Young Mothers' Play with Their Toddlers: Individual Variability as a Function of Psychosocial Factors

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There is no one style of parenting which characterizes young mothers as a group. In addition, life circumstances play an important role in shaping maternal behaviour. The aim of this study was to identify patterns of maternal play behaviour and contextual (social and personal) factors associated with these different patterns. In this study, 107 young mothers were observed at home during play with their toddlers; maternal behaviour was coded for joint attention (shared focus of mother and toddler attention) and emotional availability (e.g. sensitivity, intrusiveness, hostility). Mothers reported on aspects of their childhood history and current personal functioning and social support. A person-centred analytic approach, using cluster analysis, revealed three distinct groups of maternal play behaviour: (1) ‘sensitive-engaged’ (2) ‘inconsistent-directive,’ and (3) ‘intrusive-prohibitive’. Multivariate analyses revealed that contextual factors in mothers’ lives (e.g. childhood abuse, depressive symptomatology, partner violence, social support, and parenting self-confidence) were differentially associated with parenting clusters. Copyright © 2007 John Wiley & Sons, Ltd.

Key words: young mothers; emotional availability; joint attention

The United States has the highest rates of adolescent pregnancy and birth compared to all other western industrialized nations (Alan Guttmacher Institute, 2004). Although birth rates for American unmarried women under the age of 20 have significantly declined from 1994 to 2001, the implications of early childbearing for young women and their children are considerable. Young mothers, for example, are less likely to graduate from high school and are less likely to maintain steady employment and achieve economic security. Thus, they and their children are more likely than older mothers and their children to live in poverty (Leadbeater & Way, 2003). Young mothers are more likely to be...
unmarried, and are more likely to have subsequent children when compared to older mothers (Luster, 1998). These life circumstances may not be caused by early parenthood; still, the life experiences of many young mothers and their children include significant challenges.

While the transition to motherhood is a unique and challenging time for all mothers (Cowan & Cowan, 2000), early motherhood presents particular challenges for parenting (Whitman, Borkowski, Keogh, & Weed, 2001). Young mothers, in general, use more punitive styles of interaction, are less empathic, more hostile, and tend to have less appropriate responses to their children’s affect (Berlin, Brady-Smith, & Brooks-Gunn, 2002; Leadbeater & Way, 2003). The negative findings associated with young parenting suggest that children of adolescent mothers may be at increased risk for developmental difficulties. In fact, children of young mothers demonstrate higher rates of language, cognitive, emotional, and behavioural difficulties (Brooks-Gunn & Furstenberg, 1986; Camp, 1996; Dubow & Luster, 1990; Keown, Woodward, & Field, 2001).

While these findings characterize differences between younger and older mothers as a group, there is, in fact, considerable variability among young mothers and their children (Leadbeater & Way, 2003; Luster, 1998; Oxford, Gilchrist, Lohr, Gilmore, Morrison, & Speiker, 2005). For example, Hess, Papas, and Black (2002) found that adolescent mothers who had higher self-esteem and more positive, supportive relationships with their own mothers were rated as more nurturant when playing with their children at 6 months of age.

Critics have argued that the overwhelmingly negative and homogenous view of young parenting stems from the focus on comparing younger mothers to older mothers. This area of research often overlooks the fact that young mothers and older mothers differ on factors other than age (Butler & Burton, 1990; Brooks-Gunn & Furstenberg, 1986). Studies which suggest the observed parenting differences between younger mothers and older mothers are simply related to age may be misleading and lack explanatory power. The comparative method limits the ability to expose the diversity of parenting in both younger and older mother populations. Therefore, studies which investigate within-group differences are needed in order to determine whether factors other than age are related to parenting styles among young mothers (Shapiro & Mangelsdorf, 1994). The aim of this paper is to examine the variability of play behaviour among a sample of young mothers, and to investigate psychosocial factors (e.g. history of childhood abuse, current depression, social support, and partner violence) that may be associated with these patterns.

Ecology of Early Motherhood

Women who experience early, off-time motherhood often have a history of psychosocial risks themselves. These factors include childhood experiences of economic insecurity, maltreatment, mental health concerns, and lack of social support. Young mothers, for example, are more likely to have experienced economic challenges during their own childhoods; more likely to have been raised in single-parent households; more likely to have experienced childhood abuse; are more likely to experience depression; and less likely to have the support of a spouse (Brooks-Gunn & Furstenberg, 1986; Butler & Burton, 1990). These factors, by themselves, may be related to the mothers’ parenting styles, and their children’s development (Shapiro & Mangelsdorf, 1994).
Childhood history of abuse

Childhood abuse histories are significantly more prevalent in adolescent mother populations compared to both general adolescent and older mother populations (Adams & East, 1999; Boyer & Fine, 1992). Further, childhood maltreatment is considered a possible contributing factor to negative parenting practices (Egeland, 1993; Spieker, Bensley, McMahon, Fung, & Ossianader, 1996). Young mothers, as a group, show more potentially abusive or neglectful parenting (Stevens-Simon, Nelligan, & Kelly, 2001) compared with older mothers. Even so, most young mothers do not abuse or neglect their children. Research focused on the intergenerational transmission of maltreatment, however, often does not address the more subtle aspects of parenting behaviour, such as emotional availability (EA) and attentional availability, that is the focus of this paper. There is a need to understand the variations in young mothers’ parenting behaviours at the non-abusive or ‘subclinical’ level. This paper focuses on two aspects of maternal behaviour: EA and attentional availability in parent–child play interactions, and the contextual factors (such as depression and social support), that may influence maternal behaviour.

Depression

Depression has been implicated as a contributing factor to the negative findings associated with young parenting. In fact, depression in young mothers is considerably more common than depression in older mothers (Hall, 1990). Postpartum depression rates for older mothers range from approximately 8% to 12% (Murray, 1992), compared to rates as high as 30–67% for teenaged mothers (Leadbeater & Linares, 1992; Reis, 1988).

Maternal depression may manifest in less responsive and less sensitive caregiving (Cohn, Campbell, Matias, & Hopkins, 1990; Field, 1984). A variety of behaviours, including intrusiveness, disengagement, hostility, and rejection characterize parenting of depressed mothers (Cohn, Matias, Tronick, Connell, & Lyons-Ruth, 1986; Colletta, 1983; Field, Sandberg, Garcia, Vega-Lahr, Goldstein & Guy, 1985; Gelfand, & Teti, 1990). Mothers suffering from depression also appear less skilled at rule enforcement and less often provide their children with appropriate guidance and structure (Goodman & Brumley, 1990).

Partner violence

Young mothers are more likely to be involved in abusive relationships with male partners and may be more likely to remain in these relationships due to limited social resources (Alan Guttmacher Institute, 1999). The combination of higher rates of childhood physical and sexual abuse, lower socioeconomic status, and limited social support may leave young mothers more vulnerable to abusive partner relations than their non-parenting counterparts (Musick, 1993; Rainey, Stevens-Simon, & Kaplan, 1995; Sugar, 1993). These relationships can negatively impact a young mother’s ability to optimally parent her child (Cutrona, Hessling, Bacon, & Russell, 1998).

Social support

More positively, social support enhances a mother’s psychological well-being and parental functioning by providing emotional, informational, and material support (Leadbeater & Linares, 1992). Both frequency and perceived quality of support are central (Voight, Hans, & Bernstein, 1996). Panzarine, Slater and
Sharps (1995) found that mothers with high depressive symptoms were less satisfied with the social support they received, even when the frequency of help was equal to the amount received by their non-depressed counterparts. Crockenberg (1987), however, hypothesized that spurious relations may exist between social support and parenting behaviour, especially when young mothers experienced difficult childhood histories.

Parenting self-confidence

Parenting self-confidence refers to a mother’s confidence about her caregiving abilities and effectiveness. A mother with low parenting confidence may be unsure about how to deal with her child’s behaviour and therefore may be more likely to act inconsistently from one interaction to another. When mothers are confident, parent–child relationships may be more positive, and child behaviour problems fewer (Zahr, 1991, 1993).

Given societal attitudes towards young parenting in the United States, parenting confidence may be particularly important to consider when investigating young mother populations. Western perspectives, for example, view the developmental stage of adolescence to be a period between childhood and adulthood with a central focus on identity formation (Erikson, 1968). Motherhood is considered a normative adult role that takes places after the teen years. This cultural perspective is promoted and reflected in mass media and within mainstream institutions, such as public education and governmental programmes. Therefore, adolescent mothers who attempt to integrate the role of motherhood into their identity are challenged by ‘cultural representations of young motherhood that discourage identity integrations of motherhood for adolescents’ (Raeff, 1996, p. 277). These negative attitudes towards young parenting may lower a young mother’s self-esteem and ‘lead to the erosion of her mothering competence’ (Beck, 1996, p. 226). Additionally, adolescents who become mothers have more challenging histories in general, and therefore low parenting confidence may reflect, in part, the young mothers’ life history and current circumstances.

In order to better understand the variability in play behaviour among these young mothers, we need to look beyond the immediate context of play and consider broader influences. Bronfenbrenner’s (2005) systems theory, for example, suggests that the developing individual is embedded within a series of nested environmental systems which interact with one another and the individual. These environmental systems, which range from the immediate context of the family to the broader context of culture, influence behaviour and development in unique and important ways. The current investigation examines how a number of contextual factors, both proximal and distal, impact the play behaviour of young mothers. Some of the personal and contextual factors examined in this study may, however, overlap and therefore may not be unique contributors to maternal play behaviour. As a result, these factors may have both direct and indirect influences on behaviour.

Mother–Child Play as a Context for Observation

Many researchers interested in investigating parenting behaviour have utilized the context of play as a window into parent–child relations (see Tamis-LeMonda, Uzgiris, & Bornstein, 2002). Through mother–child play a child learns affect regulation and develops social and cognitive skills, which are the building blocks
for future development. During play, mothers share both their attentional focus, and their emotional availability, with their children. Furthermore, in many Western societies, play is an important context for the development of infants’ attentional and emotional regulation.

**Joint attention (JA)**

During the first few months of life infants and mothers most often engage in face-to-face play interactions, but as infants get older and become more interested in objects, the dyadic interaction is altered; with the introduction of objects, the dyad becomes a triad. In this sense, the interaction ‘expands to incorporate attention to both the social partner and objects’ (Mundy & Willoughby, 1996, p. 67). Sharing a focus of attention is a means by which infants can communicate to the caregiver their own intentions and affective experiences with an object and, in turn, respond to the caregiver’s experience as well. Repeated engagement in JA gives both the infant and the caregiver ‘practice in identifying, modifying, and responding to each other’s goals’ (Raver & Leadbeater, 1995, p. 253). JA, then, facilitates language development and self- and other-regulatory skills and is a crucial component of social–emotional development.

Maternal behaviours, such as maintaining, redirecting, or prohibiting the child’s focus of attention, are key aspects of JA. Maternal maintaining behaviours, which are behaviours that encourage a child’s self-selected focus of attention, are associated with more favourable outcomes in children (Rocissano, Slade, & Lynch, 1985). Maintaining behaviours allow children to serve as agents in their play, resulting in more opportunities for exploration and ‘more active participation in their own learning’ (Smith, Landry, Miller-Loncar, & Swank, 1997, p. 588). Maternal maintaining behaviours have also been associated with positive language development, the development of exploratory play, and positive affect in children (Akhtar, Dunham, & Dunham, 1991; Garner & Landry, 1994; Rocissano & Yatchmink, 1983).

In contrast, redirecting behaviours, which are maternal behaviours that redirect the child’s focus of attention from one object to another, have been found to be inversely related to child language skills and exploratory play behaviours (Tomasello & Farrar, 1986). Redirecting behaviours are said to be the most difficult behaviour for a child to accommodate to because it requires the child not only to redirect his/her attention from the object with which s/he is engaged, but also to then re-engage with the new object the mother introduces (Garner & Landry, 1994).

Both redirecting behaviours and ‘indifferent’ behaviours are more frequent in adolescent mother–child interactions than in older mother–child interactions (Garner & Landry, 1994). In fact, JA and joint object play are less frequent in adolescent mothers’ play with their children (Garner, Rennie, & Miner, 1996; Raver & Leadbeater, 1995). Indifferent behaviours, such as disengagement and non-participation, also are characteristic of mothers suffering from depression (Burge & Hammen, 1991; Furstenberg, Brooks-Gunn, & Chase-Lansdale, 1989). Maternal emotional withdrawal or unavailability, and intrusive or controlling behaviours such as maternal prohibitions, have been associated with higher rates of insecure attachments, internalizing and externalizing problems, and language delays in children (Egeland & Erickson, 1987; Hart & Risley, 1995; Shaw & Bell, 1993).

**Emotional availability**

The construct of emotional availability, which relates to the ‘emotional expression and responsiveness of both partners in a relationship,’ is recognized
as a ‘central tenet, perhaps the connective tissue, of healthy socioemotional development’ (Easterbrooks & Biringen, 2000, p. 123). EA grew out of the therapeutic and attachment literatures, suggesting that readily available, sensitive, and responsive relationships create an environment of security and trust (Emde & Easterbrooks, 1985). When a child can anticipate that a parent will help her achieve emotion regulation she comes to understand that emotions can be tolerated and changed (Easterbrooks, Biesecker, & Lyons-Ruth, 2000). Over time, these supportive positive exchanges allow for greater emotional exploration and more developed regulatory capabilities.

According to the framework operationalized by Biringen and Robinson (1991), maternal EA consists of aspects of sensitivity, non-hostility, non-intrusiveness, and appropriate structuring. A body of research provides support for the assumption that EA is associated with attachment and other aspects of the parent–child relationship, such as affect and child language development (Biringen et al., 2005; Easterbrooks, Biesecker, & Lyons-Ruth, 2000; Little & Carter, 2005; Robinson, Little, & Biringen, 1993).

Recently, leaders in the field of EA have called for more investigations of EA in diverse populations and conditions (Easterbrooks & Biringen, 2000; Emde, 2000). Although there appears to be only one published study investigating ‘EA’ among young mothers (Easterbrooks, Chaudhuri, & Gestsdottir, 2005), there is additional evidence to suggest that EA may be diminished in some young mothers (Leadbeater & Way, 2003).

The present study addresses the following goals: (1) to examine patterns of maternal play behaviour (EA and JA) among young mothers interacting with their toddlers during play, and (2) to identify contextual variables associated with the different patterns of maternal play behaviour. In addition to evaluating maternal play behaviour, we examined contextual factors associated with patterns of maternal JA and EA. Evaluating the role of contextual factors is particularly important, given that historically, researchers have largely ignored the ecological context of young mothers when evaluating their parenting (Coley & Chase-Landsdale, 1998; Shapiro & Mangelsdorf, 1994).

Based on theory which suggests that both stressors and supports in the mother’s environment affect parents, both directly and indirectly, one would expect that certain factors in a mother’s life differentially impact parenting behaviour (Belsky, 1984; Bronfenbrenner & Ceci, 1994). We hypothesized that mothers who experienced greater incidence of childhood abuse, more severe depressive symptoms, violent partner relations, lower perceived dependability of social support, and lower parenting self-confidence would be less likely to show positive aspects of JA and EA in play interactions.

**METHOD**

**Participants**

The participants in this study were recruited for the evaluation of a state-wide voluntary home visiting programme developed for first-time mothers under the age of 21 (Jacobs, Easterbrooks, Brady, & Mistry, 2005). Characteristics of the sample are presented in Table 1.
Procedure
Mothers were visited in their homes where they completed questionnaires and were videotaped playing with their toddlers in a 5-min free-play session. Videotaping was conducted at a convenient time during the visit depending on the child’s schedule. Typically, some questionnaires were completed prior to the videotaping, to allow for the child to become accustomed to the visitor. Mothers were asked to play with their child as they typically would.

MEASURES

Observation and Coding of Maternal Play Behaviour
All maternal play behaviour was coded by trained research assistants from videotaped free-play sessions. JA and EA behaviours were coded separately by independent coding teams.

Maternal joint attention behaviours
Maternal behaviour codes included maintaining and redirecting behaviours, physical and/or verbal prohibitions directed at the child, and maternal non-participating behaviours. A modified frequency (based on 10-s intervals) was calculated for each type of maternal behaviour; each behaviour was scored only once per interval. Coders could record more than one type of behaviour per interval except cases in which mothers displayed non-participating behaviours. Non-participating behaviours were only coded if the mother was uninvolved and unresponsive for the entire 10 s interval. This rule was established in order to distinguish non-participating behaviours from natural pauses in maternal–child play.
**Definitions of codes**

*Maintaining behaviours* are maternal behaviours or verbalizations which maintain or reinforce the child’s ongoing activity (e.g. commenting briefly on the child’s actions, such as, ‘Wow, good job,’ non-verbal behaviours or orienting gestures, such as giving of objects, and demonstrations which directly relate to the child’s ongoing activity). *Redirecting behaviours* are maternal attention directing behaviours which involve a shift in the child’s focus of attention (e.g. the child is occupied with a toy cup, the parent says: ‘Look, there is a ball, throw the ball to mommy. Throw it!’ or the mother says: ‘Let’s make a tower of these blocks’ while the child is playing with a puzzle.) *Prohibitions* are any physical or verbal attempt by the mother to stop what her child is presently doing or saying (e.g. saying ‘no,’ ‘you can’t have that,’ or ‘not like that,’ or mother physically blocks child from getting to where s/he wants to go). Finally, *non-participating behaviours* refer to a mothers’ lack of involvement or unresponsiveness to the child’s ongoing activity (e.g. mother is uninvolved and staring into space).

Coders were trained and reached a satisfactory level of interrater reliability. Following the training period during which reliability was established, 20% of videotapes were double coded to guard against coder drift. Disagreements were resolved by conference. Cohen’s kappas were used as the measure of reliability (Cohen, 1960). Mean kappa values for maintaining, redirecting, prohibitions, and non-participating were 0.77, 0.78, 0.87, 0.93, respectively.

**Emotional availability scales**

Maternal EA during videotaped free-play sessions was measured using the Emotional Availability Scales (EAS; Biringen, Robinson, & Emde, 1993) to evaluate four dimensions of maternal behaviour: sensitivity; structuring; non-intrusiveness; and non-hostility. EA scoring was based on the entire 5-min play episode. *Parental sensitivity* (9-point scale) refers to the mother’s affect, flexibility, responsiveness to, and awareness of her child’s cues, as well as conflict negotiation skills. *Parental structuring* (5-point scale) refers to the mother’s ability to scaffold the child in his/her environment. *Parental non-intrusiveness* (5-point scale) refers to the ability of the mother to be responsive and available while not undermining her child’s autonomy. *Parental non-hostility* (5-point scale) refers to maternal behaviour that is not antagonistic, intimidating or aggressive.

Coders were trained and achieved interrater reliability on 30% of the videotapes. Cohen’s kappas (Cohen, 1960) ranged from 0.82 to 0.94 ($M = 0.87$). Kappa values are consistent with rates reported by other researchers (Eastbrooks et al., 2000; Ziv, Aviezer, Gini, Sagi, & Koren-Karie, 2000).

**Childhood history of abuse**

The Parent–Child Conflict Tactic Scales (CTSPC) (Straus, Hamby, Finkelhor, Moore, & Runyan, 1998), a 22-item self-report questionnaire, measures the extent to which, as a child, the participant experienced acts of violence, psychological, or physical aggression from their parents. The current investigation examined physical abuse only. The score is a sum of three physical abuse subscale means (minor physical violence, severe physical violence, and very severe physical violence). The CTSPC has demonstrated moderate reliability and evidence of discriminant and construct validity (Straus et al., 1998).
Maternal depression

Maternal depressive symptoms were evaluated using the Center for Epidemiological Studies-Depression (CES-D) scale (Radloff, 1977), a 20 item self-report questionnaire designed to assess depressive symptoms in the general population. Scores range from 0 to 60. A cut-off score of 16 represents a clinically significant level of depressive symptoms. The CES-D has demonstrated strong psychometric properties in both clinical and epidemiological studies with diverse groups, including both adolescents and postpartum women (Campbell & Cohn, 1991; Radloff, 1991; Weinberg et al., 2002).

Partner violence

Exposure to partner violence was assessed using the 78-item Conflict Tactics Scale-Revised (CTS-R) questionnaire (Straus, Hamby, Boney-McCoy, & Sugarman, 1996). Four of five subscales were used for the current study: psychological aggression; physical assault; sexual coercion; and injury. Mothers were asked to respond to 78 questions on a 7-point scale (1 = ‘once in the past year,’ 7 = ‘not in the past year, but has happened,’ additional choice of 0 = ‘never happened’). Findings indicate good reliability as well as discriminant and construct validity in diverse ethnic and cultural groups (Langhinrichsen-Rohling, 2005; Straus & Savage, 2005).

Social support

Social support was measured using the personal network matrix (PNM) (Trivette & Dunst, 1988). The PNM was developed as an assessment tool for intervention purposes. The participant is asked to evaluate the dependability of social supports by indicating (a) the extent to which she perceives these individuals as being willing to provide assistance and (b) the extent to which she perceives it to be worth the effort to seek help from the identified individuals. Reliability and validity of the measure have not been established.

Parenting self-confidence

Parenting self-confidence was measured using the Parenting Self-Confidence Scale (PSCS), which assesses the extent to which parents feel confident in their knowledge and performance of day-to-day tasks of parenting (Myers-Walls, 1999). The questionnaire consists of 15 items on a 5-point Likert scale (1 = very poorly, 5 = very well). Questions range from, ‘How well do you think you are able to help your child understand and control her/his emotions?’ to ‘How well do you think you are able to keep your child healthy and fit?’ The PSCS scale has demonstrated good reliability and validity (Myers-Walls, 1999).

RESULTS

Descriptive Statistics

Tables 2 and 3 present means and standard deviations for all variables. In order to normalize the skewed distributions, transformations were conducted for two JA variables (non-participation and prohibition), and the history of child abuse variable, using arcsine or square root transformations, where appropriate (Howell, 2002). All EA variables were normally distributed.
The distributions of the partner violence subscale scores were so skewed that transformations could not normalize the distributions. Therefore, a partner violence composite score was created. First a dichotomous ‘ever occurrence’ score (0 = no, 1 = yes) was created for all four subscales. The subscales were then converted to standardized values and combined to create a partner violence composite score.

Table 4 presents intercorrelations for demographic and contextual variables.

<table>
<thead>
<tr>
<th>Measure</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per capita income for town</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Maternal age</td>
<td>—0.01</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Child age</td>
<td>0.08</td>
<td>0.13</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Depressive symptoms</td>
<td>—0.13</td>
<td>—0.04</td>
<td>—0.01</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Childhood abuse</td>
<td>—0.16</td>
<td>—0.05</td>
<td>—0.00</td>
<td>0.31**</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Partner violence</td>
<td>0.00</td>
<td>0.00</td>
<td>0.06</td>
<td>0.33**</td>
<td>0.23*</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Social support</td>
<td>—0.10</td>
<td>0.04</td>
<td>—0.01</td>
<td>—0.11</td>
<td>—0.14</td>
<td>—0.12</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Parenting self-confidence</td>
<td>—0.03</td>
<td>—0.09</td>
<td>0.03</td>
<td>—0.07</td>
<td>—0.05</td>
<td>—0.07</td>
<td>0.25*</td>
<td>—</td>
</tr>
</tbody>
</table>

*p < 0.05, **p < 0.01.
Cluster Analysis

K-means cluster analysis was used to identify patterns of maternal play behaviour based on the combination of JA and EA scores. Cluster analysis is a multivariate statistical procedure that attempts to determine underlying groups of highly similar structures by identifying which of the structures are most closely related (Aldenderfer & Blashfield, 1984). Two variables, non-hostility (EA) and non-participating (JA), were excluded due to their limited range and low frequency, respectively. Based on research related to attachment and depression, it was expected that three maternal play patterns would emerge from the data, one more ‘optimal’ group and two less ‘optimal’ parenting patterns (Ainsworth, Blehar, Waters, & Wall, 1978; Cohn et al., 1990; Field, Healy, Goldstein, & Guthertz, 1990).

Three distinct patterns of maternal play behaviour were identified: ‘sensitive-engaged’ (Cluster 1, \(N = 43\)), ‘inconsistent-directive’ (Cluster 2, \(N = 42\)), and ‘intrusive-prohibitive’ (Cluster 3, \(N = 22\)). Tables 5 and 6 display cluster means for EA and JA behaviours.

### Table 5. Between-groups differences for emotional availability measures

<table>
<thead>
<tr>
<th>Measure</th>
<th>Cut-off(^1)</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Sensitive-engaged</td>
<td>Inconsistent-directive</td>
<td>Intrusive-prohibitive</td>
</tr>
<tr>
<td></td>
<td>(n = 43)</td>
<td>(n = 42)</td>
<td>(n = 22)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>S.D.</td>
<td>M</td>
<td>S.D.</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>5.00</td>
<td>7.02(_{a,b})</td>
<td>0.83</td>
<td>5.21(_{a})</td>
</tr>
<tr>
<td>Structuring</td>
<td>3.00</td>
<td>4.09(_{a})</td>
<td>0.68</td>
<td>3.0(_{a})</td>
</tr>
<tr>
<td>Non-Intrusiveness(^2)</td>
<td>3.00</td>
<td>4.37(_{a,b})</td>
<td>0.54</td>
<td>3.38(_{a})</td>
</tr>
</tbody>
</table>

*Note:* Means in a row sharing subscripts are significantly different.

\(^1\)Scores at cut-off and below indicate non-optimal emotional availability scores (Biringen et al., 1993).

\(^{**}\)p < 0.001.

\(^2\)Arcsine transformation.

### Table 6. Between-groups differences for joint attention measures

<table>
<thead>
<tr>
<th>Measure</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sensitive-engaged</td>
<td>Inconsistent-directive</td>
<td>Intrusive-prohibitive</td>
</tr>
<tr>
<td></td>
<td>(n = 43)</td>
<td>(n = 42)</td>
<td>(n = 22)</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>S.D.</td>
<td>M</td>
</tr>
<tr>
<td>Maintaining</td>
<td>(0.79(_{a}))</td>
<td>0.13</td>
<td>(0.62(_{a,b}))</td>
</tr>
<tr>
<td>Redirecting</td>
<td>(0.18(_{a}))</td>
<td>0.11</td>
<td>(0.35(_{a,b}))</td>
</tr>
<tr>
<td>Prohibition(^1)</td>
<td>(0.36(_{a,b}))</td>
<td>0.29</td>
<td>(0.65(_{a}))</td>
</tr>
</tbody>
</table>

*Note:* Means in a row sharing subscripts are significantly different.

\(^{1}\)Arcsine transformation.

\(^{**}\)p < 0.001.
Mothers in Cluster 1: ‘sensitive-engaged’ displayed the most optimal play behaviour (both EA and JA) as compared to mothers in the other two clusters. Mothers in Cluster 1 were significantly more sensitive, better at structuring, were less intrusive and used fewer prohibitions when compared to mothers in Clusters 2 and 3. Cluster 1 scores for maintaining were statistically higher than scores in Cluster 2, but not from scores in Cluster 3 (see Tables 5 and 6). Cluster 1 scores for redirecting were the lowest on average compared to Clusters 2 and 3, but did not reach levels of statistical significance.

The mothers in Cluster 2: ‘inconsistent-directive’ scored the lowest, on average, in relation to sensitivity, structuring, and maintaining and scored the highest, on average, in relation to redirecting when compared to mothers in Clusters 1 and 3. These mothers showed significantly less optimal scores on all EA and JA behaviours compared to mothers in Cluster 1, but mothers’ behaviour in relation to sensitivity, maintaining, and redirecting was not significantly different from mothers in Cluster 3. What most distinguished these mothers from the other mothers in the sample were their non-optimal structuring scores and their high levels of redirecting behaviours.

JA and EA scores for mothers in Cluster 3: ‘intrusive-prohibitive’ were, on average, more similar to the scores of mothers in Cluster 2 than to the scores of mothers in Cluster 1. When compared to mothers in Cluster 1, Cluster 3 mothers had significantly lower scores on sensitivity and structuring as well as significantly higher scores on intrusiveness and prohibitions. When compared to mothers in Cluster 2, Cluster 3 mothers scored significantly higher on structuring and maintaining and significantly lower on redirecting. Overall, mothers in the ‘intrusive-prohibitive’ cluster were most differentiated from the other two clusters by being the most intrusive and prohibitive, as well as scoring highest on maintaining.

**Demographics by Cluster**

Chi-square and ANOVA analyses were conducted prior to multinomial logistic regression analyses to rule out possible confounding factors related to demographic variables. There were no statistically significant differences among the three clusters in relation to the following demographic variables. Maternal race $\chi^2 (6, N = 107) = 4.29, p = 0.64$, NS; maternal age ($F (2, 105) = 0.59, p = 0.55$, NS); maternal education level $\chi^2 (10, N = 103) = 11.41, p = 0.33$, NS; maternal living arrangement $\chi^2 (4, N = 106) = 3.14, p = 0.54$, NS; financial stress $\chi^2 (4, N = 95) = 4.02, p = 0.40$, NS; per capita income for town ($F (2, 105) = 2.92, p = 0.06$, NS); child age ($F (2, 100) = 0.06, p = 0.95$, NS); child gender $\chi^2 (2, N = 105) = 4.84$.

**Multivariate Analyses**

Multinomial logistic regression analyses were used to examine relations between the three patterns of maternal play behaviour (‘sensitive-engaged’, ‘inconsistent-directive’, and ‘intrusive-prohibitive’) and the maternal contextual variables (childhood history of abuse, depressive symptomatology, partner violence, perceived dependability of social support, and parenting self-confidence). Due to missing data 12 cases were excluded from the regression analyses. Results are presented in Tables 7 and 8. Independent variables were entered simultaneously into the analyses.
Significant relations were found between the three parenting clusters and the contextual factors in mothers’ lives (history of abuse, depressive symptoms, social support, and parenting self-confidence); partner violence was not associated with parenting cluster membership.

Mothers in the ‘inconsistent-directive’ cluster were more likely to report histories of physical abuse, higher current depressive symptoms, and greater parenting self-confidence when compared to mothers in the ‘sensitive-engaged’ cluster. The odds of being in the ‘inconsistent-directive’ group were two times greater when mothers had more severe childhood abuse histories. The odds of being in the ‘inconsistent-directive’ group were 1.8 times greater when mothers had more severe depressive symptoms. Contrary to study hypotheses, the odds of being in the ‘inconsistent-directive’ cluster were 2.07 times greater when mothers had more parenting self-confidence.

Social support was related to cluster membership, but in an unexpected way. Mothers in the ‘intrusive-prohibitive’ cluster were more likely to report dependable social support when compared to mothers in the ‘sensitive-engaged’ cluster. The odds of being in this cluster were 1.06 times greater when mothers found their social support systems to be more dependable. While there was no statistically significant relation between parenting self-confidence and the ‘intrusive-prohibitive’ parenting cluster, the size of the relationship (odds ratio = 1.84) may warrant further consideration in future investigations.

Table 7. Summary of multinomial logistic regression analysis: predicting inconsistent-directive interactive style

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>S.E.</th>
<th>Odds ratio</th>
<th>Wald statistic</th>
<th>95% CI Lower</th>
<th>95% CI Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Childhood history of abuse</td>
<td>0.70</td>
<td>0.31</td>
<td>2.01</td>
<td>5.05*</td>
<td>1.09</td>
<td>3.69</td>
</tr>
<tr>
<td>Depressive symptoms</td>
<td>0.58</td>
<td>0.30</td>
<td>1.80</td>
<td>3.81*</td>
<td>1.00</td>
<td>3.22</td>
</tr>
<tr>
<td>Partner violence</td>
<td>0.14</td>
<td>0.31</td>
<td>1.15</td>
<td>0.20</td>
<td>0.63</td>
<td>2.09</td>
</tr>
<tr>
<td>Social support</td>
<td>0.58</td>
<td>0.32</td>
<td>1.78</td>
<td>3.22</td>
<td>0.95</td>
<td>3.33</td>
</tr>
<tr>
<td>Parenting self-confidence</td>
<td>0.73</td>
<td>0.29</td>
<td>2.07</td>
<td>6.28**</td>
<td>1.17</td>
<td>3.66</td>
</tr>
</tbody>
</table>

*p<0.05, **p<0.01; sensitive-engaged (N = 38), inconsistent-directive (N = 37). Reference category cluster 1: sensitive-engaged.

Table 8. Summary of multinomial logistic regression analysis: predicting intrusive-prohibitive interactive style

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>S.E.</th>
<th>Odds ratio</th>
<th>Wald statistic</th>
<th>95% CI Lower</th>
<th>95% CI Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Childhood history of abuse</td>
<td>0.54</td>
<td>0.36</td>
<td>1.71</td>
<td>2.21</td>
<td>0.84</td>
<td>3.47</td>
</tr>
<tr>
<td>Depressive symptoms</td>
<td>−0.14</td>
<td>0.38</td>
<td>0.87</td>
<td>0.14</td>
<td>0.41</td>
<td>1.83</td>
</tr>
<tr>
<td>Partner violence</td>
<td>0.37</td>
<td>0.34</td>
<td>1.45</td>
<td>1.20</td>
<td>0.74</td>
<td>2.83</td>
</tr>
<tr>
<td>Social support</td>
<td>0.06</td>
<td>0.03</td>
<td>1.06</td>
<td>3.72*</td>
<td>1.00</td>
<td>1.12</td>
</tr>
<tr>
<td>Parenting self-confidence</td>
<td>0.61</td>
<td>0.34</td>
<td>1.84</td>
<td>3.22</td>
<td>0.95</td>
<td>3.59</td>
</tr>
</tbody>
</table>

*p<0.05; sensitive-engaged (N = 38), intrusive-prohibitive (N = 20). Reference category cluster 1: sensitive-engaged.
DISCUSSION

The present investigation examined a diverse group of young mothers and their toddlers during play in order to characterize patterns of maternal play behaviour. A second aim was to examine a set of contextual factors commonly linked with young mothers (e.g. depression, history of abuse, social support) in order to better understand how these factors are associated with patterns of play behaviour. We expected that there would be several patterns of maternal play behaviour, demonstrating the variability in young mothers’ parenting. Moreover, we anticipated that these patterns of behaviour would be related to circumstances in these mothers’ lives.

Cluster analyses of EA and JA behaviour identified three distinct patterns of maternal behaviour demonstrated during mother–toddler play. We have called these patterns (a) ‘sensitive-engaged’, (b) ‘inconsistent-directive’ and (c) ‘intrusive-prohibitive’. Generally, the mothers in the ‘sensitive-engaged’ cluster showed more supportive and synchronous behaviour while playing with their toddlers, while mothers in the ‘inconsistent-directive’ and ‘intrusive-prohibitive’ groups were more erratic and intrusive. Mothers in the ‘sensitive-engaged’ cluster were more likely to accurately read their child’s cues and support the child in his/her focus of attention. Transitions between play activities tended to be smoother and more rhythmic when compared to mothers in the other two clusters. For example, Mom counts along with child as child puts blocks one-by-one into a bucket, ‘One...two...three!’ Mom holds and adjusts the bucket as the child continues to drop the blocks into the container.

In contrast, mothers in the ‘intrusive-prohibitive’ cluster were more likely to over stimulate or interfere with the child’s play when compared to mothers in Clusters 1 and 2. These mothers also appeared to encourage their own focus of interest rather than the child’s. What stood out most about these mothers was their tendency to prohibit their child’s activities and pursuits. For example, child is happily putting together a puzzle, and the mother throws a ball over to the child. The child protests, ‘No!’ and attempts to go back to putting the puzzle together. The mother repeats herself, ‘Come on. Throw the ball to Mom.’ Mother then takes the puzzle away and bounces the ball in front of the child.

Lastly, mothers in the ‘inconsistent-directive’ cluster were more likely to have abrupt, unpredictable changes in behaviour. These mothers, for example, might follow the child’s lead for a period of time then change the focus of play without warning or become withdrawn and disengaged. This unpredictable structuring and disengagement can leave the child without appropriate support and prevent him/her from engaging in a sustained focus of play. For example, child is happily playing by herself with a toy car, and the mother abruptly introduces a new game of playing with a musical book. The child glances over at the book, but then attempts to re-engage with the car. The mother continues pushing musical buttons on the book and repeating, ‘Look at the book. Come on. Look.’ The child then switches her focus to the book, presses the musical buttons and looks up at the mother to engage. Meanwhile, the mother has disengaged and is blankly staring down at the floor, unresponsive to the child’s bids.

The demonstrated variability in maternal play behaviour provides support for the literature which argues that researchers need to move beyond comparing younger mothers to older mothers in order to illuminate differences in play behaviour among young mothers. In addition to advancing our understanding of the play behaviour of young mothers, the cluster patterns reinforce the notion...
that there is no one style of parenting which characterizes young mothers as a group.

Through the use of cluster analysis, the EA and JA coding systems were able to complement one another; as a result a more complex picture of maternal behaviour emerged than if the two coding systems were analysed independently. The cluster analytic technique allows us to not only conceptualize patterns of JA behaviour, but also to further qualify these behaviours through the EA codes.

Engaging in a high proportion of maintaining behaviours, for example, could be considered a more optimal pattern of behaviour; however, without taking into account the mother’s affect or level of sensitivity, the quality of the mother’s maintaining behaviour is less clear. The high proportion of maintaining behaviours characteristic of both the ‘intrusive-prohibitive’ cluster and the ‘sensitive-engaged’ cluster can be contextualized by the EA scores. Mothers in the ‘sensitive-engaged’ cluster appear to maintain in a more sensitive and less intrusive manner when compared to mothers in the ‘intrusive-prohibitive’ cluster.

Patterns of maternal behaviour were associated with aspects of mothers’ life history and context. Consistent with the literature, and with study hypotheses, history of childhood physical abuse was associated with less optimal parenting behaviour, specifically ‘inconsistent-directive’ behaviour (Egeland, 1993; Stevens-Simon et al., 2001). These findings speak to the importance of recognizing childhood history of abuse as a risk factor for parenting difficulties in young mothers. The ‘inconsistent-directive’ behaviour pattern, in particular, may be an indicator for potential child abuse or neglect. In fact, mothers in this cluster were significantly more likely than mothers in the ‘sensitive-engaged’ cluster to be identified by the state Department of Social Services as perpetrators of maltreatment against their own children, \( t(83) = -2.32, p = 0.02 \). Most (over 90%) of the maltreatment in this sample was child neglect.

Depressive symptomatology, as expected, was significantly associated with ‘inconsistent-directive’ cluster membership. In fact, the odds of being in the ‘inconsistent-directive’ group were 1.8 times greater when mothers had more severe depressive symptoms. This finding is consistent with the findings of Cohn et al. (1986) that mothers with higher levels of depressive symptoms were more likely to alternate between intrusiveness and disengagement. An unpredictable alternation between intrusiveness and disengagement may be particularly detrimental to the development of a young child (Gelfand & Teti, 1990; Isabella & Belsky, 1991). Ideally, through many interactions with the mother, the child begins to anticipate the mother’s behaviour and over time learns the parameters of a social interaction. As Jerome Bruner (1990) suggested, it is through repeated interactions with the mother that the child comes to ‘know’… this is what is happening; this is what will happen; and this is how it will feel.’ (as cited in Tronick & Weinberg, 1997). However, in cases where a mother is struggling with depression and engages in a pattern of unpredictable behaviour, the young child cannot anticipate and engage accordingly (Cummings & Cicchetti, 1990; Field, 1984). Maternal depression during infancy may be especially challenging to the positive adaptation of children. This period of life is one of rapid development of intercoordinated developmental systems. Moreover, children of mothers depressed early in their child’s life are more likely to be exposed to multiple episodes of maternal depression. One recent study (Bureau, Easterbrooks, & Lyons-Ruth, under review) found that maternal depression in infancy was more highly associated with child and adolescent depression than was current maternal depression.
in childhood or adolescence, highlighting the special significance of this
developmental period.

The hypothesized relation between depressive symptoms and the ‘intrusive-
prohibitive’ parenting cluster was not obtained. This result is unexpected because
the mothers in this group displayed a pattern of behaviour sometimes seen in
depressed mothers (Colletta, 1983; Panzarine, 1986). The lack of statistical
significance could be related to the small sample size ($N = 22$), or it may suggest
that for this group of mothers, other factors, such as support systems may play a
more important role in parenting behaviour.

The present investigation also examined the role of social support because of
the reported positive influences of social support on parenting and one’s
adjustment to the parenting role, especially in at risk populations (Kalil & Kunz,
2002). However, contrary to expectations, greater perceived dependability of
social supports was not associated with ‘sensitive-engaged’ parenting, but rather
with the ‘intrusive-prohibitive’ cluster. This finding, although unexpected, is not
t entirely surprising. Recent investigations of informal supports reveal the
complex role of social support in the lives of young mothers (Contreras, 2004;
Social support may serve a moderating, or buffering, role in relation to maternal
depressive symptoms in this group.

Based on the current findings, one might argue that the mothers in the
‘intrusive-prohibitive’ cluster might be depending on or utilizing their social
supports to the point that others are taking on the majority of child care
responsibilities. In some cases, relying on others too often may prevent a young
mother from gaining important parenting experience and skills. A lack of
involvement or the over-reliance on other sources of support (e.g. grandmother
or siblings) may, in turn, undermine a young mother’s role (Richardson, Barbour
& Bubenzer, 1991) and lead her to engage in more controlling or directive
behaviour when interacting with her child. Other studies have shown, for
example, that extensive grandmother support was related to less sensitive play in
adolescent mother–child play interactions (Chase-Lansdale, Brooks-Gunn, &
Zamsky, 1994; Contreras, Mangelsdorf, Rhodes, Diener, & Brunson, 1999).

Another explanation for the statistically significant relation between perceived
dependability of support and the ‘intrusive-prohibitive’ cluster could be that the
parenting support programme the mothers are enrolled in may be recognizing
this group of mothers as particularly needy. As a result, the programme may be
providing these mothers with additional services and, in turn, the mothers garner
a greater sense of support, regardless of whether this additional support is
effective in bolstering maternal behaviour.

The parenting self-confidence results proved to be particularly interesting.
Contrary to findings in older mother populations, which associate higher
parenting self-confidence with more optimal parenting, results for this
study investigating young mothers suggest the opposite. When controlling
for other factors, mothers with higher parenting self-confidence scores
displayed less sensitive play behaviour. This finding suggests that high levels
of parenting self-confidence in young mothers may be a risk factor for negative
parenting. In some circumstances, higher parenting self-confidence may
represent an over-confidence or a lack of understanding of the seriousness and
responsibility of the parenting role. Some young mothers may be less sensitive or
less attuned to their children’s behaviour partly because they do not recognize
the magnitude of their role and the influence they have on their child’s
development.
Limitations of the Study

Interpretation of these data are constrained by several limitations. First, all mothers in the study were enrolled in a prevention programme aimed at supporting parenting among young families. Mothers who choose to enroll in a family support programme are a self-selected group, challenging generalizability to the wider population of young mothers. Secondly, the current investigation relied on brief observations of mothers and children playing at home. Generalizability may be limited by the length of the observations or the context (e.g. in some families mothers may not regularly play with their toddlers). Although the observations are brief, however, previous studies have demonstrated robust associations between limited observation data (3–30 min) and assessments of conceptually predicted constructs, such as attachment and maternal psychosocial risk (Biringen et al., 2005). These findings suggest that even short observations can provide meaningful insights into the mother–child relationship.

Lastly, observation of mother–child interaction was limited to a free-play session. It has been suggested in the literature that by the end of the first year of life, free-play interactions may not be a challenging enough context in which to elicit or highlight variation in mother–child interaction (Egeland, Pianta, & O’Brien, 1993). Evaluation of mother–child interaction in more varied contexts (such as structured play or teaching interactions) is needed.

CONCLUSION

There is a need to move beyond the level of comparison between older and younger mothers and focus on the variability among young mother populations. The results of this investigation contribute to the literature on young parenting by shedding light on the variability of play behaviour in young mothers. In particular, contributions are made to the literature of JA and EA, both of which have limited data on young mother populations.

The current investigation suggests that both past and present psychosocial factors play an important role in shaping maternal play behaviour. The study also suggests that some risk factors may be more problematic than others. A better understanding of both risk and protective factors associated with young parenting can allow for more effective prevention and intervention programming for young mothers (see Easterbrooks, Chaudhuri & Gestsdottir, 2005). For example, screening for risk factors, such as depression or childhood abuse, could be a first step towards providing more personalized intervention care to young mothers who may be at risk for parenting difficulties. These data argue against uniform approaches to intervention and call for future investigations of young parenting conducted within a broad ecological perspective.

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