|----------------|-------------------------------------|----------------|----------------|----------------|---------------------------|------------------------------------|----------|
| Care provider (C)                             | C <sub>1</sub>                  | C <sub>2</sub> | C <sub>3</sub> | C <sub>1</sub>                 | C <sub>2</sub> | C <sub>1</sub>                      | C <sub>2</sub> | C <sub>3</sub> | C <sub>1</sub> | C <sub>1</sub>            | C <sub>2</sub>                     | 2.6 ±0.4 |
| Age group of children (Years)                 | 2-4                             | 2-4            | 2-4            | 2.5-4                          | 2.5-4          | 2-3.5                               | 2-3.5          | 2-3            | 2-4.5          | 1.5-4                     | 1.5-4                              |          |
| Time taken to adjust normally (weeks)         | 3                               | 2-3            | 3              | 1-3                            | 3-4            | 1-3                                 | 2-3            | 1-3            | 4              | 3-4                       | 1-3                                |          |
| Time taken by late adjusting children (weeks) | After 3                         | After 3        | After 3        | After 4                        | After 4        | After 3                             | After 3        | After 3        | After 4        | After 4                   | After 3                            |          |

responses were preferred. Indeed, the parenting is an intense and intimate experience in India which strongly influences the adjustment process of the children.

After identifying the categories (Early Adjusting and Late Adjusting), the observations were recorded regarding the non-adjustment reactions and behaviour of the 'Late Adjusting' group with a view to keep track of their behaviour. The observations during the subsequent weeks were periodical with two hours observations everyday alternating between outdoor and indoor activities. Observations of the 'Late Adjusting Children' were stretched up to 12 weeks (90 days) till the observed non-adjustment reactions phased out slowly. Observations during the extended period were more focused on the typical non-adjustment patterns of the individual subject.

#### Tools for the study:

A Self-structured checklist for observations was used to collect the requisite data for the study.

#### Checklist for observation:

A comprehensive checklist was prepared to record the adjustment/non-adjustment reactions of the new entrants in Laboratory Day Care Centre through spot observation. The checklist included the most common behavioural cues suggestive of adjustment vs. non-adjustment, displayed by the children during the daily eight hours schedule of the Laboratory Day Care Centre during the initial phase of their joining. Spot-observation technique, a modified time samplings method of observation in which the observer is less relatively less obstructive taking mental snapshots of activity that is going on (Rogoff, 1978) was employed to collect the information regarding the patterns of adjustment among new entrants. The checklist was finalized after consulting the supervisors working in the Laboratory Day Care Centre, relevant literature and the experts in the subject so as to record the significant reactions displayed by the new entrants.

### RESEARCH FINDINGS AND DISCUSSION

The findings obtained from the present investigation are presented below:

#### Background information of the subjects:

The socio-personal characteristics of the respondents are reported in Table 1. These characteristics included their gender, age, maternal education, maternal occupation, paternal education, paternal occupation, family type, family size and number of siblings. As evident from the Table, the total sample (n=32) comprised 46.9 per cent males

**Table 1: Socio-personal characteristics of the respondents**

| Sr. No.   | Socio-personal characteristics             | Frequency (n=32) | Percentage |
|-----------|--|------------------|------------|
| <b>1.</b> | <b>Gender</b>                              |                  |            |
|           | Male                                       | 15               | (46.88)    |
|           | Female                                     | 17               | (53.12)    |
| <b>2.</b> | <b>Age</b>                                 |                  |            |
|           | 1.5-2 years                                | 1                | (3.13)     |
|           | 2-2.5 years                                | 28               | (87.50)    |
|           | 2.5 -3 years                               | 3                | (9.38)     |
| <b>3.</b> | <b>Educational qualification of mother</b> |                  |            |
|           | 10+2                                       | 1                | (3.13)     |
|           | Graduation                                 | 10               | (31.25)    |
|           | Master                                     | 17               | (53.13)    |
|           | Ph.D                                       | 4                | (12.50)    |
| <b>4.</b> | <b>Profession of mother</b>                |                  |            |
|           | Housewife                                  | 5                | (15.63)    |
|           | Teaching                                   | 8                | (25.00)    |
|           | Medical                                    | 7                | (21.88)    |
|           | Others(corporate sector, bank jobs, etc.)  | 12               | (37.50)    |
| <b>5.</b> | <b>Educational qualification of father</b> |                  |            |
|           | 10+2                                       | 2                | (6.25)     |
|           | Graduation                                 | 4                | (12.50)    |
|           | Master                                     | 16               | (50.00)    |
|           | Ph.D.                                      | 10               | (31.25)    |
| <b>6.</b> | <b>Profession of father</b>                |                  |            |
|           | Business                                   | 5                | (15.63)    |
|           | Teaching                                   | 11               | (34.38)    |
|           | Medical                                    | 6                | (18.75)    |
|           | Administration                             | 1                | (3.13)     |
|           | Others(corporate sector, bank jobs, etc.)  | 9                | (28.13)    |
| <b>7.</b> | <b>Family type</b>                         |                  |            |
|           | Nuclear                                    | 23               | (71.88)    |
|           | Joint                                      | 9                | (28.13)    |
| <b>8.</b> | <b>Family size</b>                         |                  |            |
|           | Small family (3-4 members)                 | 21               | (65.63)    |
|           | Large family (5 and more than 5 members)   | 11               | (34.37)    |
| <b>9.</b> | <b>Number of siblings</b>                  |                  |            |
|           | Only child                                 | 22               | (68.75)    |
|           | One  | 9                | (28.13)    |
|           | Two  | 1                | (3.13)     |

Figures in parentheses denote the percentages

and 53.1 per cent females.

The majority of the selected children were females in the age group of 2-2½ years and belonged to the nuclear families. Both the parents were well-qualified and professionally well-placed. The preponderance of the only child was also quite evident in the selected sample.

**Behavioural cues of various non-adjustment reactions:**

Barriers to smooth transitions vary depending on the individual contexts. To record the observations systematically and for proper generalisation, the non-adjustment reactions were categorized into six broad areas, *i.e.* Eating problems, Temper tantrums, Over attachment with mother, Over attachment with care-providers, Unwillingness to come to the centre and withdrawn behaviour. The behavioural cues suggestive of these non-adjustment reactions were carefully recorded and examined.

Table 2 details the observations of the behaviours displayed by the sample children during the initial three weeks of their joining the Laboratory Day Care Centre. The behaviours were recorded on the predetermined parameters of non-adjustment. This categorisation was done to facilitate the generalisation of the diffused patterns of the children’s behaviour. It is quite evident from the results that the children displayed their non-adjustment reactions in different forms varying in frequency as well as intensity. However, all the non-adjustment reactions, namely Eating problems, Temper tantrums, Over attachment with mother, Over attachment with the care provider, Unwillingness to come to the centre and withdrawn behaviour were observed in the newly admitted children in the Laboratory Day Care Centre. To study the prevalence of these non-adjustment reactions in the two identified groups namely ‘Early Adjusting Children’ and ‘Late Adjusting Children’ these reactions were carefully recorded and investigated.

The findings are in line with the longitudinal study conducted by Ozaki (2003) to discover how attachment and temperament affect the reactions of children to maternal separation in a pre-school setting. The study was carried out through observation of children (2.6 – 3.5 years) in their first year of pre-school, during play with their peers while separated from their mothers. Through observations, it was revealed that the “slow group” and the “difficulty in separation group” exhibited greater shyness in new situations than those who “separated easily”. The study concluded that the patterns of reactions to separation in early childhood can be

**Table 2: Behavioural cues of various non-adjustment reactions displayed by the children in laboratory Day Care Centre**

| Non-adjustment reactions                  | Behavioural cues   |
|---|--|
| Eating problems (EP)                      | <ul style="list-style-type: none"> <li>i. Rejecting food</li> <li>ii. Spitting food</li> <li>iii. Vomiting</li> <li>iv. Crying at the sight of food</li> </ul>   |
| Temper tantrums (TT)                      | <ul style="list-style-type: none"> <li>i. Screaming</li> <li>ii. Shouting</li> <li>iii. Lying down on floor</li> <li>iv. Jumping</li> <li>v. Hitting things, himself and others</li> <li>vi. Showing anger</li> <li>vii. Breath holding</li> </ul>   |
| Over attachment with mother (OWM)         | <ul style="list-style-type: none"> <li>i. Not allowing mother to go</li> <li>ii. Not allowing to touch anyone except mother</li> <li>iii. Clinging hard to mother</li> <li>iv. Searching every room for parents</li> <li>v. Making sure that mother also stays with him</li> </ul>   |
| Over attachment with care provider (OWC)  | <ul style="list-style-type: none"> <li>i. Over possessive about one of the care provider/attendant</li> <li>ii. Clinging to one of the care provider /attendant and not allowing anyone to come near</li> <li>iii. Pulling one of the care takers hand</li> <li>iv. Repeated asking for personal helper or maid at home</li> </ul>   |
| Unwillingness to come to the centre (UCC) | <ul style="list-style-type: none"> <li>i. Crying and turning back upon arrival at Laboratory Day Care Centre</li> <li>ii. Banging the door/wall</li> </ul>   |
| Withdrawn behaviour (WB)                  | <ul style="list-style-type: none"> <li>i. Peeping from windows</li> <li>ii. Searching for nooks and corners</li> <li>iii. Hiding behind the curtain</li> <li>iv. Standing quietly without responding</li> <li>v. Not entering activity room and staying in secluded place like kitchen and observatory</li> <li>vi. Always quiet and fearful</li> <li>vii. Not allowing others to touch his belongings</li> <li>viii. Carrying bag and searching every room</li> <li>ix. Pointing towards the door to open it</li> <li>x. Not crying, but impassive</li> </ul> |

predicted, when temperament and security were taken into account.

### Distribution of children according to non-adjustment reactions:

Table 3 highlights the distribution of the children according to the non-adjustment reactions observed during the first week of their entry to Laboratory Day Care Centre. The results brought to the light that majority of the children in the category of 'Late adjusting children' displayed all the non-adjustment reactions more strongly as compared to the children in 'Early adjusting children' category. However, within each category it was evident that 'Withdrawn behaviour' (50.0% in EAC and 72.2 % in LAC) and 'Over attachment with mother' (42.9 % in EAC and 66.7% in LAC) were displayed by a majority of children. Only 7.1 per cent children in 'Early adjusting children' category were found to exhibit 'over attachment with care provider' while in case of 'Late adjusting children' 44.4 per cent displayed 'Over attachment with care provider'. 'Temper tantrums' and 'Unwillingness to come to the centre' were displayed by an equal number of children, *i.e.* 38.9 per cent in 'Late adjusting children' whereas 'Early adjusting children' did not exhibit any 'Temper tantrums' but 'Unwillingness to come to the centre' was evident in 21.4 per cent children.

### Weaning pattern of different non-adjustment reactions exhibited by late adjusting children:

In line with the objectives of the study, that is, to ascertain the non-adjustment reactions and the varying problems of 'Late Adjusting Children', Table 4 represents the weaning pattern of different non-adjustment reactions as exhibited by 'Late Adjusting Children' in Laboratory Day Care Centre. It was evident from the data that non-adjustment reactions such as 'Eating problems' and 'Temper tantrums' took 1.78 and 2.11 weeks, respectively to fade out. Whereas, 'Over attachment with mother' and 'Withdrawn behaviour' lingered on for a longer period and took on an average 4 to 5 weeks to fade out.

The data in Table 4 were further analysed using Analysis of Variance (ANOVA) and the results were found to be statistically significant. It indicated that at least one pair of non-adjustment reactions differed significantly. It was evident from data that 'Withdrawn behaviour' took significantly more time to fade out as compared to the two earliest fading non-adjustment reactions *viz.*, 'Eating problems' and 'Temper tantrums'. However, for the rest of the non-adjustment reactions, the differences were found to be statistically non-significant.

'Eating problems' were found to be resolved at the

**Table 3: Per cent distribution of the children according to non-adjustment reactions**

| Sr. No. | Non-adjustment reactions            | Early adjusting children<br>(n=14) | Late adjusting children<br>(n=18) |
|---------|-------------------------------------|------------------------------------|-----------------------------------|
| 1.      | Eating problems                     | 3(21.4)                            | 3(16.7)                           |
| 2.      | Temper tantrums                     | -                                  | 7(38.9)                           |
| 3.      | Over attachment with mother         | 6(42.9)                            | 12(66.7)                          |
| 4.      | Over attachment with care provider  | 1(7.1)                             | 8(44.4)                           |
| 5.      | Unwillingness to come to the centre | 3(21.4)                            | 7(38.9)                           |
| 6.      | Withdrawn behaviour                 | 7(50.0)                            | 13(72.2)                          |

\*Multiple responses,

Number in parentheses denote the percentages

**Table 4: Persistence time (in weeks, mean scores  $\pm$  S.D.) of non-adjustment reactions exhibited by late adjusting children for adjustment in Laboratory Day Care Centre (n=18)**

| Non-adjustment reaction (Late adjusting children) | Average number of weeks taken for adjustment | C.D. | Average +C.D. |
|---|--|------|---------------|
| Eating problems (EP)                              | 1.78   |      | 4.66          |
| Temper tantrums (TT)                              | 2.11   |      | 4.99          |
| Over attachment with mother (OWM)                 | 4.06   | 2.88 | 6.94          |
| Over attachment with care provider (OWC)          | 3.44   |      | 6.32          |
| Unwillingness to come to the centre (UCC)         | 3.44   |      | 6.32          |
| Withdrawn behaviour (WB)                          | 5.06   |      | 7.94          |
| F ratio= 2.35*                                    |  |      |               |
| F table value (5%) = 2.30                         |  |      |               |

**Table 5: Gender differentials in persistence time (in weeks, mean scores  $\pm$  S.D.) of late adjusting children (n=18)**

| Non-adjustment reactions                  | Time taken in adjusting<br>(Mean number of weeks) |             | t-values |
|---|---|-------------|----------|
|   | Boys (n=11)                                       | Girls (n=7) |          |
| Eating problems (EP)                      | 1.25  | 2.31        | 0.957    |
| Temper tantrums (TT)                      | 1.09  | 3.86        | 2.36*    |
| Over attachment with mother (OWM)         | 2.82  | 6.00        | 2.58*    |
| Over attachment with care provider (OWC)  | 2.18  | 5.43        | 2.48*    |
| Unwillingness to come to the centre (UCC) | 2.82  | 4.43        | 0.968    |
| Withdrawn behaviour (WB)                  | 4.55  | 5.86        | 0.732    |

\* indicates significance of value at  $P=0.05$

earliest owing to food being the basic physical need and the major concern of the parents as well as the care providers. Indeed, this problem was promptly attended to by the care providers and 'Special focused attention' was given to it. 'Temper tantrums' also demanded immediate attention and intervention from the care providers because the outbursts were often disturbing not only to the child, but the other children in the Laboratory Day Care Centre as well as other adults present around. On the contrary 'Withdrawn behaviour' often went unnoticed being intra-punitive in nature and often caused no disturbance in the immediate environment. It was addressed after a while because sometimes it was mistaken for calmness and compliant behaviour. Only keen and careful observation over a period of time alone could help in drawing a fine dividing line between the desirable and the depressive behaviour. This appeared to be the reason that 'Withdrawn behaviour' was attended later and took quite long to fade out. Similarly, 'Over attachment with mother' was reciprocal behaviour of the child in response to the mothers' over possessive behaviour and lack of encouragement for autonomy. It required collective efforts on the part of the care providers as well as the mothers to resolve this behaviour. When mother did not extend whole hearted cooperation, the reaction took longer to disappear.

#### **Gender differentials in non-adjustment patterns of children:**

In order to gain an in-depth insight into the non-adjustment reactions of the boys and girls and average number of weeks taken in adjusting, further analysis of the data was carried out. The results presented in Table 5 divulge that in case of the girls every non-adjustment reaction took little longer to fade out as compared to the boys. For 'Temper tantrums', Over attachment with mother and Over attachment with care provider, these differences were found to be statistically significant. However, the differences were found to be non-significant

for Eating problems, Unwillingness to come to the centre and Withdrawn behaviour.

Ladd and Price (1987) conducted a study predicting children's social and school adjustment following the transition from pre-school to kindergarten. Results brought to light that the children faced different adults, peers, room design, location, schedules, expectations, values, ways of interacting, and so on, when they were shifted from home to day care settings or from one day care setting to another.

#### **Conclusion:**

Thus, the critical observations and analysis of the non-adjustment reactions of children in Laboratory day care centre brought to the light that the 'Eating problems' were the earliest to fade out and 'Unwillingness to come to the centre' was the latest to disappear. 'Temper Tantrums' appeared to be the most common and easily noticed behaviour, but contrary to this, 'Withdrawn behaviour' was the more widespread behaviour which often went unnoticed by most of the care-providers. Usually, it was not given much importance as the children exhibiting such type of behaviour were not creating much problem like those exhibiting 'Temper tantrums'. In case of girls every non-adjustment reaction took relatively more time to fade out in comparison with the boys.

Thus, it can be concluded that the children's response varied in the time taken as well as in their behavioural symptoms during this phase of transition from home to the Laboratory Day Care Centre. These results give directives for individual attention, care and handling of the children stepping out of house and adjusting in the new abodes. Thus, the strategies and care employed by the Care Providers should be tailored as per the individual needs, pace and temperament of the each child to make this transition smooth and subtle. This will go a long way in reducing the amount of stress experienced by the children, their parents as well as care providers.

---

Authors' affiliations:

**SARITA SAINI**, Department of Human Development,  
Punjab Agricultural University, LUDHIANA (PUNJAB)  
INDIA

E-mail: saritasaini@pau.edu

---

## REFERENCES

**Bronson, G.W.** and Pankey, W.B. (1977). On the distinction between fear and wariness. *Child Dev.*, **48**: 1167–1183.

**Duhan, K.** and Kaur, P. (2000). Behaviour problems among the pre-schoolers: Emergent need for counselling. *Indian Psy. Rev.*, **54**: 82-87.

**Gutman, L.M.,** Samerof, A.J. and Cole, R. (2003). Academic growth curve trajectories from 5<sup>th</sup> grade to 12<sup>th</sup> grade: Effects of multiple social risk factors and pre-school child factors. *Developmental Psy.*, **39**: 777-790.

**Ladd, G.W.** and Price, J.M. (1987). Predicting children's social and school adjustment following the transition from pre-school to kindergarten. *Child Dev.*, **58**: 1168-1189.

**Ozaki, Y.** (2003). Attachment, temperament and maternal separation: Observations of peer play by toddlers. *Japanese J. Edu. Psy.*, **51**: 96-104.

**Rogoff, B.** (1978). Spot observation: An introduction and examination. Quarterly Newsletter of the Institute for Comparative Human Development, **2**: 21-26.

\*\*\* \*\*\*\*\* \*\*