

## *A multifactor view from the Mexican family with a child with intellectual disability\**

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**Background.** The double ABCX model, has a multifactorial perspective that has been used in several countries to measure and identify variables in adaptation of families with a child with an intellectual disability, however, Mexico lacks of this kind of multi-factored analysis. **Methods.** The sample consisted of 134 Mexican families. Three statistics procedures were done: Principal component analysis, rotated into varimax-criterion, and multiple regression equations. **Results.** Four independent variables were significant (parental support, social support, adaptability-cohesion, family sense of coherence) they explained 49% of the variance in family adaptation. **Conclusions.** Results confirm that in Mexican families the adaptation to a child with intellectual disability it is a complex procedure; family resources and family definition of the situation are two of the most important factors.

**Key words:** Double ABCX model, family satisfaction, Mexican families, and intellectual disability.

The arrival of a child generates several hopes and aspirations, and when parents learn about the disability of their child, they start to face multiple sorts of stress, since the moment of birth to the everyday handling of the disability (Valdés & Ochoa, 2010). As a principal social network, family plays a very important role in physical, mental and social health of their members, but these areas might be affected in families living with a child with a disability.

It is broadly reported by researchers (Douma, Dekker, & Koot, 2006) that the permanent character of the disability generates high stress levels due to special attention and special needs. Nevertheless, they exist results showing that some families can handle the disability positively although they still consider it a stressful fact (Gupta & Singhal, 2004).

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Following this approach, a question emerges: What are the factors that help a family to adapt positively and even report benefits of the interaction with the disability of a child? Probably the answer is the interaction of specific family characteristics that determinate the type of adaptation to the child's disability. In Mexico there are not researches about disabilities and their family impact; there are some reports that concerns only one variable such as coping (Cano, 2005), cohesion, adaptability (Díaz, 2005) or parental stress (Vera, Morales, & Vera, 2005). Family, parental and conjugal characteristics are analyzed but they are poorly explored from a multifactor point of view.

The diversity and complexity of Mexican families with a child with a disability requires a conceptual framework that promotes a multifactorial approach to explain family adaptation to the disability and consider the strengths rather than family deficits.

The model Double ABCX is considered (McCubbin & Patterson, 1983) in order to understand adaptation process in Mexican families with a child with intellectual disability because it includes four post crisis factors that describe family adaptation process through a time frame, where: (aA) refers to the severity of the stressor and the accumulation of demands and additional strains; (bB) are the resources that families apply in order to handle the crisis; (cC) the changes families do to assign a meaning to their situation in order to understand it; and (xX) the family outcomes ranging as positive or negative adaptation.

#### *Pile-up of family demands (aA factor)*

This factor considers that families rarely have to manage a single stressor in their lives. Caregiver stress in families raising a child with an intellectual disability has been widely documented. It can be related to the great caring demands, special education, health care and financial aspects (Tsai & Wang, 2009) that create pile-up demands in addition to the disability itself.

#### *Family Resources (bB factor)*

This aspect includes preexisting resources and new developed ones as a response to the demands of a stressful event. According to Mc Cubbin and Patterson (1983) these resources embrace personal resources, intra-family resources and social support. Social support is considerate as a multi-dimensional construct and also an important mediator in stress; so it is necessary to specify its nature and source, for example: friends, family, specialists (Minnes, Woodford, & Passey; 2007).

#### *Family Perception or meaning (cC factor)*

In this model the cC factor recognize the complexity to understand the

crisis, so the appraisal of the stressor involves an evaluation of the situation and the family significance, that includes the initial stressor, the associated demands and the resources to deal with the event. Family coping is the result of the interaction between family resources (bB) and its evaluation (cC). This interaction is understood as the effort to bring the family back to balance (McCubbin & Patterson, 1983).

#### *Family Adaptation (xX factor)*

This factor is seen as a continuum ranging from a negative or non-adaptation characterized by an imbalance in family functioning, to a positive or successful adaptation to the child's disability using effective coping strategies (op.cit.).

Several researches have shown the Double model ABCX efficacy but there are variations in the order that the variables were presented, for example, Nachshen and Minnes (2005) found a ACBX relation instead of ABCX relation while studying empowerment in parents of children with developmental disabilities, demonstrating that parental well-being and resources, mediate the relation between the stressor (child behavior difficulties) and the factor X (empowerment). The Double model ABCX has been used also to explain the psychological well-being of parents of children with an intellectual disability, in a study made of two samples (U.S. and Korea) it was found that American mothers relate the individual variables to stress; while in the Korean sample, cultural values such as the social influence are highly associated to stress (Shin & Crittenden, 2003).

The results of Minnes and Woodford (2004) indicate that depression predictors in parents include non-adaptive behaviors in children and changes related to age. This means it is strongly associated to factor A or children's characteristics. In the other hand, Jones and Passey (2004) show that the strongest predictor of parental stress, related to the child's characteristics, was the type of family coping and parent locus of control. Azar and Kurdahi (2006) identify that maternal depression (factor xX) is consequence of the family tensions, parental stress and family income (factor aA).

These researches manifest that the Double ABCX model has been used in diverse social contexts and populations in order to explain and understand the different variables that may contribute to the family adaptation. It is important to notice that different social and cultural contexts have an influence in the complexity and diversity in variables affecting family's adaptation to a child with a disability. In consequence, it is necessary to have a theory frame as the one provided by the Double ABCX model in order to explain this phenomenon in Mexican population.

The current study has two main goals: first, to determine through variance analysis whether variables such as gender, education, income and employment, generate differences interacting with factor aA (*parental and*

*family stress*), factor bB (*resources*: cohesion, family adaptation, social support, parental support) and factor cC (*perception*: family sense of coherence, BC coping strategies), that will produce a factor xX (*adaptation*: family satisfaction level) in the family of a child with intellectual disability; and second, to use the level of family satisfaction (factor Xx) as a dependent variable in order to obtain a multiple regression model.

## **Method**

### *Population*

This study was conducted in Tlaxcala, Mexico, with a current population of 1 69936 people (INEGI, 2010). In Mexico public services for families who have a child with disabilities include free education in public special education schools named “Centers of Multiple Attention” (CAM)”. These centers are located all over the country and their purpose is to provide preschool and elementary education along with job training programs to people with any disability (motor, visual, intellectual, etc.) with the aim of their incorporation to regular schools or seeking their own independence.

From the 20 CAM in the State of Tlaxcala 5 have the lowest level of marginalization, 9 have low levels, 4 with intermediate marginalization and only one is highly marginalized.

### *Participants*

A total of 134 families with a child with an intellectual disability belonging to any of 20 CAM in the states of Tlaxcala were interviewed. The sample consisted of 268 individuals, 50% of the subjects were mothers and 50% fathers. The children of the participating parents ranged in age from 7 to 14. Inclusion criteria limited the sample to cohabitating biological parents. Only 5 families that held the criteria were not interviewed, obtaining the 97.4% of the total sample from all the Centers of Multiple Attention in the State.

In Education a 42% of the sample had secondary education, 41% had elementary education and only 16% had completed high school or had a Bachelor degree. Moreover, 42% of the sample is a housewife, 19% are employees, 15% are workers and 11% are freelancers or farmers.

About their salaries, 5 out of 10 families do not have an income or have an income under 1000 pesos per month (78 USD), 3 out of 10 families have an income between 1000 and 3000 monthly pesos (236 USD) and only 2 out of 10 have an income higher than 3000 pesos per month (236 USD).

### *Instruments*

*Demographic Index*: It integrates specific subject’s data: age, occupation,

religion, education, marital status, years in marriage, previous marriages, month income, number of economic dependents, type and number of any public or private support, occupation, child's age, place among brothers and total brothers.

*Factor A:* Parental Stress Index (IEP, Abidín, 1992). It measures stress levels caused by raising a child. The validated version of Montiel and Vera (1998) was made in a population from the State of Sonora, Mexico with a sample of 112 mothers with children; 4 factors were obtained, explaining the 59% of the variance. This stress index counts with 73 items, answered in a 5 points Likert scale, where 1 means never and 5 always. It is structured in 13 sub scales: distractibility, reinforcement, humor, acceptance, adaptability, competence, attachment, restriction, depression, relation with the husband, isolation, health; with items like “when my son wants something he/she insists until getting it”, “my son/daughter it is very smiley with me” or, “being a mother it is harder than I thought”, this last item has a Cronbach's alpha coefficient of .91 (Oliva, Montero & Gutierrez, 2006). The addition of the score of all items indicates the level of parental stress experimented by the father or mother.

*Factor bB.* Adaptability and Family Cohesion (FACES III, Gómez & Irigoyen, 1999). It is a Standardized Instrument in Mexican population, applied to 270 families from the south region of Mexico City (Ponce et al. 2002). A .70 Cronbach's alpha coefficient was obtained, concluding to be an adequate value compared with the Anglo-Saxon version (medium reliability, .80) developed by Olson, Portner & Lavee, (1985). They reported parent's perception of their own family and the connection among the family members and the family's ability to change its leading structure, roles and rules in response to an unexpected stress or family's development itself. It has 20 items in a Likert scale of a 5 points format, with items like “we listen to children's suggestions”, “we like to pass our free time with the family”, “we discuss the punishments”.

*Social Support Index* (SSI, McCubbin, Patterson & Glynn, 1982). It's an instrument developed as part of several studies that analyzed the family support level found in their communities, highlighting the emotional aspect and support nets in the community. It consists on 17 items, in a Likert scale in a format of 5 points where 1 corresponds to totally agree and 5 to totally disagree. Some items are “people know that community can help if you have problems”, or “members of my family try to show me their love and affection”. This instrument evaluates the degree in which families are integrated in the community, the perception of the community as support resource and the feeling of the community as provider of an emotional and esteem support. The internal reliability (Alfa of Cronbach) of the scale is .82. The reliability of the test-retest is .83. The total SSI value is used (to

higher punctuation, the higher index of social support). The score is acquired from the addition of the answers.

*Parenting Alliance Inventory (PAI, Abidin & Brunner, 1995).* It is an inventory that measures the support and level of commitment and raising styles that the companions perceive in parenthood. This inventory is composed by 20 items answered in a Likert scale of 5 points, where the minimum "1" corresponds to never and the maximum of "5" to always. Its count with items like: "Me and my husband/wife can have a good communication when it is about our child", "me and my husband/wife are a good team as parents". The internal reliability (Alfa of Cronbach) of the scale is .82 (Abidin, 1990).

*Factor cC: Family Sense of Coherence, (F-SOC, Sagy,1998).* This instrument is an adaptation of the scale for personal orientation from Antonovsky (1987), about the subject's opinion from the family as a coherent percept. This score is obtained through the average of all the answered items. Underlying each item is the way that the subject interprets life as comprehensible, manageable and meaningful (Antonovsky & Sourani, 1998). Previous studies have found Cronbach's alpha coefficients of .88 (Sagy, 1998), .77 (Sagy, 2001). Some items are: Relying on reactive and "do you feel that your family understand each one of their members." High scores demonstrate a strong sense of family coherence and people sense their family situation with a sense of comprehensibility, meaningfulness and manageability.

*Factor BC: Coping strategies, (F\_COPEs, McCubbin, Olson & Larsen, 1981).* This identifies the behavioral strategies used by the families before a specific critical situation. The scale consists of 30 items with five answer possibilities according to the frequency of use of each strategy where 1 corresponds to very un-satisfied and 5 to very satisfied. Cronbach's alpha was calculated in a first sample with a value of .86, with the same results in a second sample, which yielded a value of reliability of .87. Some items are: "we ask for encouragement and support to friends", "we know we are strong to resolve problems". High scores indicate a higher effectiveness in coping.

*Factor xX: Family Satisfaction, (FSS, Olson, Stewart, & Wilson 1990):*

It evaluates the degree of satisfaction experimented in family adaptability and cohesion, consisting on 10 items, which are responded in a 5 point Likert scale, where 1 is for very unsatisfied and 5 for very satisfied. Some examples of items are: "How satisfied am I with the family's capacity to realize changes" or "how satisfied am I with the time spends together". The scale has a Cronbach's alpha coefficient of .92 and a re-test of .85. This instrument is developed with the purpose of covering one of the hypotheses of the Circumplex Model, which indicates that, the most important thing is

the satisfaction experienced by the family, its cohesion and adaptability level. The score results by adding answers, having a result between 10-50 points. The lower range reflects the family lack of satisfaction while the upper one shows family satisfaction.

### ***Procedure***

A previous appointment was set to apply the battery test to parents at their corresponding CAM or in some cases, at the family's home. For each test, tables were elaborated where the different optional answers were written in clear writing for their better identification. In case the individuals were not able to read, they could choose on the same tables. The interviewing staff was trained in order to use correctly the instruments. The field trip was approved until reaching the 95% accordance in these tools. Each and every of the participants signed a consent form in order to participate.

### **Results**

We developed an exploratory factor analysis in order to validate the dimensions for each instrument of the present investigation. We worked with the method of extraction of factors; sample adequacy KMO values were between .73 and .95 proving the viability to do a Varimax rotation. The data in Table 1 indicate that all measures are bidimensional accomplishing the statistical parameters of a construct validation and prove the theory-based. Likewise, we performed an internal analysis by the Cronbach's alpha method, its values ranged from .64 to .91 for a total instrument consistency. The lowest value resulted for the Family Sense of Coherence (F-SOC) with a questionable alpha .64; this measure has two dimensions with values of .64 and .56. Subsequently, the Coping Strategies Instrument (F-COPES) presented an acceptable internal consistency of .70, with the dimension of "social support" with an alpha of .78 and the dimension of "redefinition familiar" with an alpha of .68.

The Family Satisfaction instrument (FSS) presented good internal consistency with a Cronbach's alpha of .79 and its dimensions had acceptable values of .68 and .70 in "family union" and "family flexibility" respectively. Social Support Index (SSI) had a questionable score of .73 and its dimensions were also questionable .69 and .64 scores in "community support" and "family network". With a score of .80 the instrument of Family Adaptability and Cohesion (FACES III) obtained good and acceptable scores in the dimensions of "emotional unity" and "family participation" with .75 and .73 respectively. Finally excellent score for internal consistency of .91 was found for Parental Alliance Inventory (PAI) and in its dimensions had a score of .88 and .86 in "parental relationship" and "parental perception" (see Table 1).

Cumulative variance ranged from 30% to 48%, the instrument with the lowest score was Coping Strategies (F-COPES) with items such as "we

share problems with the family”, with a factor weight of .46, or other item is “we have the strength to solve problems” with a factor weight of .65. The measure with more cumulative variance was the Parenting Alliance Inventory (PAI) with items such as “when a problem emerge the two of us search for a solution” item which had .68 of factorial weight. The highest Cronbach’s alpha coefficient for each dimension was to “parental relationship” of the PAI instrument, with .88. The contrary happened for the dimension of “comprehensibility” of the Family Sense of Coherence Instrument (F-SOC), with a low Cronbach’s alpha coefficient of .56.

**Table 1. Psychometrics Variables Correlated of parents of a child with intellectual disability in Tlaxcala CAM.**

Measure	Dimension	No. Reactive	V. E.	$\alpha$	K.M.O	Model
PAI	Parental Relationship	12	26%	.88	.94	B
	Parental Perception	8	22%	.86		
FACES III	Affective Unit	7	22%	.75	.81	B
	Family Participation	7	20%	.73		
SSI	Community Support	6	25%	.69	.76	B
	Family Net	4	20%	.64		
F-SOC	Family Meaning	6	21%	.64	.73	C
	Comprehensibility	4	18%	.56		
F-COPEs	Social Support	9	18%	.78	.75	BC
	Family Redefinition	8	12%	.68		
FSS	Family Unity	5	21%	.68	.84	X
	Family Flexibility	5	24%	.70		

Note: Explained variance,  $\alpha$ : Cronbach’s alpha, K.M.O.: Kaiser Mayer Olkyn, Model: Representatives model variables.

In order to test a hypothesis of the project in relation of demographic variables (gender, education, income and occupation) of interviewed parents and their differences in relation to the Double ABCX model variables, we decided to work with comparison of means for each of the variables. The *t*-Student test of the variable “sex”, indicates that men and women are statistically different in all cases; women show higher levels of stress than men; significant differences were observed for mother’s skills in the IEP instrument, particularly the dimension of “health-socialization” ( $t = 4.22, p < .001$ ), than in those related to the perception of child’s temperament.

In the “Parental Perception” (PAI) dimension, men perceive a greater support from their partner; same way, for the Family Sense of Coherence (F-SOC) significant differences were found between men and women. Men have the highest mean scores (5.56) in “family meaning” (F-SOC) and also in family satisfaction (FSS), “family unity” (FSS), and “family flexibility” (FSS), dimensions were statistically significant, with Student’s *t*-test values of 2.51 and 2.97 toward men.

A one-way ANOVA analysis with and Scheffé post-hoc test for equal variability was achieved for demographic variables with more than two

levels, to compare between groups. It was found that fathers' and mothers' education is related to the variability in some instruments dimensions. In this case, mother's skills in "attachment-restriction" (IEP) as in "health-socialization" (IEP) turned statistically significant and show an important difference in a high level of stress among mothers without education or elementary school and those that have high school and college. The two dimensions of Family Sense of Coherence (F-SOC) and one of Parenting Alliance Inventory (PAI) "parental perception" turned statistically significant following the same logic than the former data, less education level results in less "family meaning" (F-SOC) and "comprehensibility" (F-SOC), but with a higher education level these indicators increase too (see Table 2).

**Table 2. Significant variability analyses for "Education" factor in Double ABCX model in families with a child with intellectual disability (n =134)**

Dimensions	Education	<i>M</i>	<i>SD</i>	<i>F</i>	<i>p</i>
Mother's skills Attachment-Restriction (IEP)	No education and Elementary	3.26	.36	4.68	0,10
	Middle School	3.16	.35		
	High school and College degree	3.08	.31		
Mother's skills Health-Socialization (IEP)	No education and Elementary	2.97	.43	6.63	.002
	Middle School	2.82	.40		
	High school and College degree	2.72	.42		
Family Meaning (FSOC)	No education and Elementary	5.43	.90	6.75	.001
	Middle School	5.47	.87		
	High school and College degree	5.96	.58		
Parental Perception (PAI)	No education and Elementary	4.10	.73	3.21	.04
	Middle School	2.87	.62		
	High school and College degree	3.81	.42		
Comprehensibility (FSOC)	No education and Elementary	3.38	1.30	5.41	.005
	Middle School	3.69	1.20		
	High school and College degree	4.10	1.24		

The analysis of variance (ANOVA) for "Income" had the largest amount of significant dimensions. The Parental Stress Index (IEP) always pursued the following logic – less income more stress –. In the Parenting Alliance Inventory (PAI) when the income increases the scores also increase, for example, a higher income is related to higher "parental perception" ( $f = 4.55$ ,  $p < .01$ ) and "parental relationship" ( $f = 8.31$ ,  $p < .001$ ).

The statistically significant relationships established between the variable

“income” and each of the dimensions of the instruments are: higher income higher percentage of “family participation” and “affective unit” of the instrument of Adaptability and Family Cohesion (FACES III), “family meaning” and “comprehensibility” of the instrument Family Sense of Coherence (SOC-F), “community support” and “family net” of the Social Support Instrument (SSI) and “social support” and “family redefinition” of the instrument of Coping Strategies (F-COPES).

Parent’s occupation turns to be important in the comparison of the different dimensions. Housewives show greater values in “health-socialization” (IEP) skills ( $f = 2.26, p < .02$ ) than employees, workers or field workers. However in “parental relationship” (PAI) ( $f = 8.76, p < .01$ ), housewives had the lowest level in perception indicating a low perception of parental relationship, while, workers and employees show the highest level. This same result was obtained in “comprehensibility” (F-SOC) dimension ( $f = 6.67, p < .01$ ) observing that housewives perceive low levels of “comprehensibility” and “parental perception”.

Finally, in order to find those predictors variables involved in family satisfaction level (Xx factor), a stepwise multiple regression analysis was done to study the relationship between the independent variables (PAI, FACES III, FSOC, IEP, FCOPES) and the dependent variable family satisfaction (FSS). Finding that the four independent variables explained 49% of the variance in family satisfaction. The Durbin-Watson independence criteria was achieved with a score of 1.62, indicating that residues (those values out of the criteria to be within the model) are independent between each other. In the same way, the regression model contrasts the hypothesis that the regression line is greater than zero and that the variables involved are linearly related. The residual square root is equal to .38 and refers to the not explained percentage by the regression line of the independent variables residues.

**Table 3. Coefficients of partial regression regarding Familiar Satisfaction as a variable in Families with a child with intellectual disability.**

Model	Non-standardized coefficients		Standardized Coefficients	t	p	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	.201	.186		1.076	.283		
PAI	.247	.042	.316	5.878	.000	.665	1.50
F-SOC	.168	.030	.279	5.627	.000	.781	1.28
SSI	.166	.044	.194	3.789	.000	.732	1.36
FACES III	.141	.050	.146	2.837	.005	.727	1.37

Note: Dependent Variable: FSS, R= .70, R<sup>2</sup>=.49, Durbin-Watson= 1.62, VIF= Variance Inflation Factor

Significant variables for the model were found, such as Family Satisfaction (FSS) and Parental Perceived Support (PAI) with a beta score of 0.31, followed by the variable Family Sense of Coherence (F-SOC) with a beta score of .27 and finally the variable that has less relative importance in

the model is Adaptability and Family Cohesion (FACES III) with a beta score of .14 (See Table 3). Taking the equation of multiple regression model:  $FSS = 0.201 (PAI (247) + FACES III (141) + FSOC (168) + SSI (166))$ . The analysis of collinearity tolerance and variance inflation shows that results are not influenced by collinearity, showing independence in each variable. In the same way like tolerance values are between .68 and .91. The residuals present normality due to values between -2.72 and 2.9. The influence values for residuals are between minimums of .01–.11 considered as not problematic. In the same way, the Cook distance is .01 and 2.42 showing that cases don't need to be reviewed.

Family Satisfaction (FSS) it is better perceived by men, particularly because man evaluates based on results and does not bear the process. The results of this study indicate that men who are mostly poor and with conservative traditions have significant differences compared with their spouses; this is related to traditional family pattern, where the mother is full time in charge of the house and dedicated to education, health, food and care of its members, while the father is in charge of providing resources.

Educational level of participants establishes statistically significant differences in parenting stress, where parents with higher education perceive themselves as less competent of caring; therefore, the dimension of "attachment – restriction" (IEP) shows that subjects with elementary school perceived higher levels of attachment than subjects with the university. Following the same logic, the dimension "health – socialization" (IEP) skills decreases 20 decimals from elementary school to the university with a starting score of 2.97. The "family meaning" (F-SOC) increases with education and the perception of competence decreases with education. It is the men's education that establishes differences because in this social context, women are housewives and their dedication has no effect on the variable. By increasing the father's education he is perceived less competent and the mother assume more responsibilities which she cannot do with the father because his absence and lack of time.

It is important to note that the dimensions of the Parental Stress Index decreased as income increases. There is a relationship between income and "familiar satisfaction", "social support", "coping", "adaptability" and "family cohesion" because they proportionally decrease if stress increases. This is particularly associated with the uncertain financial situation mostly of freelance workers. Results regarding parent's employment show a higher stress tendency among housewives. The "parental perception" dimension reaches its higher score among workers and the "familiar unity" dimension reaches its higher among farmers. In "family meaning" dimension and "coping" show the higher percentages in independent workers or freelancers. Housewives in all significant comparisons are always among the lowest perception values. The linear univariate model reveals that occupation, salary and education generates a model in which explains 26% of the

variance with a significance of .02.

## Conclusions

The results of this research provide relevant information of family adaptation to a child with an intellectual disability in a Mexican context. These results expose two important factors: parental support (bB factor); family resources and family sense of coherence (cC factor). As stated in the Double ABCX model (McCubbin & Patterson, 1983) adaptation does not only depend on the stressor and the accumulation of demands related to it, but it is a much more complex process where resources and perception contribute in a significant way.

In the literature related to family stress, support has a central role in the comprehension of the family adaptation (Trute et al., 2008). The present study corroborates that the perception of parental support plays an important role and confirms the existence of gender differences (Oelofsen & Richardson, 2006) which is also consistent in other studies (Bristol, Gallaghe, & Shopler, 1988; Saloviita, Itälina, & Leinonen, 2003); our results suggest that the resources effectiveness related to family satisfaction will depend of the parental support perception, emphasizing the importance of the relational family dynamics. This suggests the need to understand adaptation in terms of family context and not focusing only in the father or mother of a child with an intellectual disability (Trute, Worthington, & Hiebert-Murphy, 2008). It is also confirmed the importance of *Family perception or meaning* (cC factor), in the perception of family satisfaction. This factor represents a cognitive map, a family coherent vision of the world (Sagy, 1998), it is expected to be a moderator factor for stress and as such, it has been used in disabled populations (Margalit & Kleitman, 2006; Oelofsen & Richardson, 2006; Pozo, Sarriá, & Méndez, 2006). According to the results from this research, the sense of family coherence is strongly related to family satisfaction. This suggests, that while individuals have a comprehensive, meaningful and manageable vision of life they will be obtain a positive result in adaptation to the child with a disability.

In a same way, predictors as income, occupation and education highlight the complexity of family adjustment; these findings, also show up the importance to adopt multifactor approaches, and corroborate the need to consider demographic factors (Orsmond & Seltzer, 2007), particularly in developing countries such as Mexico, where most families live poverty conditions.

Research results suggest that despite of family's culture, social and economic disadvantages, this may condition a greater trend to experience high levels of stress (McConkey et al. 2008; Shin & Nhan, 2009); in this study probably the lack of financial resources block adequate life conditions, generates stress in parents and a lower family satisfaction, it is possible that

the effects of social-economic disadvantages are evident through their impact in the quality of family relations and family functioning and parental practices. (Emerson et al., 2008).

The results in this research, find support in previous studies that indicate a significant association between a socially disadvantaged environment and its family repercussion, because it increases the risk of poverty due to financial and social cost caused by caring a person with an intellectual disability. This has serious implications regarding children with intellectual disabilities, because they will live in conditions that often limit their life chances and well-being (Emerson et al., 2010). Such poverty has a direct impact on family functioning and child development.

Finally, this research illustrates the advantages of a multi factor approach in understanding family adaptation to a child with an intellectual disability. The strength of this work relies in being the first one of its kind in a Mexican context, which may also help the development of future researches. One of its limitations is the sample size, despite this, 95% of the State population with the inclusion criteria was included. The implications of this study drive us to realize the need of further research to examine and evaluate more fully the interaction between familiar characteristics, in order to establish preventive actions to solve difficulties and possible risks for these families considering that family adaptation it is a complex and multifactorial phenomenon. In consequence, it will be important to establish services and design intervention programs to offer the opportunity to promote the resources and strength in an individual and a familiar level in order to help to achieve a positive adaptation to disability.

## References

- Abidín, R. (2<sup>nd</sup> ed.). (1990). *Parenting stress index. Manual*. Charlottesville, Canada: Pediatric Psychologists Press.
- Abidín, R. (1992). The determinants of parenting stress. *Journal of Clinical Child Psychology, 21*, 407-412.
- Abidín, R. & Brunner, J. (1995). Development of a parenting behavior. *Journal of clinical Child Psychology, 21*, 407-412.
- Antonovsky, A. (1987). *Unraveling the mystery of health*. California: Jossey-Bass.
- Antonovsky, A., & Sourani, T. (1988). Family sense of coherence and family adaptation. *Journal of Marriage and the Family, 50*, 79-92.
- Azar, M., & Kurdahi, L. (2006). The adaptation of mother of children with intellectual disability in Lebanon. *Journal of Transcultural Nursing, 17*(4), 375-380.
- Bristol, M., Gallagher, J. & Shopler, E.(1988). Mothers and fathers of young developmentally disabled and nondisabled boys: Adaptation and spousal support. *Developmental Psychology, 24*(3), 441-451.
- Cano, V. (2005). *Estrés y estilos de afrontamiento de padres con un hijo con discapacidad intelectual [Stress and styles of coping with parents with a child with intellectual disabilities]*. Thesis especialidad. México: UNAM.

- Díaz, L. (2005). *Cohesión y adaptabilidad en familias de pacientes que padecen insuficiencia renal crónica [Cohesion and adaptability in families of patients suffering from chronic renal failure]*. Thesis especialidad. México: UNAM.
- Douma, J., Dekker, H., & Koot, M. (2006). Supporting parents of youths with intellectual disabilities and psychopathology. *Journal of Intellectual Disability Research, 50*(8), 570-581.
- Emerson, E., Graham, H., McCulloch, A., Blacher, J., Hatton, C., & Lewellyn, G. (2008). The social context of parenting 3-year-old children with developmental delay in the UK. *Child: Care, Health, and Development, 35*(1), 63-70.
- Emerson, E., Shahtahmasebi, S., Lancaster, G., & Berridge, D. (2010). Poverty transitions among families supporting a child with intellectual disability. *Journal of Intellectual & Developmental Disability, 35*(4), 224-234.
- Gómez, C. & Irigoyen, C., (1999). Selección y análisis de instrumentos para evaluación de la estructura y funcionalidad familiar [Selection and analysis of instruments for assessment of the structure and family functionality]. *Archivos Medicos Familiares, 1*(2), 45-57.
- Gupta, A., & Singhal, N. (2004). Positive perceptions in parents of children with disabilities. *Asia Pacific Disability Rehabilitation Journal, 15*(1), 22-35.
- Instituto Nacional de Estadística y Geografía [Instituto Nacional de Estadística y Geografía] (2010). Recuperado en <http://cuentame.inegi.org.mx>.
- Jones, J., & Passey, J. (2004). Family adaptation, coping and resources: Parents of children with developmental disabilities and behavior problems. *Journal on Developmental Disabilities, 11*(1), 1-196.
- Margalit, M., & Kleitman, T. (2006). Mother's stress, resilience and early intervention. *European Journal of Special Needs Education, 21*(3), 269-283.
- McConkey, R., Truesdale-Kennedy, M., Chang, M., Jarrah, S., & Shukri, R. (2008). The impact on mothers of bringing up a child with intellectual disabilities: A cross-cultural study. *International Journal on Nursing Studies, 45*, 65-74.
- McCubbin, H., Olson, D. & Larsen, A. (1981). Family Crisis Oriented Personal Scales (F-COPES). In D. H. Olson, A. Thompson, M. McCubbin (1996). *Family assessment: Resiliency, coping and adaptation. Inventories for research and practice* (pp. 143-159). Madison, WS: University of Wisconsin System.
- McCubbin, H., Patterson, J., & Glynn, T. (1982). Social Support Index (SSI). In McCubbin, H., Thompson, A., McCubbin, M. (1996). *Family assessment: Resiliency, coping and adaptation. Inventories for research and practice*. Madison, WS: University of Wisconsin System.
- McCubbin, H., & Patterson, J. (1983). The family stress process: The double ABCX model of adjustment and adaptation. In H. McCubbin, M. Sussman, J. Patterson (Eds.), *Social stress and the family: Advances and developments in family stress theory and research* (pp. 7-37). New York: Haworth.
- Minnes, P., & Woodford, L. (2004). Well-being in aging parents caring for an adult with a developmental disability. *Journal on Developmental Disabilities, 11*(1), 47-66.
- Minnes, P., Woodford, L., & Passey, J. (2007). Mediators of well-being in ageing family careers of adults with intellectual disabilities. *Journal of Applied Research in Intellectual Disabilities, 13*(2), 1-12.
- Montiel, M., & Vera, J. (1998). Análisis de las propiedades psicométricas del índice de estrés de la crianza en una población rural del estado de Sonora [Analysis of the psychometric properties of the index of stress of parenting in a rural population of the State of Sonora]. *La Psicología Social en México, 6*, 89-90.

- Nachshen, J., & Minnes, P. (2005). Empowerment in parents of school aged children with and without developmental disability. *Journal of Intellectual Disability Research, 49*(12), 889-904.
- Oelofsen, N., & Richardson, P. (2006). Sense of coherence and parenting stress in mothers and fathers of preschool children with developmental disability. *Journal of Intellectual & Developmental Disability, 31*(1), 1-12.
- Olson, D., Portner, J. & Lavee, Y.(1985). *FACES III*. Family Social Science, University of Minnesota: St. Paul, MN, 55108.
- Olson, D., Stewart, K., & Wilson, L. (1990). *Health and stress profile (HSP) revised*. Minneapolis, MN: Profile of Health Systems.
- Oliva, L., Montero, J. & Gutierréz, M. (2006). Relación entre el estrés parental y el del niño preescolar [Relationship between parental stress and the preschool child]. *Psicología y Salud, 16*(02), 171-178.
- Orsmond, G., & Seltzer, M. (2007). Siblings of individual with individual with autism or Down syndrome: Effect on adult lives. *Journal of Intellectual Disability Research, 51*(9), 682-696.
- Ponce, R., Gómez, C., Terán, M., Irigoyen, C., & Landgrave, S. (2002). Validez de constructo del cuestionario FACES III en español (México) [Construct validity of of the questionnaire FACES III in Spanish (Mexico)]. *Atención Primaria, 30*(7), 435-44.
- Pozo, P., Sarriá, E. & Méndez, L. (2006). Estrés en madres de personas con trastornos del espectro autista [Stress in mothers of people with autistic spectrum disorders]. *Psicothema, 18*(3), 342-347.
- Sagy, S.(1998). Effects of personal, family and community characteristics of emotional reactions in a stress situation: The Golan Heights negotiations. *Youth & Society, 29*, 311-329.
- Sagy, S. & Dotan, N. (2001). Coping resources of maltreated children in the family: A salutogenic approach. *Child Abuse & Neglect, 25*, 1463-1480.
- Saloviita, T., Itälina, M. & Leinonen, E.(2003). Explaining the parental stress of fathers and mothers caring for a child with intellectual disability: A Double ABCX Model. *Journal of Intellectual Disability Research, 47*(4/5), 300-312.
- Shin, J., & Crittenden, K. (2003). Well-being of mothers of children with mental retardation: An evaluation of the Double ABCX model in a cross-cultural context. *Asian Journal of Social Psychology, 6*(3), 171-184.
- Shin, J., & Nhan, N. (2009). Predictors of parenting stress among Vietnamese mothers of young children with and without cognitive delay. *Journal of Intellectual & Developmental Disability, 34*(1), 17-26.
- Trute, B., Worthington, C. & Hiebert-Murphy, D. (2008). Grandmother support for parents of children with disabilities: Gender differences in parenting stress. *Family Systems & Health, 26*(2), 135-146.
- Tsai, S., & Wang, H. (2009). The relationship between caregiver's strain and social support among mothers with intellectually disabled children. *Journal of Clinical Nursing, 18*, 539-548.
- Valdés, A., & Ochoa, J. (2010). *Familia y crisis: Estrategias de Afrontamiento [Family and crisis: Coping strategies]*. México: Prentice Hall Pearson.
- Vera, J., Morales, D., & Vera, C. (2005). Relación del desarrollo cognitivo con el clima familiar y el estrés de la crianza [Relationship of cognitive development with the family atmosphere and the stress of parenting]. *Psico-USF, 10* (2), 161-168.

