

Ecuadorian mothers of preschool children with and without intellectual disabilities: Individual and family dimensions

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Abstract

Background: Approximately 71,454 children younger than 5 years old have a disability in Ecuador.

Aims: Our objective was to compare and relate family cohesion, adaptability, coping, perceived stress, and control with family satisfaction of Ecuadorian mothers of preschool children with and without intellectual disabilities (ID).

Method: Participants were 384 Ecuadorian mothers: 111 had a child with ID and 273 had a child without ID. The FACES II, Family Satisfaction Scale and Moos Coping Response Inventory were used.

Results: No significant differences were found between mothers of children with and without intellectual disabilities on their perceptions of family cohesion, adaptability or family satisfaction. Mothers of children with ID perceived less stress and more control over their children and adopted more approach coping strategies compared to mothers of children without ID. The mothers' family satisfaction was positively related to approach coping strategies and to family cohesion and adaptability, and negatively related to avoidant coping strategies—regardless of whether their children had a disability or not.

Conclusions and implications: These data are in accordance with an adaptive approach to disability and emphasise the capacity of individuals and families to cope.

Keywords

Stress; Cohesion; Adaptability; Family satisfaction; Coping; Intellectual disabilities.

What this paper adds?

There are few studies of families of young children with intellectual disabilities in Ecuador that also compare families of young children with and without intellectual disabilities. This research contributes to our knowledge about Ecuadorian families of young children and families of children with intellectual disabilities in non-occidental countries and points to potential individual and family resources that may favour an adaptive approach to intellectual disability. This does not imply minimizing the impact that intellectual disabilities have on mothers and the family system, but it does imply stressing the importance of identifying resources and paying attention to the capacity of individuals and family systems to cope and adapt.

1. Introduction

Increasingly, when a child is diagnosed with an intellectual disability (ID), services worldwide have adopted a family-centred perspective (Minnes, Perry, & Weiss, 2015). This perspective is in line with the vision of the family as a system (López-Larrosa & Escudero, 2013), in which information about this system is relevant in itself as well for the roles that family resources play in the improvement of children with disabilities (Al-Yagon & Margalit, 2009). However, we can approach the study of families and their young children with ID from a perspective of negative family outcomes or from an adaptive perspective (Jess, Hastings, & Totsika, 2017; Suzuki, Hiratani, Mizukoshi, Hayashi, & Inagaki, 2018). The negative perspective emphasises the adversarial impact that an intellectual disability has on a family, such as a higher stress level compared to families whose children do not have disabilities (Kilic, Gencdogan, Bag, & Arıcan, 2013). These parents also experience more emotional burden, fatigue due to the accumulation of tasks, frustration and exhaustion (Darling, Senatore, & Strachan, 2012; Kandel & Merrick, 2007). An adaptive perspective emphasises the capacity of the family system to cope and be functional even when stress is high (Jess et al., 2017; Suzuki et al., 2018). There has been a shift in the field from focussing on negative outcomes to considering positive outcomes and family variability (Jess et al., 2017; Lightsey & Sweeney, 2008; Mas, Giné, & McWilliam, 2016).

1.1. Intellectual disability in Ecuador: family and coping

Ecuadorian statistics show that 12.68 % (71,453) of citizens with disabilities are 0- to 5-year-old children (Cortez, Chacón, & Giler, 2016). All Ecuadorian families with children under 3 years of age regardless of their cognitive condition receive professional support provided by the Programme Creciendo con Nuestros hijos (Growing with Our Children [CNH]). Children over the age of 3 attend either regular education or special education, depending on their needs. Despite the efforts to provide services to families, little research has been conducted in Ecuador regarding ID in young children, especially the dimensions related to the family (Flores Luna, 2017) and comparing families of children with and without ID.

According to some authors, the presence of a child with an ID affects families in similar ways, regardless of the culture (McConkey, Truesdale-Kennedy, Chang, Jarrah, & Shukri, 2008). However, there are differences regarding the ways Latina families communicate and solve problems and in the way the roles of caregiving and motherhood are organized among Latina mothers (Long, Kao, Plante, Seifer, & Lobato, 2015). In Ecuador, relationships inside the family are characterized by closeness and support, and this expands to extended family and kin (Handelsman, 2000). These cultural and family particularities, and the scarcity of studies comparing families of children with and without ID in Ecuador, justify the present study.

Our study is grounded on the Double ABCX Model of Family Stress and Adaptation (Lavee, McCubbin, & Patterson, 1985). It examines family variables, such as cohesion, adaptability, and family satisfaction, and individual variables such as stress, perceived control, and coping strategies of Ecuadorian mothers of preschool children with and without ID. Mothers were studied because they spend more time caring for their children in this culture (Zicavo, 2013). Ecuadorian laws recognize gender equality, but Ecuadorian women are socialized to take care of their homes from an early age based on religious, economic and family traditions. Even women in the labour force assume that taking care of their children and families is their main responsibility (Villena, 2014).

It has been reported in several countries that mothers assume more caregiving responsibilities and experience higher levels of stress when their children have a disability compared to mothers of typically developing (TD) children (Bourke-Taylor, Jane, & Peat, 2019). We are concerned with mothers of preschool children because the early years are the initial stages of their adaptation to a child with a disability. These first years influence how parents and the whole family will cope and provide care for their child in the future (Douglas, Redley, & Ottman, 2016).

According to the Double ABCX model of family stress and adaptation (Lavee et al., 1985; Pozo, Sarriá, & Brioso, 2013), the A factor refers to a pile-up of demands in which normative and non-normative events cluster. The B factor refers to adaptive resources such as personal and family resources and social support. The C factor refers to perception and coherence, that is, the family's general orientation, which relates to the perception of stressors and the "feeling of confidence that internal and external environments are predictable" (Lavee et al., 1985, p. 813). The X factor is "the outcome of the family's processes in response to the crisis and pile-up of demands" (p. 813).

In this study, the A factor is significant because we study mothers who raise preschool children and share this normative event and life cycle. And mothers of children with ID experience a non-normative event related to their children's condition. In the B factor, we will consider individual resources such as coping and family resources such as family cohesion and adaptability. The C factor will consider the perception of child-related stressors and the mothers' feelings of control. Our outcome factor (X) will be family satisfaction.

Coping (individual B factor) is a personal adaptive resource used during stressful situations. Coping strategies are cognitive, emotional and regulatory responses; and people exhibit distinctive styles of behaviour when adjusting to a challenging event (Glidden, Billings, & Jobe, 2006). Lazarus (1993) distinguished between problem-focused coping directed at altering the relationship between the person and the environment, and emotion-focused coping, "directed at managing emotional distress" (Lazarus & Folkman, 1987, p. 152).

Problem-focused coping strategies effectively reduce stress (Lustig, 2002), especially when they are under the control of reality (Kandel & Merrick, 2007). These responses attempt to resolve the situation and are similar to active coping and approach coping strategies (Carver, Scheier, & Weintraub, 1989). One approach coping strategy is positive reappraisal (e.g., when families perceive a disability as a challenge and not as an immutable complication), to rethink the child's disability in a positive way (Povee, Roberts, Bourke, & Leonard, 2012). Higher levels of positive reappraisal are associated with higher levels of subjective well-being (Glidden et al., 2006). Other approach coping responses, such as problem solving and seeking guidance and support (e.g., requesting information or help), are also used by mothers of children with disabilities (Glidden et al., 2006). The search for guidance and support enables parents of children with disabilities to manage the stress generated and prevent negative consequences to their health (Albarracín, Rey, & Jaimes, 2014).

Emotion-focused coping responses and avoidant coping strategies are used for circumstances perceived as uncontrollable to cope with. Coping responses are inherently neither good nor bad, but some authors have suggested that avoidant coping strategies and emotion-focused coping are less effective, especially the coping strategy of cognitive avoidance, which involves trying not to think about the difficulty (Kandel & Merrick, 2007). Mothers who use this strategy have lower levels of subjective well-being (Glidden et al., 2006; Zapata, Bastida, Quiroga, Charra, & Leiva, 2013). Mothers who frequently use active coping report high positive affect; by contrast, mothers of children with ID who frequently use emotion-centred coping responses tend to manifest high negative affect (Al-Yagon & Margalit, 2009). The well-being of mothers of children with disabilities is associated with the use of more problem-focused and less emotion-focused coping (Glidden et al., 2006). In a study carried out in Quito (Ecuador) with 128 fathers and mothers of children with disabilities, analyses revealed that the most used coping strategy was problem solving, while the second most used strategy was emotional expression. So, parents used both types of coping strategies (Abata, 2017).

A comparative study of parents of children with and without disabilities found that the coping responses of the latter were more cognitive, whereas those of the former tended to be more emotional (Cuzzocrea, Larcan, & Westh, 2013). Other studies have obtained similar results, where caregivers of TD children attained higher scores of self-control, support search, and problem resolution than parents of children with disabilities (Sivberg, 2002). However, other research has shown that parents of children with disabilities feel strong because they are able to cope with their children's difficulties (Yang, Byrne, & Chiu, 2016).

Family adaptability and cohesion (family B factors of the Double ABCX model) change across life spans in response to developmental changes and situational stresses; this also happens when there is a child with ID. According to Olson's Circumplex model (Olson, Russell, & Sprenkle, 1980), average levels of family cohesion and adaptability are preferable, but there are differences in family cohesion and adaptability in different cultures (López-Larrosa, 2002). A study carried out in Ecuador with a sample of 153 parents (mostly mothers, 77.8 %) of school age children showed that these families had high scores in family cohesion and adaptability (Sigüenza, 2015). Another study of 41 Ecuadorian families whose children had ID measured family functionality, a dimension comprising family cohesion, adaptability, communication, affection, roles, permeability and harmony. Results showed that most families had high scores in family functionality (63.4 %) (Flores Luna, 2017).

Some studies point out that families of young children with ID adapt their daily life in order to find a new family balance (Mas et al., 2016); others conclude that these families tend to be less adaptable, probably because families of children with ID maintain routines to handle their situation (Lanfranchi & Vianello, 2012). It has been suggested that families of children with ID may show less family cohesion (Lanfranchi & Vianello, 2012). On the contrary, some authors have argued that family cohesion enriches the family system by providing positive values regarding the parental care of children with ID, such as those with Down syndrome (Choi & Van Riper, 2016). Lower family cohesion is related to a higher level of stress among parents, whereas higher family cohesion is related to greater individual and family well-being (Mitchell, Szczerepa, & Hauser-Cram, 2016). Mothers who report less stress and greater cohesion report greater family satisfaction and less emotion-based coping (Lightsey & Sweeney, 2008). Mothers of children with ID who receive emotional support from their partners and other family members perceive a higher quality of life, and this support motivates them to devote more time and energy to their child compared to mothers who perceive less support (John & Zapata, 2017).

As for the C factor of the Double ABCX Model, when parents feel that they control the situation, the emotional well-being of the family is improved in terms of personal and family satisfaction (Ferrer, Vilaseca, & Guàrdia, 2017). Higher stress predicts lower family satisfaction (Lightsey & Sweeney, 2008), while perceived control enables parents to make decisions (Brown, Anand, Fung, Isaacs, & Baum, 2003; Gupta & Singhal, 2004). This control is related to a higher quality of family life, and families are in a better position to boost their children's learning processes and strengthen their development (Ferrer et al., 2017)

Our outcome factor (X) is family satisfaction. Family satisfaction is relevant because it is the perception of the family members regarding how they function. It includes the subjective response of pleasure, which is linked to cohesion, adaptability and communication (Olson, Gorall, & Tiesel, 2006; Sanz, 2008). Family satisfaction is related to family interaction, emotional closeness, the ability to adjust to changes, the quality of communication, and the means to solve family problems (Villarreal-Zegarra, Copez-Lonzoy, Paz-Jesús, & Costa-Ball, 2017). Some studies have found no differences between mothers of children with and without disabilities in their family satisfaction (Totsika, Hastings, Emerson, Berridge, & Lancaster, 2011), while others have detected differences showing either less or more family satisfaction in these mothers. In some studies, the high emotional burden on mothers of children with ID related to internalising symptoms; in turn, these factors related to lower life satisfaction (Darling et al., 2012; Zhang & Yi, 2011). But other research has found that parents of children with ID experienced personal growth, happiness, closeness and family satisfaction (Greer, Grey, & McClean, 2006).

1.2. Objectives and hypotheses

This study tried to expand and apply the double ABCX model to a sample from Ecuador. Our objectives (O) and each correlating hypotheses (H) follow: O1) to compare the coping responses of Ecuadorian mothers of children with and without ID; and H1) Mothers of children with ID will use less approach coping strategies compared to mothers of children without ID, as reported by previous studies (Cuzzocrea et al., 2013; Sivberg, 2002). O2) To compare perceived family cohesion and adaptability of mothers of children with and without ID; and H2) Cohesion and adaptability will be higher in families of children with ID based on previous studies (Choi & Van Riper, 2016; Mas et al., 2016). O3) To compare the stress levels and perceived control of the situation with the coping responses of mothers of children with and without ID; and H3) Mothers of children with ID will experience more stress but greater control than mothers of children without ID (Jess et al., 2017; Suzuki et al., 2018). O4) To compare the family satisfaction of mothers of children with and without ID; and H4) There will be no differences in mothers' family satisfaction (Totsika et al., 2011). O5) To relate the A variable of having a preschool child with or without an ID, the B individual variables of coping responses, the B family variables of cohesion and adaptability, the C variables of stress, and control with the X variable of family satisfaction.

2. Method

2.1. Participants

The participants were 384 Ecuadorian mothers; 111 had a child with ID, and 273 had a child without ID (see Table 1). Families lived in fourteen cantons that compose the Ecuadorian province of El Oro. Convenience sampling was used. Inclusion criteria were having a child younger than 6 years old who was attending an educational or health service facility, either with an intellectual disability (sample with ID) or without an intellectual disability (sample without ID). Exclusion criteria were any disagreement with participation, and mothers of children without ID would be excluded if they had a child with ID.

Table 1. Demographics of the participants

	Mothers of children with ID <i>n</i> = 111 <i>n</i> (%)	Mothers of children without ID <i>n</i> = 273 <i>n</i> (%)
Education		
None	1 (0.9 %)	5 (1.8 %)
Primary	31 (27.9 %)	52 (19 %)
Secondary	63 (56.8 %)	167 (61.2 %)
University	16 (14.4 %)	49 (17.9 %)
Occupation		
Not working	79 (71.2 %)	197 (72.2 %)
Working	32 (28.8 %)	76 (27.8 %)
Children's sex		
Female	52 (46.8 %)	135 (49.5 %)
Male	59 (53.2 %)	138 (50.5 %)
Children's services		
CNH	61 (55 %)	120 (44 %)
Special Education	50 (45 %)	–
Regular Education	–	153 (56 %)
Location of family Canton		
Lower elevation	89 (80.2 %)	176 (64.5 %)
Higher elevation	22 (19.8 %)	97 (35.5 %)

Note. CNH = Creciendo con nuestros hijos, Growing with Our Children Programme.

The ages of the mothers whose children had disabilities ranged from 18 to 58 years (meanage = 33.34 years, SD = 8.37). The ages of the mothers whose children did not have disabilities ranged from 15 to 61 years (meanage = 29.96 years, SD = 8.09). In both samples, the majority of mothers had a secondary education and were not working.

Most children who had disabilities had ID solely (73 %), although 30 cases had associated disorders such as motor problems (25.2 %) or West syndrome (1.8 %). The ages of children with ID ranged from 3 months to 5.9 years (meanage = 3.1 years, SD = 1.6 years). The ages of children without ID ranged from 3 months to 6 years (meanage = 3.9 years, SD = 1.8 years). Children's sex was balanced between both samples.

Table 1 shows the informal and formal education services children attended.

2.2. Instruments

The B factor of personal adaptive resources (coping) and the C factor of personal stress and control of the Double ABCX model were measured using the Moos Coping Response Inventory, Adult (CRI-A). The inventory was adapted to Spanish by Kirchner and Forms (2010). The instrument consists of two parts. In the first part, which measures stress and control (C factor), participants are asked to narrate a stressful episode. In this study, the mothers were required to relate a stressful situation with respect to their preschool children. They were asked to determine how much stress the described event generated, as well as their degree of control over that event, using a scale with values ranging from 1 to 10.

The second part of the inventory consists of 48 questions that explore different coping responses to deal with problems (B factor of personal adaptive resources). These questions were answered using a Likert-type scale of 4 points with values ranging from 0 (no, never) to 3 (yes, almost always). The questions address eight strategies: Logical Analysis (LA), in which mothers seek to understand and mentally prepare for the stressor and its effects; Positive Reappraisal (PR), in which mothers restructure a negative event in a positive way; Seeking Guidance and support (SG), in which mothers seek information, guidance and support; Problem Solving (PS), in which mothers seek a direct solution of the event; Cognitive Avoidance (CA), in which mothers avoid their real thoughts about the stressor; Acceptance or Resignation (A), in which mothers accept the event because a solution cannot be found; search for Alternative Rewards (AR), in which mothers engage in substitute activities and create new sources of satisfaction; and Emotional Discharge (ED), in which mothers reduce stress by expressing negative feelings. Kirchner and Forms (2010) calculated the internal consistency of the Spanish version of CRI-A. The reported Cronbach's alpha values among the sample of women were moderate: $\alpha = .60$, $\alpha = .66$, $\alpha = .58$, $\alpha = .63$, $\alpha = .60$, $\alpha = .50$, $\alpha = .52$ and $\alpha = .51$ for LA, PR, SG, PS, CA, A, AR and ED, respectively.

In the present study, the internal consistency values were $\alpha = .61$, $\alpha = .65$, $\alpha = .60$, $\alpha = .68$, $\alpha = .64$, $\alpha = .49$, $\alpha = .62$ and $\alpha = .57$ for LA, PR, SG, PS, CA, A, AR and ED, respectively. These values are acceptable, and moderate for A and ED (Taber, 2018). The internal consistency of the combined approach coping strategies (Logical Analysis, Positive Reappraisal, Seeking Guidance and Support, and Problem Solving) was $\alpha = .86$; and the internal consistency of the combined avoidant coping strategies (Cognitive Avoidance, Acceptance or Resignation, Seeking Alternative Rewards, and Emotional Discharge) was $\alpha = .80$. Both values are high according to Taber (2018).

To evaluate the family variables (B family factor), the Family Adaptability and Cohesion Evaluation Scale II 20 (Martínez-Pampliega, 2008) was applied. This measure comprises 20 items that assess family cohesion and adaptability. Cohesion is the union between family members and the degree of independence of its members; this dimension is measured using items such as "members of my family feel very close to each other". Adaptability is the flexibility to change roles and rules; this dimension is measured using items such as "in our family we try new ways of solving problems". The 20 items are answered using a 5-point Likert-type scale with values ranging from 1 (never or almost never) to 5 (almost always). The reliability values of a previous study employing a Spanish sample were $\alpha = .89$ for cohesion and $\alpha = .87$ for adaptability

(Martínez-Pampliega, 2008). In the present study, the reliability of the cohesion and adaptability subscales were $\alpha = .89$, and $\alpha = .84$, respectively, which are high reliabilities (Taber, 2018).

Family satisfaction is our X variable. To measure family satisfaction in relation to cohesion and adaptability, the Family Satisfaction Scale (FSS, Spanish version) was used (Sanz, 2008). This scale consists of 10 items that provide a family satisfaction score using items such as “the quality of communication between family members”. This scale is answered using a 5-point Likert-type scale, with values ranging from 1 (very dissatisfied) to 5 (very satisfied). The reliability value of a previous study with a Spanish sample was $\alpha = .95$ (Martínez-Pampliega, 2008). In the present investigation $\alpha = .89$, which is high (Taber, 2018).

2.3. Procedure

Ethical approval of the research project was sought from the Teaching and Research Coordination of Teófilo Dávila Hospital in Machala, Ecuador. With its authorisation, permission was requested from the directors of MIES (Ministry of Economic and Social Inclusion) for the Growing with Our Children (CNH) Programme. This programme serves all children ranging from 3 months to 3 years of age. To collect data from mothers of children aged 3–6 years, approval was sought from the directors of the special educational units of the Ministry of Education and the Comprehensive Care Centre for people with ID. Authorisation from the MIES directors was required to accompany the district representatives of the regular educational units to contact the teachers of the children of the pre-primary 1 (3 years old), pre-primary 2 (4 years old), and first year of Basic General Education levels (5 years old).

The mothers were contacted after the authorisations were granted. Mothers whose children participated in the CNH programme completed the questionnaires individually at their homes because their children received early developmental education at home. Mothers of children with ID who attended special education units (children aged 3–6 years) were given questionnaires to be completed while they waited for their children. Mothers of children without ID coordinated with teachers and researchers to apply the above instruments on the day of the family meetings in their children’s schools.

2.4. Data analysis

The data were analysed using IBM SPSS software, version 24 (IBM Corp., Armonk, NY, USA). There were no missing data. Internal consistency of the scales was calculated using Cronbach’s alpha. Descriptive statistics were calculated. According to Mishra et al. (2019), for a sample size higher than 300, “an absolute skewness value ≤ 2 or an absolute kurtosis (excess) ≤ 4 may be used as reference values for determining considerable normality” (p. 70). Data in this study fulfilled these criteria. To ensure the comparability of the two samples of mothers, chi-square, mean difference and correlation analyses were conducted. To meet the research objectives and test the hypotheses, mean differences were calculated (t-test), and correlations and stepwise multiple linear regression analysis were performed. Post hoc power analyses were carried out with G*Power (Faul, Erdfelder, Buchner, & Lang, 2009). Power is the probability of detecting an effect or correctly rejecting the null hypothesis.

3. Results

Descriptive statistics are shown in Table 2. Before considering our objectives and hypotheses, chi-square analyses were performed to determine the comparability of the two samples (with ID and without ID) regarding mothers' education and occupation. These analyses did not indicate significant differences, $p > .10$. No significant differences were found regarding the sex of their children, $p > .10$. However, a significant between-group difference was found regarding the age of the mothers, $t(382) = 3.67$, $p < .01$. Because mothers of children with disabilities were older on average, we analysed whether age and the dimensions under analysis in this research were related. The results of the correlation analyses did not indicate significant relationships between participant age and family satisfaction, stress intensity, degree of control, or coping strategies ($p > .10$ in all cases, except AR, $p > .05$). However, significant relationships were found between age and cohesion, $r(383) = -.11$, $p = .02$, and between age and family adaptability, $r(383) = -.12$, $p = .01$.

Table 2. Descriptive statistics.

Variables	Mean (SD)	Skewness	Kurtosis
Logical Analysis (LA)	9.31 (3.81)	.07	-.29
Positive Reappraisal (PR)	11.26 (3.73)	-.27	-.11
Seeking Guidance (SG)	11.38 (3.74)	-.30	-.05
Problem Solving (PS)	12.46 (3.64)	-.31	.10
Cognitive Avoidance (CA)	8.23 (4.19)	.01	-.65
Acceptance/Resignation (A)	7.68 (3.66)	.12	-.29
Seeking Alternative Rewards (AR)	9.60 (4.06)	.04	-.34
Emotional Discharge (ED)	7.53 (3.75)	.20	-.11
Approach coping (LA, PR, SG, PS)	44.41 (12.37)	-.39	.43
Avoidant coping (CA, A, AR, ED)	33.05 (11.69)	.06	.34
Stress Intensity	8.13 (2.51)	-1.48	1.27
Control	4.96 (3.03)	.23	-1.22
Family cohesion	41.92 (7.04)	-.97	.56
Family adaptability	38.04 (7.53)	-.49	-.24
Family satisfaction	40.32 (6.48)	-.91	1.59

Note. $n = 384$, missing = 0.

3.1. Coping responses

Concerning the first objective, significant differences were found between mothers of children with and without ID with regard to Seeking Guidance, Positive Reappraisal, Problem Solving, Cognitive Avoidance, Acceptance and seeking for Alternative Rewards (with small effect sizes in all variables, but in Seeking Guidance, effect size was medium; see Table 3). Mothers of children with ID reported significantly more Seeking Guidance, Positive Reappraisal, Problem Solving, Acceptance and Seeking Alternative Rewards. Mothers of children without ID made greater use of Cognitive Avoidance. When considering the combined measures of approach coping strategies and avoidant coping strategies, there were significant differences in the mothers' approach coping responses. Mothers of children with ID used more approach coping strategies compared to mothers of children without ID with a small effect size. Power analysis indicated that the probability for detecting differences between mothers of children with and without ID in Positive Reappraisal,

Seeking Guidance, Problem Solving, Cognitive Avoidance, Acceptance, Seeking Alternative Rewards and the combined measure of approach coping strategies was higher than 80 %.

Table 3. Means, standard deviations, t-tests, effect size (Cohen's d) and power for family dimensions, coping responses, stress and control of mothers of children with and without ID.

	<i>Mean (SD)</i>		<i>Mean difference</i>	Mean difference	Power
	With ID n = 111	Without ID n = 273			
Coping responses					
Logical Analysis (LA)	9.31 (3.99)	9.31 (3.74)	$t(382) = -.012$ $p = .99$	0	0.05
Positive Reappraisal (PR))	12.41 (3.80)	10.79 (3.61)	$t(382) = 3.63$ $p = .00$	0.44	0.98
Seeking Guidance (SG)	12.71 (3.56)	10.84 (3.67)	$t(382) = 4.56$ $p = .00$	0.51	0.99
Problem Solving (PS)	13.22 (3.72)	12.16 (3.58)	$t(382) = 2.59$ $p = .01$	0.29	0.82
Cognitive Avoidance (CA)	7.30 (4.19)	8.62 (4.14)	$t(382) = -2.81$ $p = .00$	0.31	0.87
Acceptance/Resignation (A)	8.49 (3.37)	7.36 (3.73)	$t(382) = 2.75$ $p = .00$	0.31	0.88
Seeking Alternative Rewards (AR)	10.77 (4.67)	9.13 (3.68)	$t(382) = 3.64$ $p = .00$	0.39	0.96
Emotional Discharge (ED)	7.68 (3.60)	7.47 (3.82)	$t(382) = .489$ $p = .62$	0.05	0.12
Approach coping (LA, PR, SG,PS)	47.64 (12.56)	43.10 (12.06)	$t(382) = 3.30$ $p = .00$	0.36	0.94
Avoidant coping (CA, A, AR, ED)	34.23 (11.00)	32.57 (12.00)	$t(382) = 1.25$ $p = .21$	0.14	0.35
Stress					
Intensity	6.77 (3.12)	8.67 (1.97)	$t(382) = -7.14$ $p = .00$	0.72	1.0
Control	6.26 (3.00)	4.43 (2.88)	$t(382) = 5.56$ $p = .00$	0.62	1.0
Family dimensions					
Cohesion	42.09 (6.97)	41.85 (7.08)	$t(382) = .30$ $p = .75$	0.03	0.09
Adaptability	39.15 (7.57)	37.59 (7.49)	$t(382) = 1.85$ $p = .06$	0.20	0.57
Satisfaction	40.19 (6.32)	40.37 (6.55)	$t(382) = -2.47$ $p = .80$	0.02	0.08

Table 4. Pearson correlations between stress intensity, control, coping responses and family dimensions in the sample of mothers of children with ID.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Stress Control	–													
2. Stress Intensity	-.12	–												
3. Logical Analysis	.16	-.07	–											
4. Positive Reappraisal	.22*	-.07	.56**	–										
5. Seeking Guidance	.22*	-.04	.53**	.59**	–									
6. Problem Solving	.20*	-.03	.51**	.63**	.73**	–								
7. Cognitive Avoidance	.01	.14	.39**	.26**	.26**	.25**	–							
8. Acceptance	-.10	.15	.32**	.28**	.07	.06	.49**	–						
9. Alternative Rewards	.16	-.15	.49**	.68**	.54**	.58**	.19*	.30**	–					
10. Emotional Discharge	-.01	.02	.41**	.22*	.24*	.18	.37**	.33**	.19*	–				
11. Approach coping	.24*	-.06	.79**	.83**	.85**	.86**	.35**	.22*	.69**	.32**	–			
12. Avoidant coping	.03	.04	.59**	.55**	.43**	.42**	.73**	.73**	.65**	.65**	.60**	–		
13. Family Cohesion	.23*	-.13	.33**	.48**	.33**	.33**	.01	-.01	.45**	.07	.44**	.25**	–	
14. Family Adaptability	.24*	-.15	.36**	.41**	.27**	.27**	.18	.10	.28**	.02	.39**	.23*	.78**	–
15. Family Satisfaction	.19*	-.12	.31**	.39**	.35**	.37**	.21*	-.06	.41**	-.06	.42**	.21*	.62**	.57**

Note. n = 111, * p < .05, ** p < .01.

Table 5. Pearson correlations between stress intensity, control, coping responses and family dimensions in the sample of mothers of children without ID.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Stress Control	–													
2. Stress Intensity	-.18**	–												
3. Logical Analysis	.05	.04	–											
4. Positive Reappraisal	.14*	.09	.66**	–										
5. Seeking Guidance	.05	.00	.50**	.52**	–									
6. Problem Solving	.15*	.13*	.55**	.62**	.60**	–								
7. Cognitive Avoidance	-.09	.07	.56**	.44**	.25**	.36**	–							
8. Acceptance	-.18**	.10	.42**	.35**	.16**	.16**	.53**	–						
9. Alternative Rewards	.03	-.04	.56**	.56**	.42**	.50**	.46**	.42**	–					
10. Emotional Discharge	-.15**	.13*	.49**	.36**	.35**	.25**	.46**	.52**	.42**	–				
11. Approach coping	.12*	.08	.82**	.84**	.79**	.83**	.49**	.34**	.63**	.44**	–			
12. Avoidant coping	-.13*	.08	.67**	.55**	.38**	.40**	.80**	.79**	.73**	.77**	.61**	–		
13. Family Cohesion	.13*	-.02	.16**	.30**	.31**	.32**	.09	-.03	.16**	-.10	.33**	.03	–	
14. Family Adaptability	.20**	-.00	.20**	.31**	.27**	.33**	.06	-.04	.21**	-.08	.34**	.05	.79**	–
15. Family Satisfaction	.08	-.02	.13*	.28**	.21**	.26**	.05	-.05	.17**	-.19**	.27**	.00	.54**	.50**

Note. n = 273, * p < .05, ** p < .01.

3.2. Family cohesion and adaptability

Regarding the second objective, no significant differences were found in family cohesion and adaptability between mothers of children with ID and mothers of children without ID, $p > .10$. Effect size was small and power was low (Table 3). In general, power is calculated based on the size of the effect (Gelman & Carlin, 2014). This may explain why both effect and power were low.

3.3. Stress and perceived control

As for the third objective of comparing the levels of stress and perceived control regarding stressful situations between mothers of children with and without ID, significant differences were found in both cases (see Table 3). Mothers of children without ID perceived stressful situations as more stressful than mothers of children with ID. Mothers of children with ID indicated that they had better control of situations. Effect size was moderate. Power analysis indicated a great probability to detect differences between mothers of children with and without ID in perceived stress and control.

When relating stress and control with the coping strategies of mothers of children with and without disabilities (Tables 4 and 5), the results of the correlation analyses indicated that Positive Reappraisal, Problem Solving and the combined measure of approach-coping strategies were related to greater control of stressful situations among both samples. In addition, greater Seeking Guidance was related to greater perceived control among mothers of children with ID. Furthermore, greater uses of Acceptance, Emotional Discharge and the combined measure of avoidant coping strategies were associated with less control among mothers of children without ID. In the sample of mothers of children with ID, no significant relationship was found between stress and control; but among mothers of children without ID, more control was associated with less stress. In addition, significant correlations between stress intensity and both Problem Solving and Emotional Discharge were found among mothers of children without ID, and the use of both strategies was associated with a greater intensity of stress.

3.4. Family satisfaction

Regarding the fourth objective, when comparing family satisfaction between mothers of children with and without ID, no statistical differences were found, $p > .10$. Effect size was small and power was low.

With regard to the fifth objective, to relate the A variable of having a preschool child with or without ID, the B individual variables of coping strategies as well as the B family variables of cohesion and adaptability, and the C variables of stress and control with the X variable of family satisfaction, the step-wise multiple linear regression analysis showed that both B variables (individual and family variables) were related to family satisfaction. The dummy variable with ID/without ID (A variable) was not significant, so there was no relationship between family satisfaction and having a child with or without a disability. As expected, cohesion and adaptability were related to family satisfaction, although cohesion explained a greater percentage of the variability in satisfaction. Regarding coping strategies, approach coping was related to greater satisfaction, whereas avoidant coping was related to lower family satisfaction (Table 6). Achieved power was 1.

Table 6. Results of the stepwise multiple linear regression analysis.

Dependent variable	Step	Independent variable	R ²	adjusted R ²	F	β
Family satisfaction	1	Cohesion	.31	.31	F(1,382) = 177.64**	.56
		Cohesion	.33	.33	F(2,381) = 94.82**	.41
	3	Adaptability				.20
		Cohesion	.34	.33	F(3,380) = 65.65**	.39
		Adaptability				.17
	4	Approach coping				.10
		Cohesion	.35	.34	F(4,379) = 50.80**	.38
		Adaptability				.17
		Approach coping				.18
			Avoidant coping			

Note. ** $p < .01$. Independent variables: dummy variable with ID/ without ID (children with intellectual disabilities/children without intellectual disabilities), approach and avoidant coping strategies, family cohesion and adaptability, stress and control. Dependent variable: Family satisfaction.

4. Discussion

In the current study, mothers of children with disabilities made significantly more use of approach coping strategies compared to mothers of children without disabilities. So, our first hypothesis, which predicted that mothers of children with ID would use less approach coping strategies compared to mothers of children without ID, was not supported by the data. Our results go against studies that have found a greater use of avoidant or emotional coping strategies among mothers of children with ID (Cuzzocrea et al., 2013; Sivberg, 2002) but agrees with research that has shown that parents of children with ID use approach coping strategies (Glidden et al., 2006). The use of Seeking Guidance helps parents of children with disabilities manage the stress and prevent negative consequences to their health (Albarracín et al., 2014). Positive Reappraisal enables parents to perceive the disability as a challenge, thereby adaptively rethinking the success of the child in a positive light (Povee et al., 2012). The well-being of mothers of children with disabilities is associated with the use of more problem-focused coping (Glidden et al., 2006). The study by Abata (2017) showed that the most used coping strategy by parents of children with disabilities was problem solving, but we have not found other references in the country that may explain why mothers of children with ID significantly used more approach coping strategies than mothers of children without ID. According to an adaptive perspective, participant Ecuadorian mothers of children with ID seem to show their capacity to cope and be functional (Jess et al., 2017; Suzuki et al., 2018).

The differences in the use of avoidant strategies among mothers of children with and without ID concerned Cognitive Avoidance, Acceptance and Alternative Rewarding. Cognitive Avoidance implies not thinking about the problem, which is less effective (Kandel & Merrick, 2007). Mothers whose children do not have disabilities used this strategy significantly more than mothers of children with ID. It could be that mothers of children with ID face their children's permanent condition, and they cannot disregard what happens to them. Although the mothers of children with disabilities used Alternative Rewarding (AR) more often, AR enables them to dedicate themselves to different tasks that satisfy them. In fact, as seen in Table 4, Seeking Alternative Rewards had a significant positive correlation with family satisfaction. Mothers of children with ID used Acceptance more than mothers of children without ID, but this coping strategy was not correlated with stress; it was positively correlated with Logical analysis and Positive reappraisal, showing that these mothers may accept their children's condition but they also analysed and valued stressful situations.

Despite the undeniable effect that the birth of a child with disabilities has on the entire family system, the data from this study showed the absence of significant differences among the family dimensions studied. The Ecuadorian mothers of children with ID perceived their families as having levels of cohesion and adaptability similar to families whose children did not have ID. Thus, our second hypothesis, which predicted higher family cohesion and adaptability in families of children with ID, was not supported by the data. The levels of cohesion in both samples were high because the maximum possible value of the cohesion subscale was 50, and the average cohesion score was higher than 40 for both samples. Therefore, the effects of mutual support among Latino families observed by other studies (e.g., Al-Yagon & Margalit, 2009; Magaña, 1999) and specifically in Ecuadorian families (Handelsman, 2000) was also observed in this work. Regarding adaptability, the means of both samples were lower than those of cohesion, but close to 40. Families with small children are in the same stage of their family life cycle, and we assume that the challenges of caring for young children and the levels of family cohesion and adaptability for an adequately functioning family system in Ecuador are similar, regardless of whether the children have disabilities. All participants whose children had disabilities were previously diagnosed and received support from the Growing with Our Children programme (CNH). Consequently, this fact might have favoured family functioning. Differences in family cohesion and adaptability were related to the mothers' ages. Older mothers perceived lower levels of family cohesion and adaptability. It is unknown if families with older mothers also had older children. Because older children are often more autonomous, family cohesion may be perceived as lower; alternatively, the family has been together longer and the roles and rules related to family adaptability receive less revision, which could contribute to lower family adaptability.

Our third hypothesis was partially confirmed because mothers of children with ID experienced more control over situations related to their young children compared to mothers of children without ID; however, they experienced less stress than mothers of children without ID, which was against our prediction. The literature suggests that when a young child has a disability, parents may experience emotional burden and fatigue (Darling et al., 2012; Kandel & Merrick, 2007); nevertheless, our results showed that mothers of children without disabilities evaluated difficult situations regarding their children as more stressful than mothers of children with disabilities. One tentative explanation is that mothers of children with disabilities have had their ability to cope with stress tested; therefore, they reported less stress and more control over stressful situations. Also, this finding was related to coping strategies of mothers of children with disabilities who used active approach coping strategies, which exhibited higher control scores regarding stressful situations. This is in line with the proposal that parents of children with disabilities perceive themselves as strong because they have been able to face the challenges their children present (Yang et al., 2016). Interestingly, no significant relationship was found between stress and control among mothers of children with ID, unlike among mothers of children without ID.

Concerning family satisfaction, differences were not observed between mothers of children with and without ID. This result supports previous studies (Totsika et al., 2011) and confirms our fourth hypothesis, although it differs from other studies (Darling et al., 2012). Family satisfaction in this work was linked to family dimensions (cohesion and adaptability) and individual coping strategies (approach coping and avoidant coping). Avoidant coping does not seem to favour family satisfaction. As other authors found, when mothers perceive greater family cohesion and use approach coping or problem-focused strategies, family satisfaction is greater (Lightsey & Sweeney, 2008). These results are encouraging because previous studies have linked higher quality of life to greater motivation to spend time and energy with a child with an ID (John & Zapata, 2017). Given that family satisfaction was related to approach coping strategies, we hypothesise that greater family satisfaction may increase encouragement to take initiatives related to children with disabilities. As mothers of children with ID perceive greater control in stressful situations related to their children, the perception of being able to control this situation enables decision-making (Brown et al., 2003; Gupta & Singhal, 2004) and improves the emotional well-being of the family (Ferrer et al., 2017).

4.1. Limitations

The limitations of this study concern its cross-sectional design. Participants comprised a convenience sample of mothers, and we do not have equivalent information from fathers or mothers who were not willing to participate in data collection. This is a correlation study, and we do not have measures of the children's results that allow us to relate family and individual data of mothers with those of their children. Additionally, Moos Coping Response Inventory, Adult (CRI-A), works with small-range Likert scales, and this could have influenced the results, such as obscuring subtle differences between mothers of children with and without ID.

4.2. Future research and implications

Future research could replicate this study using wide-range Likert scales to measure coping. Other future studies should address variables that were not explored here, such as social support, subjective wellbeing, and resilience to investigate the relationships between family dimensions and social support and how they relate to resilience, either individual or family resilience, and subjective wellbeing. It would also be of interest to undertake cross-cultural research considering other non-occidental countries that do not develop universal programs for families of preschool children, such as the Ecuadorian CNH programme, to compare family dimensions and children's outcomes. A longitudinal research, ideally beginning before families receive diagnoses of their children's disabilities, that measures individual dimensions, family dimensions and children's improvements across time would also be beneficial.

This study has theoretical and practical implications. It expanded and applied the ABCX model to a sample of Ecuadorian mothers, comparing families of children with and without ID of a determined age range living in varied settings of the region. To our knowledge this has not been done before in this country. This study also contributes to a supportive, adaptive approach to working with intellectual disabilities in families. Practical implications may involve using the instruments employed or the dimensions measured here in the services already supporting families of children with or without ID. In line with the vision of the family as a system (López-Larrosa & Escudero, 2013), family and mothers' resources play a key role in the improvement of children with disabilities (Al-Yagon & Margalit, 2009). The measures used in this study may help professionals to identify mothers with approach coping skills or those in need of coping skills with stressful situations. It may also help to identify mothers in need of family support.

5. Conclusion

This research contributes to our knowledge about Ecuadorian families of young children and about families of children with ID in non-occidental countries. The results of this study support an adaptive view of disability among participating Ecuadorian families with equivalent levels of satisfaction, cohesion and family adaptability compared to families with young children without disabilities; and among mothers whom we assume have developed control and active strategies to cope with the fact that one of their children has a disability.

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