Maternal sensitivity in mothers with mild intellectual disabilities is related to experiences of maltreatment and predictive of child attachment: A matched-comparison study

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Abstract

Scientific knowledge on the quality of caregiving/maternal sensitivity among mothers with mild intellectual disabilities (ID) is limited and subject to many methodological shortcomings, but suggests that these mothers are less sensitive than mothers without ID. In this matched-comparison study ($N=48$) we observed maternal sensitivity for 20 minutes in four different laboratory play situations. The study also included semi-structured interviews to assess maternal experiences of maltreatment and child attachment (child $M$ age = 77 months; 57% boys). Mothers with ID were significantly lower in sensitivity than comparison group mothers without ID. Among mothers with ID, low sensitivity was related to maternal experiences of maltreatment and predictive of disorganized child attachment. In the comparison group, high maternal sensitivity was related to partner presence and social support, and predictive of child intelligence. The findings highlight the importance of attending to ID mothers’ history of receiving care to understand their capacity for giving adequate care.

Key words: Maternal sensitivity, intellectual disabilities, maltreatment, attachment, intelligence.
Children of parents with intellectual disabilities (ID) are often considered to be at risk for maladaptive development across multiple domains of development (Lindblad et al. 2014), and these difficulties are often attributed to dysfunctional caregiving. Sixty-seven percent of professionals working with parents with ID were for example recently found to be of the opinion that these parents do not provide good enough care of their children (Willems et al. 2007). Accordingly, high rates of children of mothers with ID are taken out of their mothers’ care by social agencies (Llewellyn & Hindmarsh 2015; McConnell et al. 2011). However, due to methodological shortcomings in existing research it is unclear if dysfunctional caregiving causes the problems found in some children of mothers with ID (Collings & Llewellyn 2012; Emerson & Brigham 2014; IASSID 2008). Custody assessments regarding parents with ID have for example been described as highly unstructured, with courts and child protection services referring to “attachment problems” among the children and concluding insufficient caregiving without systematic assessments of attachment or notes about important contextual factors (Alexius & Hollander 2014). Yet, research on parenting and ID has demonstrated how contextual factors such as poverty and lack of social support can influence parenting abilities and family outcomes (Feldman et al. 2012; Llewellyn & Hindmarsh 2015; Wade et al. 2011).

**Parental sensitivity, child development, and the importance of contextual factors**

Parental sensitivity is the most central caregiving construct within attachment research and theorizing (Ainsworth et al. 1978), and constitutes a well-established predictor of child attachment quality (De Wolff & van IJzendoorn 1997). Sensitivity refers to a parent’s ability to adequately interpret and respond to the child’s signals and developmental needs related to exploration, autonomy, and safety. Accordingly, highly sensitive caregivers typically demonstrate a well-developed capacity to take their child’s perspective and provide for the child’s wellbeing through warmth and acceptance in interactions (Manning et al. 2014).
Naturally, parental sensitivity is considered important for the child’s social and emotional development (Raby et al. 2015). However, parental sensitivity has also emerged as a unique predictor of children’s more advanced cognitive development (e.g., higher IQ) (Ainsworth & Bell 1974; Lemelin et al. 2006; van Ijzendoorn et al. 1995; van Ijzendoorn & van Vliet-Visser 1988). Parental sensitivity may impact children’s cognitive development by affecting their epistemic space; knowing that the caregiver can be reliably counted on in case of alarm may infuse the child with confidence to explore its surrounding and thereby learn from it more freely. Indeed, neuroimaging research has found larger brain volumes in school-aged children whose parents were high in sensitivity early in child development (Kok et al. 2015).

Caregiver sensitivity is often regarded as an individual attribute, but should not be mistaken for a “trait” as it is highly context dependent. Contextual factors such as marital and social support have repeatedly been shown to contribute to maternal sensitivity (Belsky 1984; Belsky & Isabella 1988; Crnic et al. 1983), supporting the application of an ecological model (Bronfenbrenner 1997; Bronfenbrenner & Ceci 1994). Marital and social support may increase sensitivity by bringing about required resources and release the mother from competing domestic tasks.

**Sensitivity, child development, and contextual factors among mothers with intellectual disabilities**

A failure to carefully define caregiving has been stressed in the literature on parents with ID, both in research and practice (Dowdney & Skuse 1993; Tymchuk 1992). Accordingly, observational research of sensitivity among parents with ID is scant, which is remarkable given the importance of parental sensitivity in child development and the weight assigned to assumptions of inadequate caregiving in custody assessments of parents with ID. Crittenden and Bonvillian (1984) found a relation between low maternal IQ and insensitivity among mothers with ID. Lower play involvement, less praise, and more direct commands...
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have also been observed in mothers with ID (Feldman et al. 1986; Peterson et al. 1983). However, these studies used very small samples, very short observations, and comparison groups that were not matched socioeconomically (Dowdney & Skuse 1993), making generalizations and conclusions ambiguous.

Building on the ecological model, researchers have begun seeking to identify contextual factors that impact on the caregiving of parents with ID and the development of their children (Parchomiuk 2014; Wade et al. 2011). Wade et al. (2011) found that social support was directly related to caregiving (i.e., warmth, hostility, engagement, and efficacy), and indirectly related to child wellbeing through caregiving. McGaw, Scully, and Pritchard (2010) found that parental experiences of childhood abuse, neglect and trauma (but not single parenting or lack of social support) constituted a risk factor for inadequate caregiving in parents with ID. Further research found a link between parental ID and child developmental delays in the presence of five or more contextual risk factors (e.g., poverty, poor housing, single parenting, past or present family abuse), and that controlling for the lower socio-economic position of mothers with ID substantially reduced the risk for child developmental delays (Emerson & Brigham 2014).

Research on attachment among children to parents with ID is also remarkably scant. The only such study conducted to date, which used a matched-comparison design, found that a substantial minority (35%) of children to mothers with ID had secure attachment representations (50% in the comparison group; Granqvist et al., 2014). In line with prior research abuse, trauma and maltreatment (ATM) was highly overrepresented among the mothers with ID (Emerson & Brigham 2013; McGaw et al. 2007; McGaw et al. 2010), and rates of disorganized and insecure attachment were elevated only when the mothers with ID had experienced high rates of ATM. Unlike ATM, maternal fluid intelligence was not predictive of child attachment (Granqvist et al., 2014).
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In sum, research on caregiving and children’s development has consistently demonstrated the importance of contextual factors, and this conclusion should certainly be applicable also to mothers with ID and their children. Yet, we know very little about maternal sensitivity among mothers with ID, how it is impacted by contextual factors, and the role it plays in relation to their children’s development.

**The present study**

The general aim of the present study was to examine maternal sensitivity among mothers with ID using a matched comparison design. We asked the following three research questions: First, does maternal sensitivity differ between mothers with and without ID? This question was answered by testing a simple mean difference between groups, as well as by testing whether this difference remained following statistical control of pertinent contextual covariates. Second, do key contextual factors (presence of a partner; social support; history of abuse, trauma, and maltreatment) relate to maternal sensitivity among mothers with (and without) ID? Third, is maternal sensitivity predictive of child development (attachment and intelligence) among children of mothers with (and without) ID? In answering questions 2 and 3, we also examined whether maternal fluid intelligence acted as a statistical confound. Due to the unavailability (or scarcity) of prior research, we did not formulate specific predictions.

**Method**

**Participants**

Mothers with ID were recruited after approval from the Regional Ethical Committee at Uppsala University, Sweden. Twenty-six mothers receiving services from habilitation centers in the central regions of Sweden during the period 2007 to 2011 participated in the study. In Sweden persons with ID have voluntary contact with habilitation centers in order to receive assistance. Professionals at the habilitation centers gave mothers with ID (verbal and written) initial information about the study, and interested mothers were contacted by the research
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group and given further information. Inclusion criteria were a diagnosis of mild intellectual disability (IQ score 55-70 and significant limitations in adaptive functioning); having a 5-8 year old child living together with the mother at least 50% of the time; and both mother and child speaking Swedish. Exclusion criterion was a diagnosis of autism in mother or child. Three of the 26 ID dyads were excluded since they only participated in the first of two visits, leaving 23 dyads with complete data.

The comparison group was recruited in 2010-2011 through a register with addresses of mothers with children born between 2002 and 2005. The comparison group was matched against the maternal ID group regarding residential demographics and child sex and age (±6 months). Demographic information included the residential area’s average income, social allowances, health status, unemployment rate, number of habitants in the area, and proportion of persons with foreign background. Areas in the surroundings of Uppsala that corresponded most closely to the living area of a specific mother with ID were used to select a comparison mother and child, primarily living in a rental apartment. Eligible comparison mothers were given information about the study by postal mail and mothers who did not decline participation by returning a pre-stamped envelope were contacted by phone for further information. One of the 26 comparison group dyads participated only in the first of two visits, leaving 25 dyads with complete data.

Analyses of group differences in demographic data for the participants in the present study have previously been presented (see Granqvist et al., 2014). The only significant difference was a lower percentage of mothers with ID living with a partner (31% vs 81%), which is in line with prior research (Feldman et al. 1997).

Procedure

Data was collected at two different occasions, each lasting two to three hours. The first occasion was a home visit, performed by two members in the research team with extensive
expertise in habilitation care, at which an interview covering background information, social support, and maternal experiences of abuse, trauma and maltreatment (ATM) was completed. The second occasion was a laboratory visit for the mother and child that started with observations of maternal sensitivity, followed by intelligence tests, interviews, and a child attachment representation task. Instructions and questions in the questionnaires, interviews, tests, and observations – which were tested in a pilot study with three women with ID not included in the study sample – were given orally and kept simple and concrete to facilitate participants’ understanding.

Mothers received information about the voluntary premise for participation and that they could terminate participation at any time without any consequences. Information about anonymity and that the collected material would be used only for research purposes was also given. Written consent was obtained and information given for every task included in the study. Questions about ATM were posed with careful attention to signals of any distress. If needed, extra support was offered or actions were taken in cases of difficulties expressed.

Measures

Partner presence. Partner presence was measured as co-habitation with a partner or not (i.e. single mother).

Social support. Social support was assessed using a 30-items instrument covering four aspects of support (availability of general, family, and emotional support, and satisfaction with support). This instrument (Henderson, Byrne & Duncan-Jones, 1981), which was adapted by Crnic et al. (1983) to suit parents, was translated to Swedish and adapted to Swedish standards by Lindberg et al. (1994). A 5-point response scale was used for questions regarding the three aspects of availability (0 persons/not at all to more than 6 persons/much). In the present study we used a 3-point scale for items about satisfaction (1= dissatisfied to
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3=satisfied) instead of the original 5-point scale. To reduce the number of analyzes all answers were standardized and aggregated into a total social support score ($\alpha = .83$).

**Mothers’ experiences of abuse, trauma and maltreatment (ATM).** A semi-structured interview containing 30 specific questions about emotional, physical and sexual abuse, neglect, traumatic loss/separations, and observing serious violence, was used to assess ATM. Standardized probes (e.g., when, where, who, how often) were used if the mother answered affirmatively to any question. The recorded interviews (previously described in Granqvist et al., 2014) were coded by two coders blind to ID status for prevalence (yes/no) as well as frequency (how many times) of ATM, by attachment figures as well as by others. To reduce the number of statistical analyses an aggregated scale for total ATM was used in the present study, constituted by the total frequency sum of ATM by attachment figures and others. The interrater agreement was high ($intraclass r$ for absolute agreement = .86).

**Maternal sensitivity.** To measure sensitivity we observed mother-child interaction during a 20 minutes semi-structured play session that contained four different 5-minute situations. In the first situation (free play with toys), mother and child were given five boxes with toys appropriate for the child’s age and told to play as they would do at home. At the end of the situation the mothers were instructed (using an ear-phone) to tell their children to put the toys back in the boxes. In the second situation (free play without toys), the mother and child were instructed to play freely without toys. During the third situation (cooperation), we equipped the mother and child with an etch-a-sketch and told them to jointly draw either a house or a boat according to a pre-drawn model, using one wheel each. Lastly (competing attention) we gave the mothers a test to complete (Emde et al. 1993) while the child got an overly challenging toy to play with, so as to mimic real-life situations in which mothers must negotiate their attention between the tasks they have at hand and the needs of their children.

Maternal sensitivity was coded by the 1st author (blind to all other data) using
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Ainsworth’s 9-point sensitivity scale (Ainsworth et al. 1974). Modifications were made, since the scale was developed for infants, to adapt maternal sensitivity (awareness of, interpretation of, appropriate reaction and prompt response) to the child’s more developed signals. Interrater agreement was established using an independent coder (the 2nd author), who coded 20 of the dyads (intraclass rs for absolute agreement, .78 - .97). Discrepancies were settled through discussions. To reduce the number of statistical analyses we created an aggregated sensitivity score for each dyad (α=.84) that was used in the primary analyses.

Maternal fluid intelligence. The “block design” subtest from Wechsler Adult Intelligence Scales (WAIS-III; Wechsler 2003) was used to measure maternal intelligence. This test was chosen as it is considered a proxy measure of non-verbal fluid intelligence and relatively unaffected by education (Bugg et al. 2006). To avoid prolonging the second visit and over-burdening participating mothers only the block design subtest was used.

Child intelligence. Child intelligence was measured using the Swedish version of the IQ-screen in Leiter-R (Roid & Miller, 1997). This test is nonverbal and considered especially useful when studying children with potential developmental delays. We used the visual and reasoning batteries, which have been reported to have good test-retest reliabilities (.75 to .90) and validity with WISC-III (Roid & Miller 1997).

Child attachment representations. Attachment security and disorganization were assessed using the adapted Separation Anxiety Test - SAT (Kaplan 1987), a semi-structured interview in which the child is presented with six pictures illustrating parent-child separations with different severity (previously described in Granqvist et al., 2014). Questions are posed about how the illustrated child feels, why, and what the child will do. We used the continuous measure (1-9) of emotional security and a semi-continuous measure of disorganization (D; 0 = no D classification, 1 = secondary D classification, 2 = primary D classification). The
continuous and semi-continuous scores were chosen in order to retain the variance which otherwise would be lost in use of classifications.

**Statistical analyses**

The relatively small study groups limit the statistical power and restrict the use of statistical analyses. For these reasons, our primary analyses were simple tests of mean differences between study groups and bivariate relations among study variables. Bivariate relations were examined within the respective study groups rather than in the total sample, to examine the possibility of differential patterns across groups. Report of significance levels, which are affected by low power in the present study, are complemented with effect sizes.

**Results**

**Preliminary analyses**

There was a significant difference in social support, with mothers with ID ($M = -.26, SD = .68$) reporting lower levels of social support than the comparison group mothers ($M = .16, SD = .46$), $t (48) = -2.58, p < .05, d = .72$, a medium-large effect size (Cohen, 1992).

To address the potentially confounding effects of maternal fluid intelligence we tested whether maternal fluid intelligence was related to the outcome variables in the two study groups. Maternal fluid intelligence was unrelated to sensitivity within both study groups (ID group, $r = -.13$, comparison group, $r = .13$). Similarly, maternal fluid intelligence was unrelated to child intelligence and attachment within both study groups (Granqvist et al., 2014). Subsequent analyses on sensitivity and child development were therefore performed without control for maternal fluid intelligence.
Tests of research questions

Group comparisons on maternal sensitivity. An independent samples t test showed a highly significant difference in total sensitivity, with lower sensitivity among mothers with ID than the comparison group mothers, \( t(45) = -6.05, p < .001, d = 1.78 \), a large effect size (see Table 1 for descriptive statistics). There was however notable variation in sensitivity among mothers with ID, ranging from 2.00 to 5.50 (4.25 to 6.50 in the comparison group).

(Insert Table 1 about here)

To determine whether any of the different sensitivity situations accounted for this group difference we also examined the effect sizes in each of the four sensitivity situations (see Table 1). The effect sizes were large across all four situations, indicating that they all contributed to the large overall group effect on the aggregated sensitivity variable. On average, mothers in the ID group had moderate (4-6) sensitivity scores, and the variation within the ID group was descriptively larger for free play without toys and for cooperation than in the comparison group (see SDs in Table 1).

Finally, an ANCOVA showed that the group difference remained following statistical control of pertinent contextual variables, \( F(1,43) = 15.32, p < .001 \), and that the group effect explained a notable proportion of the variance in sensitivity, \( \eta^2 = .26 \) (\( Adj \ R^2 \) for the full model = .49). Hence irrespective of group differences on the contextual variables, mothers with ID were less sensitive than mothers in the comparison group.

Contextual factors in relation to maternal sensitivity. Pearson correlations were used to study associations between the contextual factors and maternal sensitivity, performed separately within the two study groups (see Table 2). Within the maternal ID group, there was a statistically significant negative association between ATM and maternal sensitivity. In the comparison group, partner presence and social support were significantly positively associated with maternal sensitivity.
Maternal sensitivity in relation to child development. Pearson correlations were also performed to study associations between maternal sensitivity and child development (intelligence and attachment security and disorganization). Within the maternal ID group, maternal sensitivity was trend-significantly ($p = .06$) associated with child disorganization. The effect size was substantial ($r = -.40$), and failure to reach full significance was thus likely due to low statistical power. We therefore conducted post-hoc analyses exploring whether maternal sensitivity in any of the specific sensitivity situations was fully significantly related to disorganization, with Bonferroni corrections used to adjust for multiple testing in these post-hoc analyses (i.e., alpha of .05 divided by 5 sensitivity variables = .01). Low sensitivity in the situation of competing attention was fully and strongly related to higher disorganization ($r = -.60$, $p = .003$), even following Bonferroni correction.

Again, contrasting results were found in the comparison group. Maternal sensitivity was positively related to child intelligence only (Table 2).

**Discussion**

Using a matched comparison-design, mothers with intellectual disabilities (ID) were found to be less sensitive in interacting with their children, and reported less social support, than comparison group mothers without ID. A striking feature of our results is that maternal sensitivity was predicted by and predictive of different outcomes across the two study groups. Maternal experiences of abuse, trauma, and maltreatment (ATM) emerged as key for the insensitivity displayed by some of the mothers with ID. Insensitivity was in turn linked to higher rates of child disorganization, especially in the situation of competing attention. In contrast, living with a partner and having social support appear to be key for the sensitivity displayed by mothers without ID, which was in turn linked to higher child intelligence. Thus, whereas the storyline in the ID group was negative, highlighting risk factors and negative
outcomes, the storyline in the comparison group was positive, highlighting protective factors and positive outcomes. Our findings make intensified work related to prevention and intervention for mothers with ID ever the more imperative.

**Sensitivity among mothers with ID**

Mothers with ID were, as a group, clearly less sensitive ($M=4.3$) than mothers without ID ($M=5.6$). The distributions were however overlapping and the variation among mothers with ID was particularly notable, ranging from insensitive to moderately/inconsistently sensitive. Importantly, Nine out of the 23 mothers with ID (39%) had a mean sensitivity score equal to or higher than the mean score found in a normal population sample with children of similar age (e.g., Grossmann et al., 2002). This serves to further strengthen the conclusion that not all mothers with ID in our study can be considered insensitive, a finding that is in keeping with the general heterogeneity of functioning observed among parents with ID (Booth & Booth 2005; Llewellyn et al. 2003).

Interestingly, whereas the comparison group mothers showed a rather stable pattern of sensitivity, the mothers with ID varied in sensitivity between the situations, handling “play without toys” descriptively better than the other situations, which required more maternal guidance. According to Grusec and Davidov (2010), supporting children’s learning and competence requires guided-learning skills such as organization, communication, and planning. It is possible that mothers with ID are more situation-specific in their sensitivity than mothers in the general population and can better handle situations that do not require structure or guided learning (e.g., Grusec and Davidov 2010). Our results suggest that guided interaction should be a focus in interventions aimed at improving sensitivity and caregiving of mothers with ID, like the video-feedback intervention developed by Hodes et al. (2014).

**Contextual factors and sensitivity among mothers with ID**
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The lower levels of social support reported by mothers with ID replicate recent population-based findings in mothers with and without ID (Hindmarsh et al. 2015). Moreover, the link between maternal experiences of ATM and maternal insensitivity among mothers with ID is in line with previous findings (McGaw et al., 2010). Also, highly elevated rates of ATM in women with ID have now been found in several studies (Granqvist et al., 2014; Horner-Johnson & Drum 2006; Hughes et al. 2011; Hughes et al. 2012). However, very few studies have examined the potentially deleterious effects of ATM on caregiving among parents with ID (McGaw et al. 2007; McGaw et al. 2010), and practitioners seldom refer to this issue (see Alexius & Hollander 2014). In fact, to the best of our knowledge this is the first study examining experiences of ATM in relation to maternal sensitivity among mothers with ID. We therefore stress the importance of the finding that experiences of ATM, unlike variations in maternal fluid intelligence, were related to maternal sensitivity (and child disorganization, see Granqvist et al., 2014). This highlights the importance of preventive interventions minimizing the risk that individuals with ID are exposed to ATM in the first place as well as for identifying and offering interventions to parents with ID who have experienced high levels of ATM.

There was no significant association between partner absence or low levels of social support and maternal insensitivity among the group of mothers with ID, possibly because of power problems. Indeed, studies with larger samples have indicated that social support may have a bearing on parenting for mothers with ID (Aunos et al. 2008; Emerson & Brigham 2013; Feldman et al. 2002; Hindmarsh et al. 2015; Wade et al. 2011).

Maternal sensitivity and child development

To the best of our knowledge, the present study provides the first demonstration of a relation between maternal sensitivity and child attachment in research on parents with ID and their children. This finding has important implications for prevention and intervention
strategies targeting sensitivity among mothers with ID (see Hodes et al. 2004). Although low
statistical power problems rendered the link with total sensitivity marginally significant, post-
hoc analyses showed a highly significant association between sensitivity in the situation of
competing attentional demands and disorganized attachment. Since competing attentional
demands are a central characteristic of real-life situations, it is important that parents can be
made able to manage such situations.

Surprisingly, there was no association between maternal sensitivity and child
attachment security. It could be that given statistical power constraints, relatively extreme
insecurity scores, as more characteristic of disorganization than “organized” insecurity, are
required to get beyond the threshold needed for meaningful co-variation with maternal
sensitivity. It should also be borne in mind that the chief caregiving-related problems of
mothers with ID are likely not stemming from a history of “merely” rejection or inconsistent
responsiveness, which is usually a part of the backgrounds leading to ordinary forms of
maternal insensitivity. Rather, the principal caregiving-related problems of mothers with ID
are likely to stem from ATM-related experiences, which are believed to cause atypical forms
of caregiving (e.g., frightening, frightened, dissociative behaviors) (Hesse & Main 2006).
Thus, measures of atypical caregiving may produce even stronger links to child attachment
and disorganization in ID populations, which should be explored in future research.

Maternal sensitivity was only significantly related to child intelligence in the
comparison group. It may be that higher maternal sensitivity stimulates the child’s cognitive
development (Feldman & Eidelman 2009; Feniger-Schaal & Oppenheim 2013; Stamset et al.
2002), or that it is easier to be sensitive when the child’s cognitive development is normal to
high (Feniger-Schaal & Oppenheim 2013). However, variation in maternal fluid intelligence
did not predict child intelligence in either study group (see Granqvist et al., 2014). Thus, an
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explanation in terms of heritability of intelligence cannot account for the observed relation between child intelligence and maternal sensitivity in the comparison group.

Strengths and limitations

The use of a matched comparison group is a notable strength of this study, minimizing some possible socioeconomic confounds. Moreover, our measurements were comparatively careful in that we used well-validated methods and independent, blinded coders to tap most of our key constructs (i.e., maternal sensitivity, ATM, and child attachment).

The most important limitation of the study is the small sample size, limiting the statistical power and restricting the statistical toolkit. Future research seeking to extend our findings should therefore use larger samples. Indeed, several of our moderate correlations could well turn out to be significant with larger samples. Also, the possibility of using more sophisticated analyses, such as multiple regression analyses and structural equation modelling, would enable testing questions such as whether maternal caregiving has a moderating or mediating effect on the previously reported association between maternal ATM and child attachment (Granqvist et al., 2014).

It is hard to determine the representativeness of our sample of mothers with mild ID for the population of all mothers with ID (for a discussion see Granqvist et al., 2014), partly because of a scarcity of knowledge regarding the proportion of children to parents with ID who live with their parents. However, a national study in Germany found that a majority (60%) of children to parents with ID, of a similar age as in the present study, lived with their parent (Pixa-Kettner, 2008). The cross-sectional design of the study also restricts our possibility to disentangle process direction, and prospective longitudinal studies would therefore be valuable.

Conclusion
The limitations noted above notwithstanding, the present study contributes with valuable knowledge about caregiving in the context of ID, highlighting the importance of attending to the mothers’ history of receiving care to understand their capacity for giving adequate care. Parental experiences of maltreatment must be taken into account, rather than merely ID per se, to get a grasp of when parents with ID are at risk for providing insensitive care. Such experiences are also informative of when preventive interventions and treatment of abused women with ID may be warranted, to promote the health of women with ID and their children alike.

References

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Table 1. Group Comparisons on Maternal Sensitivity.

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<tr>
<th>Maternal sensitivity</th>
<th>ID group</th>
<th>Comp group</th>
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<tr>
<td></td>
<td>M (SD)</td>
<td>M (SD)</td>
<td></td>
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<tr>
<td>Total sensitivity</td>
<td>4.33 (.83)</td>
<td>5.61 (.61)</td>
<td>1.78</td>
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<tr>
<td>Free play with toys</td>
<td>4.27 (.70)</td>
<td>5.68 (.75)</td>
<td>1.95</td>
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<tr>
<td>Free play without toys</td>
<td>4.68 (1.21)</td>
<td>5.68 (.63)</td>
<td>1.09</td>
</tr>
<tr>
<td>Cooperation on etch-a-sketch</td>
<td>4.14 (1.17)</td>
<td>5.60 (.91)</td>
<td>1.40</td>
</tr>
<tr>
<td>Competing attention</td>
<td>4.22 (1.23)</td>
<td>5.48 (1.16)</td>
<td>1.05</td>
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</tbody>
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Table 2. Pearson Correlations for Maternal Sensitivity in Relation to Contextual Factors and Child Development Variables

<table>
<thead>
<tr>
<th>Maternal sensitivity</th>
<th>ID (n=23)</th>
<th>Comparison (n=25)</th>
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<tr>
<td><strong>Contextual factors</strong></td>
<td></td>
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<tr>
<td>Living with a partner</td>
<td>.16</td>
<td>.40*</td>
</tr>
<tr>
<td>Social support</td>
<td>.14</td>
<td>.44*</td>
</tr>
<tr>
<td>ATM</td>
<td>-.43*</td>
<td>-.27</td>
</tr>
<tr>
<td><strong>Child development</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligence</td>
<td>.26</td>
<td>.41*</td>
</tr>
<tr>
<td>Attachment security</td>
<td>.09</td>
<td>.16</td>
</tr>
<tr>
<td>Disorganization</td>
<td>-.40+</td>
<td>-.20</td>
</tr>
</tbody>
</table>

*p < .05; + p < .10