Children of Mothers with Intellectual Disability: Stigma, Mother–Child Relationship and Self-esteem

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Background We investigated mother–child relationships and self-esteem of typical children of mothers with intellectual disability.
Methods Eighteen girls and 18 boys from various ethnic groups were administered questionnaires to assess: (a) attachment style; (b) caregiver style; (c) perception of maternal stigma; and (d) self-esteem. The children were also asked to list the identities or roles that they play in life.
Results Results suggested that: (a) the relationship between the child's perception of stigma and attachment to the mother is mediated by the warmth of the mother's caregiving style; and (b) if the child has an avoidant or anxious/ambivalent attachment to the mother, self-esteem tends to be lower. Furthermore, multiple identities contribute to positive self-esteem among these children.
Conclusions Results are discussed in relation to the model presented and the consistency of the findings with attachment theory.

Introduction

In the past 15 years, a substantial amount of research has investigated children of parents with psychiatric impairment. Some of these studies have compared children who adjust well to the parent's psychiatric impairment with those who do not (e.g. Feldman *et al.* 1987; Lewis *et al.* 1988), and others have considered how to enhance children's resiliency and promote psychological competence (e.g. Anthony & Cohler 1987; Lewis *et al.* 1988). Little research has been conducted on the children of parents with intellectual disabilities. This research generally focuses on influences on the child's cognitive or language development (e.g. Slater 1986; Feldman *et al.* 1993) or child behavioural problems associated with the mother's diagnosis (Feldman 1986; Feldman & Walton-Allen 1997). In many cases, the children appear to overcome, manage or rise above the potentially stigmatizing effects of the mother's diagnosis (Ronai 1997; Booth & Booth 2000). An understudied area is the view of the mother through the eyes of the child. There appears to be little published research that address the way children of parents with intellectual disability perceive their parents and how those perceptions might influence the child's relationship with the parent or the child's sense of well-being. The current research assessed the child's perceptions of the mother–child relationship and

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self-esteem. It also explored child identity as a mechanism that may offset potentially adverse effects of maternal intellectual disabilities.

Children of parents with intellectual disabilities

Early eugenics research on people with intellectual disabilities focused on the genetic and social consequences of allowing persons with intellectual disabilities to have children (Wolfensberger 1975). This research contributed to the removal of people with intellectual disabilities from the community and their placement in institutions. With the advent of de-institutionalization, women with intellectual disabilities returned to the community, often without the skills necessary to socialize themselves or their children adequately (Wolfensberger 1975; Holburn *et al.* 2001). Additionally, the extended families and children of mothers with intellectual disabilities were often the subject of discriminatory and stigmatizing practices (Edgerton 1967; Hayman 1990). With the assistance of community-based social service agencies, mothers with intellectual disabilities attempted to perform parental functions and raise families within the community (Budd & Greenspan 1985). Research interests slowly became more focused on the children of mothers with intellectual disabilities (Heber *et al.* 1972; Greenspan & Budd 1986; Martin *et al.* 1990; Espe-Scherwindt & Crable 1993).

A parent's cognitive limitation has long been recognized as a risk factor for child abuse and neglect (Sheridan 1956; Seagull & Scheurer 1986; Feldman & Walton-Allen 1997). Studies examining the relationship between mothers' cognitive limitations and the children's development tend to focus on the mother's ability to teach, care for and discipline her child. This research often measures the mother's functioning as a predictor of the child's IQ and developmental delays (Mickelson 1949; Whitman & Accardo 1990). According to Greenspan & Budd (1986), the most salient characteristic of children of mothers with intellectual disabilities is that they are 'at risk' for delinquency, abuse, developmental delays and (unspecified) poor social outcomes. Children of parents with intellectual disabilities do have a high rate of removal from the family of origin (Borgman 1969; Hertz 1979; Hayman 1990), are more often victims of abuse when the child's IQ is higher than the mother's IQ (Whitman & Accardo 1990; Ronai 1997; Denfeld 1998), have a greater prevalence of cognitive delays and may have many behavioural problems, particularly if the child has no cognitive disabilities (Greenspan & Budd 1986). On the brighter side, as pointed out by Booth & Booth (1997), as a result of certain disadvantages, many children of parents with intellectual disabilities have developed a resilience to hardship and disappointment.

However, only a few studies have examined the emotional outcomes among these children (e.g. Nichols 1989; Booth & Booth 1997; Feldman & Walton-Allen 1997), and we found only one that focused on children of typical parents with intellectual disabilities (O'Neil 1985). None was found that quantitatively assessed interpersonal aspects of the mother–child relationship such as attachment, caregiving or possible coping mechanisms of children of mothers with intellectual disabilities.

Nichols (1989) examined children's self-esteem to determine the psychological effects of parenting by mothers with intellectual disabilities. Self-esteem was seen as a barometer of the emotional climate of home, reflecting the child's perception of self-value, the worth of life, and expectations about goals and future relationships. In this exploratory study of four children, all were found to have psychological problems, such as anxiety, depression and feelings of rejection. However, they all scored within the normal range on

two different self-esteem inventories, suggesting that self-esteem was maintained despite their mothers' disabilities.

Factors that threaten the mother–child relationship, and subsequently the child's self-esteem were discussed in an ethnographic account of life as the child of a mother with intellectual disabilities (Ronai 1997). In this article, the author describes the way her mother loved her, played with her and protected her, but she also allowed 'bad' things to happen to her. Ronai's poignant story reveals how she had to negotiate competing experiences and feelings to maintain a clear perspective of herself as the daughter of a mother with intellectual disabilities. The following passage shows her ambivalence towards her mother:

> I must face the reality that I am unable to love her again in the intense, unbridled way I did as a child. But she carried me in her womb and would not abort me when grandmother begged. And she often conspired to save me from Frank [her father]. But she also beat me and delivered me to Frank for sexual abuse. She was strong and weak in the strangest ways. Yet, she was my only stability growing up, the only thing that was with me consistently over the years (p. 430).

In another account, Denfeld (1998) describes the life of Sarah, whose parents and brother have intellectual disabilities. According to Sarah's teachers, she is 'bright'. However, she exhibits many behavioural problems at home and often models the developmentally delayed speech of her mother. Sarah is living in a world where all members of her immediate family have intellectual disabilities, with the exception of a grandmother, who visits often. In interactions with social service providers and within the family, Sarah is often overlooked because she is 'normal'.

Conditions that may affect the child's self-esteem

Stigma

Atypical personal characteristics and behaviours are often stigmatizing. For example, people with disabilities have been stigmatized by their disabilities and hence discriminated against by other members of society. In the last 25 years, the stigma of having a disability has become somewhat lessened owing, in part, to the growth of the disability advocacy movement. In addition, federal laws and statutes, such as The Americans with Disabilities Act in 1990 in the US, proscribe discrimination against people with disabilities. Nevertheless, feelings of shame and stigma associated with having a family member with disability, especially intellectual disability, cannot be legislated away.

Children often feel stigmatized by certain characteristics and behaviours of their parents, particularly those that are noticeably different from other parents. For example, children of immigrants may feel ashamed because their parents do not speak the language of their new country well. They may feel stigmatized because their parents conspicuously practice customs of the old country and wish that their parents would shed such practices. Likewise, children of alcoholic parents feel stigmatized by the parents' drinking and the behaviours associated with it. Part of the child's feeling of stigma may include the fear that the parent's condition or characteristics may 'rub off' on him/her, or that others might perceive the child as associated with or equivalent to the stigmatizing qualities of the parent.

The child of a mother with intellectual disability may also feel the stigma of the mother's condition. This stigmatization may be, especially pronounced if the child without any intellectual disability. The mother might respond to her child's needs in an atypical manner, which tends to become especially troublesome if the child is 'smarter' than the mother (Whitman & Accardo 1990). The child may act out, react to or interact with the mother in a manner that reflects the emotional turmoil created by this perception. An ultimate consequence is that the child may have less positive feelings about him/herself.

Mother–child relationship

It is well established that early interactions between parents and children form the basis of their relationship (Bowlby 1969, 1973, 1980; Ainsworth *et al.* 1978). During the course of the first year of life, the child develops an attachment to his or her caregivers, usually the mother or father. The strength and quality of this attachment is dependent on the quality of the interactions between the child and parents and the way the parents satisfy the child's needs. Thus, attachment may be seen as an outcome of the early parent–child relationship. Three distinct patterns of attachment, secure, anxious/avoidant and ambivalent, were identified by Ainsworth *et al.* (1978) from their observations of infants with their caretakers. These attachment styles, consistent with Bowlby's work on attachment theory, were related to differences in caregiver warmth and responsiveness.

The influence of attachment appears to extend beyond the mother–child relationship. Researchers from many developmental perspectives agree that affective events during childhood, particularly within child–caretaker relationships, strongly influence the nature and the quality of an individual's adulthood relationships (Bowlby 1979; Maccoby 1980; Main *et al.* 1985; Collins & Read 1990). More recent research has investigated the degree to which early mother–child relationships influence the child's beliefs about the self and social world, and how these beliefs guide relationships into adulthood. For example, Hazan & Shaver (1987) have used the framework of attachment theory to examine the association between early parent–child interactions and adult-love relationships.

Similarly, Collins & Read (1990) examined how adult attachment styles are related to the ways in which one represents oneself, others and romantic relationships. They found that adults with a more secure attachment style tended to have more positive views about their social world and about human nature in general. Conversely, avoidant and anxious adults had more negative and mistrusting views of others. Additionally, when the caregiver's parenting behaviour was perceived as warm and not rejecting, participants were more likely to feel that they could depend on others and were less likely to be anxious about being abandoned or unloved. Consistent with attachment theory, Collins & Read (1990), found that memories about child–caretaker relationships were related to feelings of security in adulthood.

Child adjustment and identity negotiation

It is possible that children of mothers with intellectual disabilities adjust and maintain high self-esteem through a hypothesized social-psychological process called identity negotiation. Deaux & Ethier (1998) conceptualized the notion of identity negotiation as a

continual effort to maintain existing identities while adapting to changing circumstances. Hypothetically, an individual alters the identity as a response to threat; in this way, people actively define self and communicate their identity to others. Identity negotiation involves the addition, deletion, or a change in the existing identities. It consists of either identity negation or identity enhancement. For example, children who negate their identity as son or daughter may choose to eliminate, deny or decrease the importance of that identity. Identity enhancement is intended to strengthen the existing identity or link it to a new context. Accordingly, the child may enhance other identities to compensate for or dissociate from a problematic 'son' or 'daughter' identity.

Many studies have shown that the addition of identities can act as a buffer against certain illnesses and psychological distress (Linville 1985; Thoits 1988). Multiple identities might compensate for a problematic identity and minimize its effect. For example, Linville (1985) conducted two experiments to develop and test a model relating complexity of self-representation to affective and evaluative responses. In one experiment, she hypothesized that the less complex a person's cognitive representation of the self, the more extreme will be the person's changes in affect and appraisal (less self-complexity entailed representing the self in terms of fewer cognitive self-aspects and maintaining fewer distinctions among self-aspects). As hypothesized, following failure, those with less self-complexity experienced a greater drop in affect and in self-evaluation. Following success, those with less self-complexity experienced a greater increase in affect and an increase in self-evaluation. In the second experiment, Linville also confirmed her hypotheses that individuals with less self-complexity would experience more extreme affective swings (in both positive and negative directions), and greater affective variability over a period of time. Linville (1987) has also examined self-complexity as a buffer against stress-related illness and depression. These latter findings suggest that vulnerability to stress-related depression and illness might be owing, in part, to differences in cognitive representations of self.

Similarly, Thoits (1988) demonstrated that individuals who possessed numerous identities reported significantly less psychological distress. Holding background factors (e.g. age, sex, socioeconomic status and education) constant, identity accumulation significantly reduced stress. The more identities lost from time 1 to 2, the greater the mean distress at time 2. These findings also suggest that multiple identity involvement does not necessarily lead to role strain or role conflict.

Having numerous identities may function as a protective self-system, which might be the case with Sarah (Denfeld 1998) and Carol Ronai (Ronai 1997) discussed earlier. Steele (1988) hypothesized that self-protective systems mediate responses to threat. Accordingly, individuals cope with one kind of self-threat by affirming another aspect of the self. In an experimental study, he demonstrated that negative name-calling produced more helping behaviour than a neutral or positive name-calling condition. This finding suggests that when one aspect of the self is threatened, another aspect of the self is affirmed to preserve integrity. Thus, self-affirmation and ultimately positive self-esteem may be the successful outcome of the process of identity negotiation.

Hypotheses

1 *Perception of stigma reduces strength of attachment to mother.* The child may feel stigmatized by the mother's unusual characteristics, behaviour, or condition, and therefore feel less securely attached to the mother.
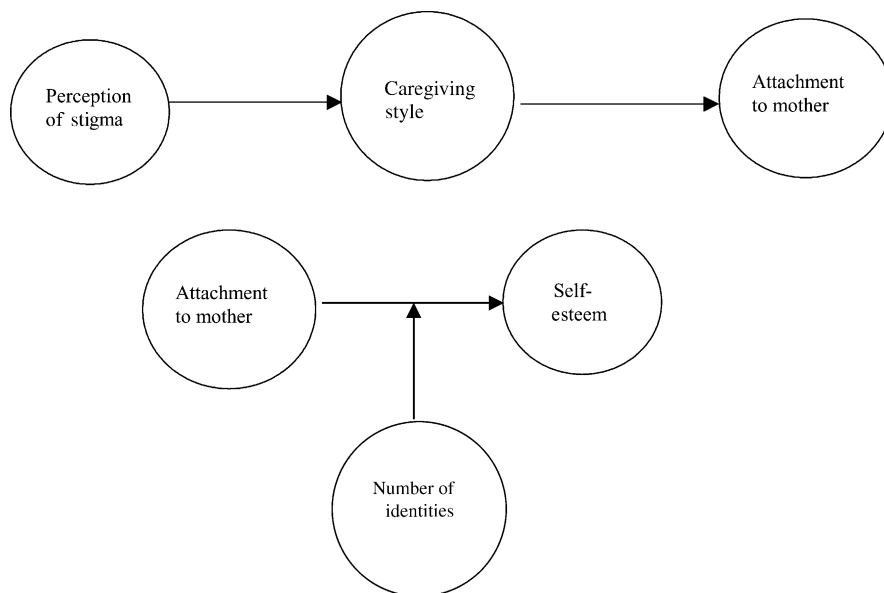
Figure 1 Hypothesized relationships among variables.

2 *Maternal caregiving style mediates the relationship between perception of stigma and strength of attachment.* Specifically, we predicted that less stigma would be associated with perceptions of the mother as a warmer caregiver, which in turn, would make the child feel more securely attached to the mother.

3 *Attachment is related to the child's self-esteem.* One way in which children establish positive self-esteem is through positive interactions with the mother. A secure attachment with the mother should have a positive influence on child's self-esteem.

4 *The number of identities that a child claims will moderate the relationship between attachment and self-esteem.* More specifically, children who have less secure attachment to the mother will have more identities, a relationship that functions to offset the damage to self-esteem created by the by the identity as son or daughter of a mother with intellectual disabilities. Further, it is proposed that more identities will be associated with higher self-esteem.

The hypothesized relationships are illustrated in the model presented in Figure 1 (see Baron & Kenny (1986) for a discussion of the differences between mediating and moderating variables).

Method

Sample

Table 1 contains the ranges, mean, SD and percentages of participant characteristics. The sample was drawn from various agencies located throughout New York State that provide services to mothers with intellectual disabilities. The criteria for inclusion were: (a) the mother be identified by the agency as having intellectual disability; (b) the child live with the mother; (c) the mother be the primary caregiver; and (d) the child should be without intellectual disability. According to the social service agencies, none of the

Table 1 Demographic characteristics of participants

Characteristic (N = 36)	Range	Mean	SD	%
Age (years)	9–17	13	2.35	
Gender				
Boys				50
Girls				50
Ethnicity[a]				
Caucasian or White				53
Italian-American				11
African-American				28
Puerto Rican				3
American-Indian				3
Mixed heritage				3

[a]Self-reported ethnic group categorization.

children were receiving any type of remedial school services. One child was in a gifted and talented educational program. All of the mothers were receiving agency-coordinated services such as parenting skills, counselling and vocational training, and all families received public financial assistance support, such as aid to families with dependent children. This means that all families were at or below the 'poverty line' for the US families.

Thirty-six children and adolescents of mothers with intellectual disabilities participated in the study. There was equal representation boys and girls of ages ranging from 9 to 17 years. Participants identified themselves as Caucasian or White, Italian-American, African-American, Puerto Rican, American-Indian and mixed heritage. No other demographic data are available.

Measures and procedure

Each participant took part in an interview lasting approximately 45 min in which the first or second author instructed the child about form completion. Prior to the interview, the investigator discussed the task with the child and mother, then secured written consent from the mother and assent from the child. The mother was asked to read along as the investigator read the consent form to her. The process was then repeated with the child in a separate session. Only the child and the interviewer were present during the interview (the mother was not present). The child was informed that she/he did not have to answer any questions with which she/he was not comfortable, and could stop the interview at any time. Participants completed a battery of measures to assess self-esteem, attachment style, perception of stigma and caregiver style. These participants were all typically developing children who were all able to read. Few of them had any problem completing the measures. The few cases in which a participant needed assistance in reading the questions, the interviewer read those aloud, explaining any part that was not understood. Participants also listed the identities or roles that they play in life and provided descriptions of those identities or roles. The interviewer presented measures in the order listed above and remained throughout the session to answer questions and assist with instructions for completing forms. When the interview was finished, both the mother and the participant were de-briefed, and participants were paid $10.

Child's perception of maternal stigma
To ascertain the degree to which the child felt that the mother was stigmatized, a six-item questionnaire was administered. The questions were created based on traditional literature on stigma, which suggests that the manifestation of stigma is most evident in social interactions (Goffman 1963; Sabsay & Platt 1985; Dudley 1997). This questionnaire, developed by the first and third authors, assesses the extent to which the child goes on public outings with the mother and the extent to which the child feels comfortable having friends around the mother. Each item has three anchor points: (0) a lot; (1) sometimes; and (2) never. A sample item is 'How comfortable are you if your friends talk to your mother?' Answers were summed to create a single scaled score representing degree of stigmatization. Possible scores on this instrument range from 0 to 12, with higher scores indicating perceptions of greater stigmatization. Cronbach's alpha in this sample for the stigma items was 0.70. The data are normally distributed in this sample with a Kolmogorov–Smirnov d score $= 0.202$ (<0.15). No test–retest reliabilities are available for this measure at this time owing to the limited access to the study participants.

Attachment to mother
Attachment style was assessed with Hazan & Shaver's (1987) attachment scale. The scale was conceptualized as the attachment between the mother and child, although Hazan & Shaver used 'significant other' as the referent. Shaver & Hazan (1993) reported multiple studies in which the proportions of the three patterns of adult attachment (secure, anxious/ avoidant and ambivalent) were found to be roughly equivalent to those found in children as reported by Ainsworth *et al.* (1978) and other investigators. In addition, there was evidence of construct validity based on comparisons with descriptions from childhood and other pertinent indicators in the studies reported by Shaver and Hazan (1993).

We changed the referent to 'mother' for this study. The attachment scale is an 18-item, self-report measure consisting of three subscales, each with six items. The three subscales assess the presence of (a) secure attachment, (b) avoidant attachment, or (c) anxious/ ambivalent attachment. Participants were asked to rate the extent to which each statement described their feelings on a scale ranging from 1 (not at all characteristic) to 5 (very characteristic). Sample items are, 'I find it relatively easy to get close to my mother' (secure attachment); 'I find it difficult trusting my mother' (avoidant attachment); and 'I find that my mother does not know how to get as close to me as I would like' (anxious/ambivalent attachment). On each subscale, possible scores ranged from 6 to 30, with higher scores indicating greater prevalence of a particular style. Respective Cronbach's alpha of 0.75, 0.72 and 0.69 for secure, avoidant and anxious/ambivalent items, respectively, in this sample, were all reasonable.

Quality of maternal caregiving
The child's perception of the quality of the mother's caregiving was assessed using Hazan & Shaver's (personal communication) descriptions of the Parental Caregiving Style Questionnaire, which were presented in Collins and Read 1990). This protocol requires participants to read three paragraphs portraying three styles of caregiving. Neither Hazan & Shaver (1987) nor Collins & Read (1990) report psychometric properties of this questionnaire.

We deconstructed the paragraphs to form 13 questionnaire items depicting the three caregiving styles consistent with the original protocol: (a) warm/responsive, five items;

(b) cold/rejecting, four items; and (c) ambivalent/inconsistent four items. Respondents rate the extent to which each statement describes their mother's caregiving on a 5-point scale ranging from 1 (not true at all) to 5 (completely true). Sample items are 'My mother is a warm, caring person' (warm/responsive); 'My mother is cold and distant' (cold/rejecting); and 'My mother is sometimes nice and sometimes not' (ambivalent/inconsistent). The warm caregiving subscale score possibilities range from 5 to 25, while both cold caregiving and ambivalent caregiving subscale score possibilities range from 4 to 20. Higher scores indicate greater degree of a given caregiving style. Respective Cronbach's alpha of 0.65, 0.69 and 0.63 for warm, cold and ambivalent subscales were moderate.

List of identities

To garner a list of identities by which children define themselves, we asked each child to list all of the identities or roles that were important to him or her. If a child needed clarification of the task, the investigator mentioned a few of their own roles in life such as 'wife', 'researcher' and 'tennis player.' If further clarification was needed, the investigator offered child-related examples such as 'student' and 'friend.' Participants were also instructed to list adjectives pertaining to each role, data that are planned for a follow-up study. For example, a 15-year-old boy defined himself as a:

1 *student*: good listener, understands well;
2 *athlete*: fast, strong, team player;
3 *friend*: helpful, fair, funny; and
4 *helper*: responsible, hardworking.

This method has been used to assess the identities of children and teenagers (see Ethier & Deaux 1994; Haviland *et al.* 1994).

Self-esteem

Self-esteem is conceptualized as a global self-esteem, which refers to a general evaluation of one's self (Rosenberg 1965). We assessed self-esteem with the Rosenberg's Self-esteem Scale (Rosenberg 1965), a widely used measure that consists of five positively worded and five negatively worded statements to ascertain global self-esteem. Answers range from 'strongly agree' to 'strongly disagree' along a 4-point continuum. They were coded such that higher scores indicated higher self-esteem, with possible scores on this instrument ranging from 0 to 40. Sample items are 'I feel that I have a number of good qualities' and 'I wish I could have more respect for myself'. Cronbach's alpha was 0.80 in our sample.

The only measure developed by the current authors was the child's perception of maternal stigma measure. For the other measures, the authors report psychometric properties in the original references cited.

Results

A summary of central tendency and variability for all measures in the study is presented in Table 2. This table shows that on the attachment measure children in this sample tended to have a moderately secure attachment to the mother (i.e. within the mid-to-high range on the secure attachment dimension). Children also tended to see the mother's caregiving as either ambivalent or warm. Self-esteem was in the low range of the scale and children listed an average of 5.75 identities.

Table 2 Ranges, means and SD of scores for all measures

Characteristic (N = 36)	Ranges	Mean	SD
Mother–child relationship			
Attachment			
Secure attachment	6–30	22	4.94
Avoidant attachment	6–30	17	5.21
Anxious attachment	6–30	13	6.20
Caregiving			
Warm caregiving	5–25	11	6.66
Cold/resistant caregiving	4–20	9	3.27
Ambivalent caregiving	4–20	12	3.46
Self-esteem	10–40	20	6.13
Perception of stigma	0–12	5	2.74
Number of identities	0–6	5.75	1.84

Analysis

To evaluate the entire model in one, unified analysis, a path analysis would have been appropriate because of the implications of causality in the model. However, owing to the highly selective sample, and therefore limited sample size, path analysis was not possible. Instead, hierarchical linear regression was used to evaluate most components of the model. First, Pearson's correlation were performed to assess the direction and strength of the relationships among the variables. Then, regression analyses were used to assess the relationships between subsets of predictor variables and outcome variables in the model depicted in Figure 1. In Figure 1, the variable subsets are represented, but specifically not listed within the contiguous circles.

In hierarchical linear regression analyses, predictor variables are entered in steps, and significance is evaluated by the change in the variance (R^2) from one step to the next. For example, a significant beta (β) in step 1 signifies that the predictor entered in that step accounts for a significant proportion of the variance in the outcome variable. A significant beta in subsequent steps signifies that the addition of predictors to the model accounts for additional significant proportions of variance in the outcome, over and above variance explained by the previous predictors entered into the regression analysis.

Does stigma affect the mother–child relationship?

We first predicted that that the child's perception of stigma would reduce his/her strength of attachment to the mother. Table 3a shows the relationship of perception of stigma and warm caregiving style to secure attachment. Stigma was a significant predictor of secure attachment style, $F(1,35) = 7.91$, $P = 0.008$, accounting for 19% of the variance in secure attachment such that less stigma was associated with a higher level of secure attachment ($r = -0.44$, $P = 0.008$). Bivariate correlation showed that the two remaining attachment styles were not significantly related to stigma.

We also predicted that maternal caregiving style would mediate the relationship between stigma and attachment. As predicted, perception of stigma predicts warm caregiving style: $F(1,35) = 12.25$, $P < 0.001$ (Table 3b), and warm caregiving style predicts attachment: $F(1,35) = 20.98$, $P < 0.001$ (Table 3a). As illustrated in Table 3a, warm caregiving style mediates the relationship between stigma and attachment style, such that

Table 3a Effects of perception of stigma and warm caregiving style on secure attachment to mother ($N = 36$)

	Univariate				Multivariate			
	B	SE B	β	Unadj. R^2	B	SE B	β	Unadj. R^2
Perception of stigma	−0.78	0.28	−0.43**	0.19	−0.24	0.30	−0.13	} 0.39
Warm caregiver style	0.55	0.12	0.61***	0.38	0.48	0.15	0.54***	

Table 3b Effect of perception of stigma on warm caregiving style ($N = 36$)

	Univariate			
	B	SE B	β	Unadj. R^2
Perception of Stigma	−1.14	0.29	−0.56***	0.32

$P \leq 0.05$; **$P \leq 0.01$; ***$P \leq 0.001$.

when caregiving style is included in the model along with perception of stigma, perception of stigma is no longer a predictor of attachment. The value of R^2 indicates that the variables together account for 39% of the variance in secure attachment, $F(2,34) = 16.23$, $P < 0.001$. This finding suggests that stigma can negatively affect the quality of the mother–child relationship through its effect on caregiving.

Consistent with this finding, the higher the perception of stigma, the stronger the child's perception of the mother as a cold caregiver ($r = 0.45$, $P = 0.006$), and the stronger the child's perception of the mother as an ambivalent caregiver ($r = 0.68$, $P < 0.001$). In addition, children who perceive the mother as being a cold caregiver and as an ambivalent caregiver have less secure attachment ($r = -0.44$, $P = 0.008$ and $r = -0.51$, $P = 0.001$, respectively). Unrelated to the model, we found that younger children ($r = -0.47$, $P = 0.008$), and girls ($r = -0.40$, $P = 0.05$) perceived the mother as a warmer caregiver.

Does the child's attachment to the mother affect self-esteem?

The third hypothesis was that the child's attachment to the mother would affect the child's self-esteem. Specifically, we predicted that secure attachment style would be associated with higher self-esteem, but this relationship was not significant. However, both an avoidant attachment style and an anxious/ambivalent attachment style were significantly correlated with self esteem. Specifically, children who had more avoidant attachment to the mother tended to have lower self-esteem ($r = -0.47$, $P = 0.003$), and children who had more of an anxious/ambivalent attachment also tended to have lower self-esteem ($r = -0.41$, $P = 0.01$).

Does an increased number of identities help to preserve self-esteem?

Finally, we predicted that the number of identities listed by the child would moderate the relationship between attachment style and self-esteem. This prediction was not substantiated. As mentioned above, avoidant and ambivalent attachment styles *are* significant predictors of self-esteem. The number of identities is also a significant predictor of self-esteem, $F(1,35) = 9.59$, $P < 0.01$ ($r = 0.47$, $P = 0.004$). However, as shown in Table 4,

Table 4 Prediction of child self-esteem by avoidant attachment and number of identities ($N = 36$)

	Univariate				Multivariate				Multivariate with interaction			
	B	SE B	β	Unadj. R^2	B	SE B	β	Unadj. R^2	B	SE B	β	Unadj. R^2
Avoidant attachment	−0.56	0.18	−0.48**	0.23	−0.48	0.16	−0.41**	}0.38	−1.05	0.67	−0.89	}0.40
Number of identities	1.56	0.50	0.47**	0.22	1.34	0.46	0.40**		−0.12	1.73	−0.04	
Avoidant × identities									0.09	0.11	0.61	

**P ≤ 0.05; **P ≤ 0.01; ***P ≤ 0.001.

when the interaction between number of identities and avoidant attachment is added to the model for predicting self-esteem, the interaction is not significant.

Discussion

Research on parent–child interactions with a mother with intellectual disability has typically been conducted with infants, tends to focus on the mother during mother–child interactions, and seeks to demonstrate some quality of the mothers' parenting compared to mothers without intellectual disabilities (for a review, see Holburn *et al.* 2001). Although these endeavours have been meaningful, we know little about school-age children of mothers with intellectual disabilities. We know even less about the way these children feel about the mother and deal with their mother's stigmatizing diagnosis or label. The current study sought to understand the way children with normal intellectual levels are affected if their mothers have intellectual disability. We hypothesized that such children's attachment to their mothers will be less secure owing to the stigma they felt about their mother's disability, and this in turn might have a negative effect on the child's self-esteem. However, we suggested that if the child perceived the mother to have a warm caregiving style, the child's self-esteem would not be affected. We also proposed that if the child had a large number of identities to call on, none of these relationships would hold. Our findings partially support these predictions. The fact that attachment styles were not mutually exclusive (not categorically assigned) affected our results (see below).

Clearly, each child's experience of his/her mother's diagnosis and its corresponding stigma are unique; however, there appears to be some common ground on which these children tread to preserve a positive feeling about themselves. While the mother's behaviour is extremely important for the social and developmental outcomes of the child, this research suggests that the child's perceptions of the mother are also important.

Children of mothers with intellectual disability feel the stigma associated with the disability and may even feel stigmatized themselves. This, of course, may cause the child to feel less attached to his/her mother. However, our research indicates that the child's perception of the mother's caregiving style may have a positive influence on the child's attachment. Similarly, Collins & Read (1990) found that adults who had warm caregivers were more trusting and experienced more love in their adult relationships. Perhaps warm caregiving will shield against stigma in childhood and also stimulate more love and trust in adulthood. Conversely, Collins & Read (1990) found that adult avoidant and anxious attachment styles were associated with negative and mistrustful perceptions of others.

Factors that influence the child's perception of the mother's caregiving need further investigation. For example, perhaps the social service agency from which the family receives services can play a role in helping the child understand the realities and dispel the myths of the mother's limitations and abilities and create ways of working with the mother to maintain the goals of the family. A more direct approach to influence the child's perception of the mother's caregiving would be to operationalize warm caregiving and teach it directly to parents. This approach has been used by Golden (1999) in teaching parents at risk of child abuse how to listen, accept, comfort and support their children.

Assuming that maintaining positive self-esteem is a valuable goal, the child's attachment to the mother may play an even more important role for younger children who,

compared with older children, have less contact with the world, away from the mother. In fact, our research indicates that older children do not perceive the mother's caregiving style to be as warm as younger children perceive it to be. Nonetheless, these children seem to be able to preserve their self-esteem. Our findings suggest that one mechanism by which self-esteem is preserved is the claiming of numerous identities. In theory, having numerous identities provide a buffer in the event that one identity is threatened (Deaux & Ethier 1998). We found that both the child's secure attachment to the mother and identification with numerous identities positively influenced self-esteem. Thus, if the son/daughter's identity is threatened, the children might have numerous other identities on which they can rely. However, identity as a moderator of the relationship between attachment and self-esteem was not corroborated.

   The results of the current study suggest that the model represented in Figure 1 be revised as shown in Figure 2. Our results indicate that perception of stigma affects secure attachment by way of maternal caregiving. Ambivalent or avoidant attachment and multiple identities are related to decreased self-esteem. Thus, although there appears to be a relationship between perception of stigma and one measure of attachment, and also a relationship between other measures of attachment and self-esteem, these relationships are not consistent with one another. When secure attachment is high, there is no effect on self-esteem regardless of the caregiving relationship. The original concept and measurement of attachment between child and parent suggests three mutually exclusive types of attachment (Ainsworth *et al.* 1978). Accordingly, children were categorized into one of three distinct types based on mother–child observations. However, the Hazan & Shaver (1987) instrument that we used was originally created as an adult measure of attachment with a significant other, and it measures secure, anxious/ambivalent and avoidant attachment independently as three continuous variables. Perhaps, our original model
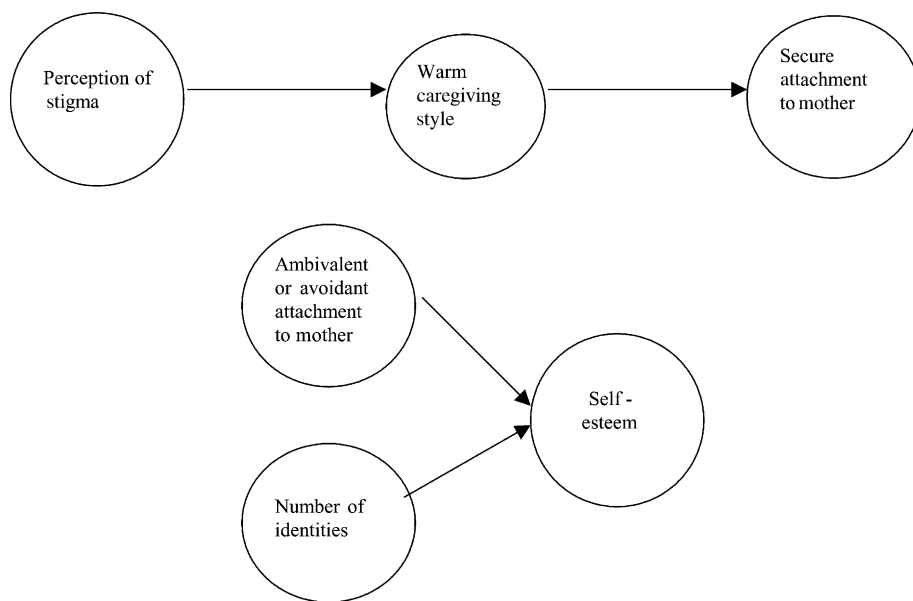

Figure 2 Substantiated relationships among variables.

would have been confirmed if we had assigned each participant to an attachment category based on a profile of their attachment scores. Nevertheless, the model has some validity and is supported by the data presented.

Research that focuses on the school-age children of mothers with intellectual disabilities may provide valuable information about the needs of children in families where the caregiver(s) with intellectual disability. It may provide information about how these children can cope with threats to self-esteem and inform practitioners and educators of ways of strengthening the relationship between mother and child (Coates *et al.* 1985). The present study suggests that assisting the mother to provide warm caregiving and helping children develop a variety of identities might be useful strategies.

Acknowledgements

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