

Parental Socialization of Emotion: Differences in Mothers of Children with and without Intellectual Disability

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Abstract

Children with intellectual disabilities (ID) present developmental deficits in socio-emotional competencies compared to same-aged children with typical development (TD). Parents play a crucial role in fostering the socio-emotional development of their children, yet, few studies have investigated the socialization of emotion by parents of children with ID. In the current study, 34 mothers of children with ID and those with children with TD (40) completed questionnaires and were compared on their socialization of emotion, and on their perceptions of their child's socio-emotional competencies. No differences were found in the socialization of emotion between mothers of children with ID and those of children with TD; however mothers of children with ID were more likely to perceive their children as having fewer socio-emotional competences. Given these findings, programs designed to improve socio-emotional competences could benefit children with ID.

Keywords

Children, Intellectual Disability, Socio-Emotional Competences, Parental Socialization of Emotion

1. Introduction

Although the majority of children with intellectual disability (ID) in Québec are integrated into regular environments in order to foster their social inclusion (Bellefeuille & Labbé, 2016), the parents of these children and the professionals who work with them may be concerned about their social adjustment and

well-being. Hence, there is considerable interest in early intervention to prevent socio-emotional difficulties. Parental support is crucial to children's development. Parents have an important role to play in their children's development on both an intellectual and a socio-emotional level (Grusec & Davidov, 2007). It is essential to know more about parents' practices with respect to the socialization of emotion in order to assist them more effectively in supporting their children with ID.

Various studies have shown that children with ID have difficulties with social competences (Baker, Fenning, Crnic, Baker, & Blacher, 2007) and emotional competences compared to children with typical development (TD) (Abbeduto, Short-Meyerson, Benson, & Dolish, 2004; Alevriadou & Giaouri, 2011; Thirion-Marissiaux & Nader-Grosbois, 2008a, 2008b). Children with ID often lack some of the social skills needed to establish relationships with others and be accepted by their peers (Baker et al., 2007). Compared to children with TD, they interact less with other children and some have a tendency to display behaviors that can be disruptive during group play, such as taking toys from other children and being more aggressive (Guralnick, Neville, Hammond, & Connor, 2007). On the emotional level, they may have difficulty expressing and regulating their own emotions and understanding other people's (Brun & Mellier, 2004). According to Wieland, Green, Ellingsen and Baker (2014), they have difficulty resolving conflicts and considering other people's point of view compared to their typically developing peers. These shortcomings in social and emotional competences may impede their inclusion in society. Personal and environmental factors may influence the children's profiles of socio-emotional competences. Certain factors that could be acted upon should be identified, including parental practices with respect to the socialization of emotion. However, few studies of parental practices related to emotions have been done with parents of children with ID (Jacobs, Mazzone, Simon, & Nader-Grosbois, 2019).

1.1. Parental Socialization of Emotion

Socialization is the process whereby children's skills, behaviors, values, motivations and attitudes are developed to conform to what is appropriate in their environment (Maccoby, 2007). A model designed by Eisenberg et al. (1998a, 1998b) explains the role that parents play in the socialization of emotion with respect to their children. Some researchers maintain that better practices in the parental socialization of emotion (PSE) have a positive impact on children's social and emotional development (Denham, Basset, & Wyatt, 2007; Eisenberg, Fabes, & Murphy, 1996). Three components of PSE are proposed in Eisenberg et al.'s model (1998a, 1998b): parental reactions to their children's emotions, parental discussion of emotions, and parental expression of emotions.

1.2. Parental Reactions to Children's Emotions

To socialize their children to emotions, parents display supportive or non-supportive reactions to their children's emotions. The manner in which

parents react to their children's emotions, particularly negative ones, provides good opportunities for socialization. According to Eisenberg et al. (1998a), parents react with supportive and reassuring behaviors or, conversely, may avoid contact with the child, punish the child or minimize the emotional experience. Few studies have compared the reactions of parents of children with ID and children with TD to their children's emotions. A study by Paczkowski and Baker (2007) showed that mothers of children with ID and mothers of children with TD had similar reactions to their children's negative emotions. In contrast, two other studies showed that the parents of children with ID reported being less supportive about their children's negative emotions (Rodas, Zeedyk, & Baker, 2016) and, in general, had a greater tendency to display non-supportive reactions (Rodas, Chavira, & Baker, 2017) compared to parents of children with TD. The reactions shown by parents to their child's emotions have an impact on the child's socio-emotional development (Coutu, Bouchard, Émard, & Cantin, 2012; Denham et al., 2007), including the regulation of emotions (Eisenberg et al., 1998a).

1.3. Parental Discussion of Emotions

Parents also talk about emotions with their children, to varying degrees. Children who grow up with adults who encourage conversations that mention emotional experiences are more able to communicate their own emotions and understand other people's, thereby making them emotionally and socially competent (Eisenberg et al., 1998a). According to some studies, parents with children with ID had fewer conversations about emotions than parents with children with TD (Baker & Crnic, 2009; Fenning, Baker, & Juvonen, 2011). The discussions that parents have with their children about emotions and regulating them contribute to the children's social and emotional development (Coutu et al., 2012; Eisenberg et al., 1998a).

1.4. Parental Expression of Emotions

Parents also express emotions. The expression of emotions consists of verbal and non-verbal behaviors and can be positive (expressing joy, gratitude, admiration) or negative, such as acting in a threatening manner and expressing anger (Halberstadt, Crisp, & Eaton, 1999). Children learn many things by observing and imitating their parents, and learning emotional behaviors is no exception (Coutu et al., 2012). For example, in families where the parents often express positive emotions, this is associated with comparable expressiveness in the child (Halberstat & Eaton, 2003; Valiente, Eisenberg, Fabes, Shepard, Cumberland, & Lo-soya, 2004) and fosters the development of the child's social competences (Coutu et al., 2012; Valiente et al., 2004). A study of mothers of children with ID and children with TD showed that the mothers of children with ID expressed fewer positive emotions and more negative emotions than mothers of children with TD (Green & Baker, 2011).

1.5. Socio-Emotional Competences

Generally, social competences reflect the skills children use to interact effectively and satisfactorily with the people around them (Rubin, Bukowski, & Parker, 2006). Emotional competences refer to the ability to manage and express one's emotions in a socially acceptable way, in accordance with the situation and culture, and to understand one's own and other people's emotions (Denham et al., 2007). There is a strong correlation between children's emotional competences and social competences (Denham, 2007). As emotional competences foster the development of social competences and vice versa (Denham, 2007; Halberstadt, Denham, & Dunsmore, 2001), Halberstadt et al. (2001) suggested merging these two inseparable concepts and calling them "socio-emotional competences". Based on Yeates et al.'s model (2007) and Eisenberg et al.'s model (1998a), Nader-Grosbois (2014) developed an integrated model that differentiates between three levels of complexity of these competences, namely, those derived from the theory of mind and processing of social information (1), emotional regulation during social interactions (2), and social adjustment as expressed in the quality of social relationships (3) (see also Baurain & Nader-Grosbois, 2013, and Nader-Grosbois & Fiasse, 2011). Two-way links between the competences at these three levels may appear to varying degrees, depending on the populations of children with typical or atypical development.

1.6. Theory of Mind

The theory of mind (ToM) is defined as the ability to form a mental image of other people's thoughts, beliefs, emotions and intentions and predict their behaviors (Bee & Boyd, 2011). From a meta-analysis exploring the development of ToM in children, it was found that desires are understood before the step of understanding false beliefs (Wellman & Liu, 2004), a step that corresponds to the moment children become aware that other people's thoughts may differ from their own (Astington & Edward, 2010). Various studies have shown that, compared to children with TD, children with ID are somewhat delayed with respect to ToM related to understanding the causes and consequences of emotions, and have difficulty understanding beliefs (Abbeduto et al., 2004; Alevriadou & Giaouri, 2011; Giaouri, Alevriadou, & Tsakiridou, 2010; Thirion-Marissiaux & Nader-Grosbois, 2008b, 2008c). Baurain and Nader-Grosbois (2013) established a positive correlation between ToM and emotional regulation, and social adjustment. These authors explained that children, with and without ID, who have a greater understanding of other people's emotions, are more able to respond to an adult's instructions, more patient and more capable of moderating their externalized behavior.

1.7. Emotional Regulation

Emotional regulation refers to the processes by which people govern the emotions they feel, when they feel them and how they experience and express these emotions (Gross, 2002). Some studies comparing children with ID and children

with TD showed that there were significant differences, indicating a deficit in emotional regulation in the former (Berkovits & Baker, 2014; Gerstein, Pedersen y Arbona, Crnic, Ryu, Baker, & Blacher, 2011; Norona & Baker, 2014; Norona & Baker, 2016) while the study by Baurain and Nader-Grosbois (2012) highlighted a developmental delay. Whether there are deficits or developmental delays in the regulation of emotions in children with ID, more work is needed to examine how these specific characteristics in children's emotional regulation contribute to their social adjustment in daily life.

1.8. Social Adjustment

Social adjustment is the way in which children achieve goals that are socially acceptable, desirable and appropriate to their developmental period (Yeates et al., 2007). Some researchers maintain that, compared to children with TD, children with ID present shortcomings in their social adjustment (Mellier & Courbois, 2005; Thirion-Marissiaux & Nader-Grosbois, 2008a, 2008c), in accordance with the diagnostic criteria for ID. Baker and Crnic (2009) and Green and Baker (2011) found that, compared to mothers of children with TD, mothers of children with ID think that their children have significantly fewer social skills. However, other studies (Baurain, Nader-Grosbois, & Dionne, 2013; Malone, 2007) indicated that mothers and teachers do not think that children with ID are less competent in terms of social adjustment than children with TD.

1.9. Current Study

Few studies have examined practices with respect to the socialization of emotion in parents of children with ID and these children's socio-emotional competences. Furthermore, there does not seem to be a consensus when the results of studies comparing families and children with ID and TD are analyzed. This study had two objectives: 1) verify if mothers of children with ID and mothers of children with TD have different parental socialization practices and 2) explore if children with ID and children with TD differ in their socio-emotional competences, as perceived by the mothers.

2. Method

2.1. Participants and Procedure

Thirty-four mothers of children with ID aged 6 to 13 years and 40 mothers of children with TD aged 3 to 6 years participated in this study. Eleven of the 34 children with ID had Down syndrome and 11 did not have any syndrome. The remaining 12 children had other types of syndromes ($n = 9$) or an unspecified syndrome ($n = 3$). The exclusion criteria were to have a child 1) with autism spectrum disorder (ASD), 2) with Williams syndrome, or 3) with Fragile X syndrome.

Mothers of children with TD were recruited via Facebook (information shared and posted in various parents' groups). A poster describing the study contained

a link to the online questionnaires. Thirty-nine children with TD had French as their maternal language and one had English. Mothers of children with ID were also recruited via Facebook and also contacted by letter by different ID rehabilitation centers in Québec, by community organizations across Québec, and by two specialized schools in Montréal. This study was approved by a 13-member committee, the Research Ethics Committee of the Université du Québec à Montréal, and by another 17-member committee, the Joint Research Ethics Committee (CERC DI-TSA) for Québec ID rehabilitation centers.

2.2. Measures

Developmental Age. The Child Development Inventory (Ireton, 1992; French version, Duyme & Capron, 2010) was used to obtain a developmental age in months. The short form of the questionnaire consists of 70 items with Yes/No answers. The items are divided into six development scales: social, self-help, gross motor, fine motor, language, and letters and numbers. The interrater reliability index (parents vs teacher) is .78 and the test-retest reliability coefficient is .97 (Duyme & Capron, 2010).

Parental Reactions to Children's Emotions. The Parental Reactions Toward Positive and Negative Emotions questionnaire (Daffe & Nader-Grosbois, 2009a) contains eight scenarios illustrating the following emotions: anger, sadness, fear and joy. When the scenario depicts the child experiencing a positive emotion, i.e. joy (2 scenarios), the parent must respond in four parental reaction modes, namely socialization, encouragement, reprimand and discomfort. The parent reports each of these modes on a 7-point Likert scale ranging from 1 = *very unlikely* to 7 = *very likely*. For scenarios in which the child experiences negative emotions (anger, sadness and fear), parents are presented with six types of reactions to which they must respond using the same scale. These reactions refer to comfort, encouragement, and help with problem-solving (Supportive Reactions), distress, minimization and punishment (Non-Supportive Reactions). Regarding internal consistency, the Cronbach coefficient is .78 for Non-Supportive Reactions and .81 for Supportive Reactions.

Discussion of Emotions. The Questionnaire of Parent-Child Conversations about Emotions (QPCCE) (Mazzone, Roskam, Mikolajczak, & Nader-Grosbois, 2017) explores the conversations about emotions that parents have with their children in everyday life. Twenty-four items are answered on a Likert scale indicating the frequency of conversations with the child as follows: 0X, 1 – 2X, 3 – 4X, 5 + X, where X means the number of times, or *not applicable*, when the situation did not arise. Cronbach's alpha is .91 and test-retest reliability is $r = .60$ (Mazzone et al., 2017).

Parental Expression of Emotions. The Emotional Expression (EE) scale from the Profile of Emotional Competence questionnaire developed by Brasseur, Grégoire, Bourdu and Mikolajczak (2013) was used to evaluate mothers' emotional expression. The scale contains five items with responses on a 5-point Likert scale ranging from 1 = *Strongly disagree* to 5 = *Strongly agree*. Cronbach

coefficients vary from .60 to .83 for all the scales; specific data for each scale are not available (Brasseur et al., 2013). Also, to rate the expression of emotions, the Communication of Emotion (COMEMO) subscale of the Dimensions of Openness to Emotions (DOE) model (Reicherts, Casellini, Duc, & Genoud, 2007) was used. This subscale consists of seven items rated on a Likert scale; respondents indicate whether the items reflect their affective state *Not at all*, *A little*, *Moderately*, *A lot* or *Extremely*. This subscale has a Cronbach's alpha of .81 (Reicherts et al., 2007).

Theory of Mind. The Theory of Mind Inventory (Hutchins, Prelock, & Bonazinga, 2012; French version, Houssa, Mazzone, & Nader-Grosbois, 2014) is a questionnaire filled out by parents that explores their perception of their child's competences in relation to the theory of mind. This questionnaire consists of 39 items answered on a continuum from *Definitely Not* to *Definitely*. Higher scores reflect greater ToM competences. The French version of the ToMI has a Cronbach's alpha of .94 and test-retest reliability of $r = .86$ (Houssa et al., 2014).

Emotional Regulation. The Emotion Regulation Checklist (Shields & Cicchetti, 1997; French version, Nader-Grosbois & Mazzone, 2015) measures intrapersonal and interpersonal emotional regulation in children from 3 to 12 years. The questionnaire contains 24 items describing behaviors observed in daily life. The frequency of the behavior is scored on a 4-point Likert scale as follows: *Never*, *Sometimes*, *Often* and *Almost always*. Scores are added to produce a score for emotional regulation, a score for emotional dysregulation, and a raw composite score for emotional regulation. In the present study, only the score for emotional regulation (ERC-ER) was used. This checklist has a Cronbach's alpha of .72 and test-retest reliability of .92 (Nader-Grosbois & Mazzone, 2015).

Social Adjustment. The Social Adjustment Scale (Hughes et al., 1997; French version, Comte-Gervais et al., 2008) comprises 50 items designed to explore children's social competences; 25 items relate to ToM and 25 to social skills. For each item, the response is 2 if the behavior is very frequent, 1 if the behavior is relatively frequent, and 0 if it is very rare or non-existent. Internal consistency indices are .77 for items related to ToM and .79 for items related to social skills (Comte-Gervais et al., 2008). In the present study, only the 25 items associated with social skills were used (EASE-SS).

2.3. Analyses

Descriptive analyses, t-tests and a chi-square test were performed to compare the characteristics of mothers and children (gender of children, age of mothers and children, level of education of mothers). To determine if there were any differences between the mothers in their socialization of emotion, one-way ANCOVAs were performed with the children's developmental age as a control variable. The same analyses were done to investigate if mothers of children with ID and mothers of children with TD had different perceptions of their children's socio-emotional competences. Statistical analyses were carried out using SPSS v.25.

3. Results

Table 1 shows the demographic characteristics of the children and mothers. Since the children with ID had a mean developmental age significantly lower than that of the children with TD, developmental age was used as a control variable in most of the analyses.

Table 2 presents the means obtained for the two groups of mothers for the reactions they had to their children's emotions, the conversations about emotions they had with their children, and their expression of their own emotions. One-way ANCOVAs, with *developmental age* as a control variable, showed that there were no significant differences in the socialization of emotions between mothers of children with ID and mothers of children with TD for all three aspects: reactions to emotions, frequency of discussion of emotions, and expression of emotions.

Table 3 shows one-way ANCOVAs for perceptions of socio-emotional competences with developmental age as a co-variable. Compared to mothers of

Table 1. Demographic characteristics by group (ID, TD).

	ID n = 34 M(SD)	TD n = 40 M(SD)	<i>t</i> or χ^2
Children's chronological age ^a	10.22 (2.27)	4.84 (1.08)	<i>t</i> = 13.30**
Children's developmental age ^a	3.74 (1.33)	5.27 (.60)	<i>t</i> = -6.57**
Child's sex (% female)	50.00	52.50	χ^2 = 0.83
Mother's age	39.97 (5.91)	37.18 (3.82)	<i>t</i> = 2.37*
Mother's education	4.24 (1.58)	6.05 (1.36)	<i>t</i> = -5.25**

Note. Education levels: 1 = high school diploma, 2 = vocational certificate, 3 = vocational diploma, 4 = college diploma, 5 = university certificate, 6 = bachelor's degree, 7 = master's degree, and 8 = PhD. ^aConverted into years. **p* < .05, ***p* < .01.

Table 2. ANOVA results for mothers' socialization of emotion.

		ID (<i>n</i> = 34 ^a) M(SD)	TD (<i>n</i> = 40) M(SD)	<i>p</i>	η^2
Reactions	NSRNE	2.56 (.65)	2.77 (.63)	.914	<.001
	SRNE	5.30 (.91)	5.43 (.56)	.840	.001
	NSRPE	3.07 (1.42)	3.38 (1.24)	.627	.003
	SRPE	5.06 (.89)	5.29 (.62)	.965	<.001
Discussion	QPCCE	2.54 (.50)	2.56 (.34)	.423	.009
Expression	EE	3.12 (.66)	3.24 (.70)	.954	<.001
	EMOCOM	3.11 (.77)	3.31 (.78)	.126	<.033

Note. With developmental age controlled for ^aExcept for QPCCE, where *n* = 33. NSRNE = Non-Supportive Reactions to Negative Emotion, SRNE = Supportive Reactions to Negative Emotion, NSRPE = Non-Supportive Reactions to Positive Emotion, SRPE = Supportive Reactions to Positive Emotion, QPCCE = Questionnaire of Parent-Child Conversations about Emotions, EE = Emotional Expression, EMOCOM = Emotional Communication.

Table 3. ANOVA results for perceived socio-emotional competences.

	ID (n = 34) M (SD)	TD (n = 40) M (SD)	<i>p</i>	η^2
ToMI	48.06 (23.67)	78.67 (12.42)	.023*	.071
EASE-SS	28.71 (10.47)	43.45 (4.50)	<.001**	.171
ERC-ER	24.79 (3.88)	27.95 (2.23)	.098	.038

Note. With developmental age controlled for ToMI = Theory of Mind Inventory; EASE-SS = Social Adjustment Scale-Social Skills; ERC-ER = Emotion Regulation Checklist-Emotion Regulation scale. * $p < .05$, ** $p < .001$.

children with TD, mothers of children with ID thought that their children presented significantly fewer competences associated with theory of mind (ToMI-total) and significantly fewer social skills (EASE-SS). There were no significant differences in the mothers' perceptions of their children's emotional regulation (ERC-ER).

4. Discussion

The first objective of this study was to examine if, in accordance with the concept of parental socialization of emotion, mothers of children with ID differed from mothers of children with TD. No such difference was found according to the participants' reports. Concerning reactions to their children's emotions, mothers of children with ID and mothers of children with TD reported having similar supportive and non-supportive reactions to their children's positive and negative emotions. These results partially agree with those of Paczkowski and Baker (2007), who did not find any difference between mothers of children with developmental delay and mothers of children with TD in the way they reacted to negative emotions. In the present study, developmental age was used as a control variable because there was a significant difference in that regard. However, even when not controlling for this variable, no significant difference was observed.

Although using the same measure as Paczkowski and Baker (2007), namely the Coping with Children's Negative Emotions Scale, Rodas et al. (2016) got different results. The parents of children with ID reported having more non-supportive reactions to their children's negative emotions than the parents of children with TD. These authors hypothesized that the former group is often confronted with the difficulties these children have in regulating their emotions, and this could lead to these parents having less supportive practices. In our view, the opposite hypothesis could also explain why mothers of children with ID reported similar reactions to other mothers. In fact, the mothers of children with ID in our sample did not think, more than the mothers of children with TD, that their children had difficulties regulating their emotions. Thus, since the mothers of children with ID did not have to cope with difficulties related to the regulation of emotions more than the mothers of children with TD, it is possible that they reacted as supportively to their child's negative emotions as the mothers of

children with TD. On the other hand, it is also possible that mothers with children with ID in our study had received assistance or been made aware of the importance of supporting their children with regard to their social and emotional competences.

Concerning the other mechanism underlying the concept of parental socialization of emotion (discussion of emotions, according to Eisenberg et al.'s model (1998a)), the results indicated that the mothers of children with ID and mothers of children with TD had a comparable frequency of conversations about emotions. To our knowledge, this is the first study to not report a difference in the frequency of conversations about emotions between parents of children with ID and parents of children with TD. Other studies showed that parents of children with ID had fewer conversations about emotions than parents of children with TD (see Baker & Crnic, 2009; Daffe & Nader-Grosbois, 2009b; Fenning, et al., 2011). In these studies, except for the one by Daffe and Nader-Grosbois (2009b), the frequency of conversations or topics related to emotions was identified from actual parent-child conversations. In the present study, the questionnaire used, the QPCCE, is a self-report measure for which mothers were asked to recall the frequency of various conversations related to emotions that they had had with their child in the preceding two weeks. It is possible that this type of questionnaire had an impact on our results. It would be interesting to see if the results were the same if the conversations were analyzed with measures comparable to the other studies. It was also interesting to discover that there were no differences between the two groups of mothers. Since most of the studies reported data from several years and in the same direction as discussed previously, more attention may be paid to emotions today and the mothers of children with and without ID may be more sensitized to this aspect.

The same observation applies to the parental expression of emotions. No difference was found between what was reported by the mothers of children with ID and mothers of children with TD. It is conceivable that in the present study the mothers of children with ID showed resilience and were already past the stage of mourning for the idealized child; if so, their emotional expressions during that period may not have been too negatively affected by learning of the diagnosis. However, the results obtained here are not consistent with those of Green and Baker (2011), who observed that the mothers of children with ID, aged 5 to 9 years, expressed fewer positive and more negative emotions than the mothers of children with TD, also aged 5 to 9. On the other hand, it is important to note that the measure for the expression of emotions used in the current study differed from that used in theirs. Their results were derived from observations made at home during interactions between parents and children, whereas in our study the expression of emotions was evaluated with two self-report subscales. In addition, the results obtained in our study were not associated with the emotions expressed to their children but focused on their expression of emotions generally in their lives. We can hypothesize that the way they express their emotions in their daily lives influences the interactions they have with their children, but it

would still have been interesting to compare the mothers' expression of emotions that they show specifically in their child's presence. Once again, it is interesting that we did not observe any differences between our two groups of mothers. Since to our knowledge only one other study has been done on the subject, the mothers may express themselves in much the same way, regardless of whether their child has an intellectual disability or not.

The study by Kopp, Baker and Brown (1992) could help to explain why the mothers of children with ID did not differ in their socialization of emotion from the mothers of children with TD in our study. These researchers questioned parents and observed that the parents of children with and without ID reported attaching the same importance to making their children aware of social competences and giving them the same learning opportunities. However, the parents of children with ID were responsible for transmitting many skills, not just in the social domain, to their children, compared to the parents of children with TD. Kopp et al. (1992) suggested that even if they did not differ from each other in their conception of the transmission of social skills, parents with children with ID may not give the same priority to teaching social skills as other parents because the former have a larger number of other skills to transmit.

The second objective of this study was to compare the socio-emotional competences of children with ID and children with TD. These competences were measured based on ToM, social adjustment and emotional regulation. Our results were not identical. Children with ID had significantly inferior ToM competences than children with TD. Our results reflect those obtained by other studies (Abbeduto et al., 2004; Alevriadou & Giaouri, 2011; Giaouri, Alevriadou, & Tsakiridou, 2010; Thirion-Marissiaux & Nader-Grosbois, 2008b, 2008c).

Concerning social adjustment, even when controlling for developmental age, children with ID lagged behind what was reported for children with TD. The results confirmed those of other authors suggesting that children with ID have social adjustment difficulties (Barasnikov & Lejeune, 2018; Thirion-Marissiaux & Nader-Grosbois, 2008a, 2008c) and that their mothers perceive them as having a deficit in that regard compared to children with TD (Baker & Crnic, 2009; Berkovits & Baker, 2014; Fenning et al., 2011; Green & Baker, 2011; Murphy, 2017). Our results are not so surprising when we look at the definition of ID. In fact, if the social domain, one of the three domains of adaptive functioning, has a deficit, it can characterize the intellectual disability (Schalock et al., 2010).

With respect to emotional regulation, the results do not suggest any significant difference between children with ID and children with TD. These results are consistent with those of Baurain and Nader-Grosbois (2012) but contrary to others (Berkovits & Baker, 2014; Gerstein et al., 2011; Norona & Baker, 2014; Norona & Baker, 2016). The fact that the children in these two groups did not differ from each other with respect to emotional regulation could, as suggested by Baurain and Nader-Grosbois (2012), be explained as follows: children with ID learn to regulate their emotions in a similar way to children with TD, except that they do it more slowly. Since the studies cited previously compared children

with ID and children with TD with the same chronological age, it is not surprising, as posited by [Baurain and Nader-Grosbois \(2012\)](#), that they were significantly different. In the present study, although we controlled for developmental age in our analyses, we initially compared children with ID who were older (6 to 13 years) than those with TD (3 to 6 years), which could explain why we did not observe any difference in the regulation of their emotions. Also, since the children with ID were older, they could have had support until now from parents or educators with regulating emotions.

Finally, consistent with [Green and Baker's \(2011\)](#) suggestion concerning the expression of emotions in parents of children with ID, these children may need the positive expression of emotions to be more exaggerated and overt so they understand it better and can benefit from it. This suggestion is particularly relevant to the results of our study since we observed a smaller but significant difference in ToM in the children with ID. Thus, even if mothers of children with ID did not differ from mothers of children with TD in their socialization of emotion, children with ID could well benefit from emphasizing these practices so that they develop their socio-emotional competences more effectively.

4.1. Limitations and Future Directions

To ensure that our results would be statistically significant, a power analysis was performed using the G Power software. This analysis indicated that the power of our results should be very high (above 0.9). Given that our actual sample size was lower than our anticipated sample size, it would be interesting to obtain a bigger sample in a future study. Also, although the children with ID presented more behavior problems than the children with TD, our study did not control for this variable. This may have affected the perception of the mothers of children with ID of their children's socio-emotional competences. The measuring instruments that we used may also have influenced our results. If, for example, direct observation measures had been used rather than self-report questionnaires, the results may not have been the same. Furthermore, whether or not the mothers of children with ID had other children was not taken into account in this study. In future studies, it would be germane to examine if these mothers interact in the same way, whether their children have an intellectual disability or not. In the same vein, it would be interesting to observe if having siblings or not influences the socio-emotional competences of children with ID. It could also be interesting to conduct a longitudinal study to explore the development over time of the socio-emotional competences of children with and without ID. Finally, it would be germane to include fathers in a future study on the socialization of emotion to see if they differ from mothers and if there is a difference between fathers of children with and without ID.

4.2. Clinical Implications

Since the results of this study suggest that children with ID experience delays in developing socio-emotional competences compared to children with TD, pro-

grams aimed at improving these competences could benefit them. Some programs already exist and have had success with children with ID (e.g. Vis-à-Vis program of Glaser, Lothe, Chabloz, Dukes, Pasca, Redoute, & Eliez, 2012; Kids in Transition to School program of Pears, Fischer, Kim, Bruce, Healy, & Yoergler, 2013). Other studies have also shown that different programs improve the socio-emotional competences of these children (e.g. Adibsereshki, Abdolazadeh, Karmilo, & Hasanzadeh, 2014; Jacobs, Léonard, Nader-Grosbois, Houssa, & Mazzone, 2016). Furthermore, as mentioned above and as suggested by Green and Baker (2011), children with ID would certainly benefit from exaggeration or emphasis when their parents converse, express emotions or react supportively to their children. Parents could be made aware of this need by the professionals who work with them with the aim of encouraging and supporting these “accentuated practices” and emphasizing their potentially positive effects on their children’s socio-emotional competences.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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