REVISTA CHILENA DE PEDIATRÍA
Sociedad Chilena de Pediatría
www.scielo.cl

Rev Chil Pediatr. 2017;88(3):340-347
DOI: 10.4067/S0370-41062017000300005

ORIGINAL ARTICLE

Socioeconomical level and behavior in school-age children: the mediating role of parents

Nivel Socioeconómico y conductas externalizadas en preescolares: el rol del mediador parental

Natalia Ulloa Vidal[a], Félix Cova Solar[a], Claudio Bustos N.[a]

[a]Psychology Department University of Concepción, Concepción-Chile

Received: 19-5-2016; Accepted: 14-12-2016

Abstract

Background: One of the most important facts that determine human development is the socioeconomic status (SES), specifically, low SES and poverty. Likewise, family environment is essential in the development of children and a potential mediator or moderator of the effect of other social conditions in children. **Objective:** To analyze the role of parenting stress as a variable that mediates the relationship between SES and both externalized and internalized behaviors in preschool children. **Subjects and Method:** Descriptive secondary base study based on the Longitudinal Survey of Chilean First Infancy that selected a stratified sample, representative by clusters, of 9.996 children from 3 to 5 years old and their caregivers, that completed a battery of instruments for measuring SES variables, parenting stress and externalized and internalized behaviors. The analysis used a linear model with least square estimate. As hypothesis test, the Dm (an adaptation of the F-test for multiple account assignment) was used. **Results:** The mediation model of parenting stress in the relationship between SES and both externalized and internalized behaviors was confirmed for the latter; regarding externalized behaviors, a model of moderation was observed, being the stress influence lower on the low SES. **Conclusions:** Parental stress showed a clear relationship with the presence of externalized and internalized behaviors, stronger than the SES. The relationship between SES and parenting stress is very important to understand the processes that affect children's development.

Keywords:
Parenting stress, socioeconomic status, preschool, mediation, moderation.

Correspondence:
Natalia Ulloa Vidal
nataliaulloa@udec.cl

Introduction

The development and learning process of children depends on the influences of the natural and social environment, which can be favorable or obstructive in many different ways[1-5]. A particularly important determinant of child development is family socioeconomic status (SES), specifically a low SES and poverty. National and international studies show that children who live in poverty reach lower levels of development than their peers with a higher socioeconomic status[6-9].

In Chile, incomes are led by inequity, and it is one of the most worrisome problems, producing a wide sector of the child population lives in conditions of poverty. Although poverty levels have declined, still about a fifth of the population lives in this condition: 14.4% of Chileans are in poverty, 20.4% in multidimensional poverty and 5.5% in poverty and multidimensional poverty. On the other hand, there are no relevant changes in the levels of inequality, which are considerably high[10].

There are a few national researches which show the relationship between SES and the development of boys and girls[11]. Some studies, which were carried out in the context of the Subsystem for the Protection of Children (Subsistema de Protección a la Infancia, Chile Crece Contigo), show that 32% (in 2010) and 34% (in 2013) of children have developmental delays. This situation is highly frequent in rural areas (48% and 44%, respectively). One of the areas of development most affected was socio-emotional development[12,13].

A study carried out with families of children attending kindergartens of JUNJI (National Board of Kindergartens, according to its acronym in Spanish) showed that family variables are significantly important in child development. This study concludes that the family's attitude towards parenting is fundamental and very important, even more than other "relevant" variables, such as schooling or parental occupation[14]. Some findings suggest that the family environment would be fundamental for the adequate development of children and a potential mediator or moderator of the effect of social conditions, providing some protection to vulnerability through some actions, such as maternal affection and some activities of stimulation. The quality of the relationship between parents and child, adding the factor of feel 'unconditionally loved', are a protective mechanism that increases the resilience of children to the adversity of living conditions and the risks they face due to their context[15].

According to family environment, an important aspect is the level of experienced parental stress. This has been discussed from different perspectives, but all agree that daily stressors and care demands implicit in parenting role are crucial for parental stress[16,17]. It has been suggested that the presence of stress depends on three fundamental factors: the psychological resources of each parent (e.g., personality, attitudes towards parenting, coping style or strategies), child characteristics (e.g. temper, age, gender), and the context (e.g. social support, employment, socio-economic status).

Stress contributes to parents' irritability, which led them to have aggressive behaviors with their children or to counteracting the aggressive response of their children with more aggression[19].

Likewise, it would be associated with higher levels of indifferent or disconnected behavior, the latter being a mediating variable for the prediction of behavioral problems of boys and girls[20,21].

It is important to mention that a behavioral problem of boys and girls also affects parental behavior, by establishing a two-way relationship. Thus, high parental stress contributes to a worsening of children's behavioral problems, and problems of child behavior contribute to worsening levels of parental stress[17,22] and behavior[23].

Bedregal (2010) reports that 20% of primary caregivers of Chilean children perceive parenting as an emotionally and physically demanding instance, with a low proportion of caregivers who feel capable of handling the negative emotions that arise in parenting[12].

The present study focuses on externalized and internalized behaviors, their relationship with SES and parental stress. Several researchers have identified that the most frequent forms of disadaptive behaviors* in childhood can be located in two dimensional groups. One of them corresponds to behaviors usually called "internalized", related to negative emotional experiences of malaise, fear, anxiety, sadness and depressive mood, somatizations, and avoidance and isolation behaviors. The second group refers to behaviors called "externalized", which imply disruptive behavior in relation to others and the environment, showing hostility, aggressiveness and lack of respect to rules[24]. These maladaptive behaviors in early childhood (0-6 years) may affect the present and future well-being of boys and girls[25]. These problems, in certain contexts, have the risk of stabilizing or worsening later and are a risk factor for various psychopathological difficulties in adolescence and adulthood. Externalized behaviors are those that have shown the greatest risk of future continuity in many different manifestations[26].

The relationship between SES, in particular, between poverty and social disadvantage and greater risk of developing internalized or externalized behaviors

*NT1: 'Maladaptive behavior' - comportamiento/conducta anormal o psicopática/conducta mal adaptada, inadaptada. Término especializado y aceptado en el área de psicología.

has been observed in several research projects[27-29]. Identifying the processes through which SES can influence, the development of internalized and externalized behaviors is extremely important for the implementation of relevant promotion and prevention strategies. Therefore, the objective of this research is to determine if parental stress is a variable that comes as a mediator of the effect of SES on internalized and externalized behaviors.

Method

A secondary analysis was carried out based on the data collected in the Longitudinal Survey of Early Childhood, from now on as LSEC (Encuesta Longitudinal de Primera Infancia, ELPI, according to its acronym in Spanish) in Chile, carried out during 2012. The LSEC was a descriptive study with a cross-sectional design, whose sample frame corresponded to children born between January 1, 2006 and December 31, 2011. It was necessary to have reliable information of children born alive between these dates for the selection of the sample, and who did not register death at the date of data processing. This information was provided by the Civil Registry and Identification Service of Chile (Servicio de Registro Civil e Identificación, SRCeI, according to its acronym in Spanish). A stratified sampling was used as sample design, in which the strata were constructed by conglomeration of communes that had similar SES. The selection of the units of analysis was done by systematic random sampling, while the distribution of the sample was made proportional to the population of each stratum, considering the 15 regions of the country. In order to obtain a representative sample of the boys and girls, the use of a stratified two-stage cluster sample design was considered as the best option. The variable "commune" was considered as the smallest and most reliable unit to form the conglomerates of the individuals in the records of the SRCeI, constituting this, the first stage unit[31]. Thus, the sample consisted of 16,033 children and their caregivers belonging to a representative sample of the Chilean territory.

A sample of the existing database was selected for this study, whose inclusion criterion was for children between 3 (36 months) and 5 (71 months) years old. Following this criterion, the selected sample was 9,669 children, together with their main caregivers. The average age for children was 4 years and 5 months (SD = 10.42 months) and that of their caregivers was 31 years 6 months (SD = 7.55 years). The sample was balanced by gender (51% girls and 49% boys). Different is the case of their caregivers, where 0.3% corresponded to men, 98% to biological mothers and 2% to other relatives. 84% of the selected children attended pre-school education, while 16% did not attend any education center. When dividing the sample into the three large groups of SES (high, mean and low), 3.91% was in high SES, 71.34% in mean SES and 24.75% in low SES. Although the LSEC had expansion factors to achieve representativeness for the territory for the transversal and longitudinal analysis, it was not considered pertinent to use it, since the effect of the geographic location was considered to be smaller when controlling the main variable, which is SES.

There should be no significant bias within the subsample performed, since the selection was random.

SES is understood as a combination of factors that describe an individual or family, and include various interrelated aspects, such as income, education level and parental occupation[32]. This was categorized in the table of double entry for socioeconomic stratification, based on occupational category and educational level of ESO-MAR: ABC1, C2, C3, D and E[33]. These are divided into three groups, leaving as High SES: ABC1, Medium SES: C2, C3, and Low SES: D and E[34].

All the people who agreed to participate in the study were initially visited by a surveyor at their homes, who collected socio-demographic data (used for the characterization of the sample and the construction of the SES), where they signed immediately their Informed Consent, which explained the main objectives of the research and their voluntary participation[35]. Along with this, they were asked for contact information for the coordination of a subsequent visit by a child's development specialist, for the application of the abbreviated version of the Parenting Stress Index[17] and Child Behavior Checklist 1½-5[36], among other instruments.

The abbreviated version of the Parenting Stress Index (PSI) is a self-report questionnaire consisting of 36 statements, to which the parents responded on a 5-point Likert scale. It provided information on how the adult felt in his/her role of father or mother, assessing the stress experienced in the exercise of paternity/maternity. It consists of three scales: Parental distress, Parent-Child Dysfunctional Interaction and Difficult Child. From the sum of these three scales an overall final score was obtained called Total Stress. The score in this variable indicated the degree of stress that the parents experienced when playing their role (score range: 36-180)[17].

The Child Behavior Checklist 1½-5 (CBCL) is a self-report questionnaire that has 99 phrases, where the main caregivers of children between 18 months and 0 days and 71 months and 30 days respond to what degree they are found in their children. For each statement presented there are three alternatives: it is not true (0 points) somewhat or sometimes true (1 point) and very true or often true (2 points). It aims to evalua-

te the behavior and emotional problems of preschool children, allowing the measurement of the presence of disadaptive behaviors in global terms, called total problems, and two general subscales, Internalization and Externalization[36]. The Internalization scale has 28 items (score range 0 to 56) and the Externalization scale 24 items (score range 0-48).

The reliability and validity established by the authors of both instruments have been confirmed cross-culturally, including Spanish-speaking countries like Chile[11,37]. For the data analysis the gross score of the indicated instruments was used.

For a significant number of cases, the LSEC database did not record the SES (7,617 cases of 16,033, considering the complete database). In order to respond to this difficulty, a simple imputation algorithm was used that considered three ways of assigning a unique value to the SES, used in order according to their availability: by goods (official method indicated by Association of Market Research (Asociación de Investigadores del Mercado, AIM), 2000), for historical occupation information, and finally, through *random forest*, a method of classification of *machine learning*, using information on education, property or goods and mother's education level, total score of the Battelle Developmental Inventory and the four subscales of the Child Learning and Development Test (Test de Aprendizaje y Desarrollo Infantil, TADI). The convergence of the chains and the plausibility of the imputed data were corroborated.

Prior to the evaluation of the mediation of parental stress in the relation between SES and maladaptive behaviors, we evaluated the possible existence of a moderating effect of parental stress on the relationship between SES and disadaptive behaviors. The existence of a moderating effect implies that a simple mediation hypothesis cannot be analyzed[38].

For this purpose, a linear model with least squares estimation was used, specifically in the models for predicting internalized and externalized behaviors that included SES and parental stress as predictors. We sought to identify if the interaction effect between SES and parental stress was statistically significant. As proof of hypothesis, the Dm test, *an adaptation of the F-test for multiple account assignments*, was used. As a test to establish the existence of a mediation effect, a non-parametric resampling with 1,000 samples was used, where it was calculated that the product of the SES regression coefficients on Parental Stress (a) and Parental Stress on Internalized Disadaptive Behaviors (b) was different from 0. As the SES is a categorical variable with three levels, the regression coefficients will be the differences of the high and low SES with respect to the mean SES, which is taken as the reference point. A mediation effect was considered to exist if the 95% resampling confidence interval does not include 0[39]. The ratio of the indirect effect on the total effect was used as an indicator of the size of the effect of the mediation, for both the high and low SES.

The LSEC was evaluated and approved by the Ethics Committee of the US National Institutes of Health, where it was presented due to the connection which it established with the University of Pennsylvania for the use of the data. Locally, we used the information properly with regard to the Protection of personal data, established in Chilean Law 19.628 of 1999 and the protection of confidentiality and statistical confidentiality.

Results

Table 1 show that levels of parental stress and disadaptive behaviors are inversely related to the socioeconomic level of the caregivers, with higher levels in the lower SES and lower in the high SES. Analysis of variance indicates that SES is related to 6.3% of the variance of parental stress, 2.8% of that of internalized CBCL and 1.3% of externalized CBCL.

When performing the pre-mediation check of a possible stress moderation effect on the relationship between SES and disadaptive behaviors, we found that the interaction effect was not significant in the internalized CBCL model, Dm (2,183.34) = 1.35, p = 0.26, but it was in the externalized CBCL model, Dm (2,134.93) = 11.57, p < 0.001.

Table 1. Raw scores of parental stress and disadaptive behaviors by SES

Scales	Low SES		Medium SES		High SES		η^2
	M(SD)	CI 95%	M(SD)	CI 95%	M(SD)	CI 95%	
PSI	83.30 (25.54)	[82.25; 84.34]	72.36 (21.49)	[71.84; 72.88]	58.81 (15.28)	[57.20; 60.41]	0.0631
Internalized CBCL 1½-5	15.41 (9.93)	[15.01; 15.81]	12.81 (8.44)	[12.61; 13.01]	8.91 (5.90)	[8.31; 9.51]	0.0278
Externalized CBCL 1½-5	17.57 (10.09)	[17.16; 17.98]	16.08 (9.49)	[15.86; 16.31]	12.41 (7.89)	[11.61; 13.22]	0.0126

Note: Following the criteria of Achenbach and Rescorla[36] the raw scores of the CBCL scales are used, the same respect to the PSI/SES: Socioeconomic Status, PSI: Parenting Stress Index, CBCL: Child Behavior Checklist 1½-5, M(SD): Mean(Standard Deviation), CI 95%: Confidence Interval 95%, η2: variance.

Table 2. Multiple regression analysis to evaluate SES as moderator of the relationship between Parental Stress and Externalized Behaviors (n = 9669)

	B	SE	T	Df	p-value
(Intercept)	0.019	0.011	1.760	4,584.898	0.079
SES = Low	-0.023	0.023	-1.024	4,009.154	0.306
SES = High	-0.051	0.071	-0.719	439.602	0.473
Total PSI	0.453	0.013	34.619	98.352	< 0.001
SES = Low x total PSI	-0.099	0.022	-4.514	190.695	< 0.001
SES = High x total PSI	0.092	0.076	1.200	260.719	0.231

Note: Value of the intercept represents value of the medium SES. All measures are standardized/SES: Socioeconomic Status, PSI: Parenting Stress Index, *B*: Beta, SE: Standar error, T: t value, Df: Degrees of freedom, p: probability value.

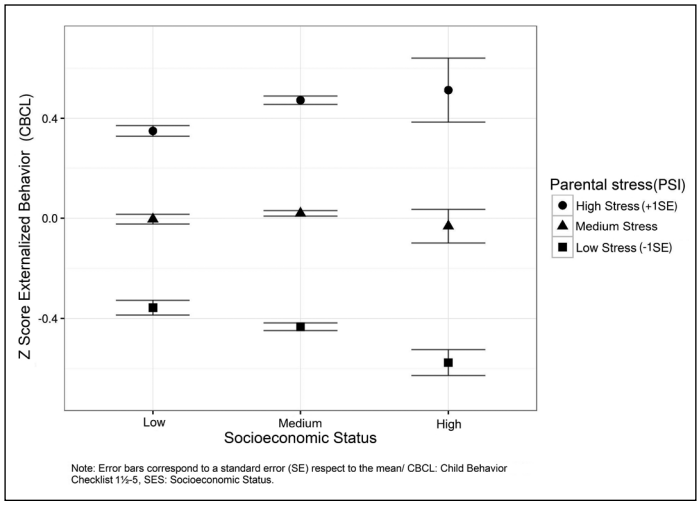

Figure 1. Relationship between parental stress and externalized behavior according to SES.

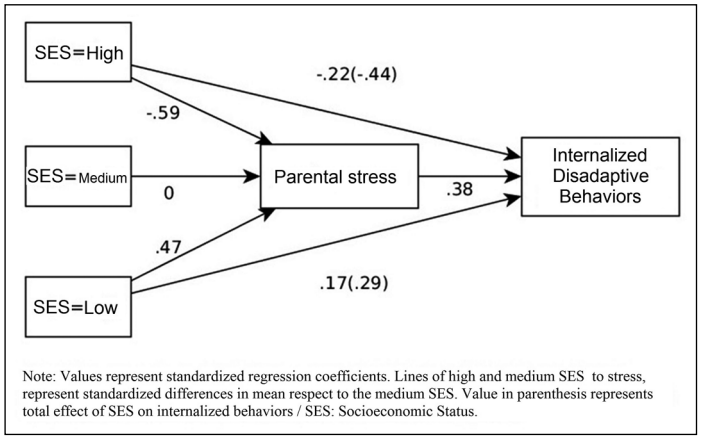

Figure 2. Model of mediation of parental stress between SES and internalized behaviors.

In Table 2, the regression model of SES is presented, as well as parental stress of externalized CBCL. The coefficient of determination of the model is R2 = 0.18. The effect of stress on externalized behaviors is direct, indicating that the higher the number of externalized behaviors, the greater the number of externalized behaviors. The coefficients of interaction effects between SES and stress indicate that the main difference in the moderating effect of stress is found in parents with low SES, with no significant difference between medium SES and high SES.

If we observe Figure 1, we could clearly notice that in low SES, the effect of the change of 1 SD of stress changes the level of externalized behaviors by 0.35 SD, while in the mean SES this change is 0.45 SD, and in a high level of SES of 0.54 SD.

After it is established the moderating role of parental stress in the relationship between SES and externalized behaviors, the analysis of a possible mediating effect of stress was continued only for the internalized behaviors. We found a mediation effect in both the low SES, with a 95% CI = [0.16, 0.20], and in the high SES, with 95% CI = [- 0.25, -0.20].

Figure 2 shows the model of mediation of parental stress in the relationship between SES and internalized behaviors. In order to simplify this model, the mean of the parental stress from the medium SES is taken as the reference point. The coefficient of determination of the model in relation to the internalized behaviors is $R^2 = 0.16$. It can be observed that the difference in effect of SES on parental stress is higher between the medium SES and the high SES, than between the medium SES and the low SES. The difference in total SES effect on internalized behaviors is also higher between the high SES and the medium SES than between the medium SES and the low SES. The correlation between parental stress and internalized behaviors is moderate (r = 0.38). The direct effect of the high SES on the internalized behaviors, of -0.22, is practically 50% of the total effect of the high SES, of -0.44. The direct effect of the low SES of -0.17 corresponds to 59% of the total effect of the low SES of -0.29.

Discussion

This study suggests that the relationship between SES and externalized and internalized behaviors of preschool children would be mediated by the level of family stress, especially parental stress. A previous assumption of this hypothesis was that both socioeconomic level and parental stress would be related to the presence of these behaviors, which was actually confirmed. The relationship with SES was observed for both internalized and externalized behaviors, although the

explained variance is small. Parental stress showed a stronger relationship with both types of behaviors. As expected, parental stress was also related to SES, with a linear relationship between SES and stress.

When analyzing the role of parental stress in the relationship between SES and externalized and internalized behaviors, a different performance was observed. Regarding the first (externalized), a moderating effect was observed, and a lower stress effect was observed as well in the low SES, in relation to high SES and medium SES. On the other hand, regarding internalized behaviors, we actually observed the mediating effect that we were looking for, presenting data that showed that SES and internalized behavior may decrease if stress is under control.

We could conclude, as hypothesis, that the greater stress effects in high and medium SES, regarding externalized effects, it is due to the 'ceiling effect': the low SES has several high levels of parental stress and more externalized behaviors than high and medium SES, that an increase of the effect may be more difficult to observe. On the contrary, in a more favorable social context, a higher level of parental stress could imply other conditioning variables and generate greater vulnerability (12, 13). It is important to emphasize that the SES, by itself, did not show a relationship with externalized behaviors when the stress levels were under control. However, stress did show a relationship with externalized behaviors, being SES under control.

A clearer effect of parental stress was observed in the relationship between SES and internalized behaviors. The relationship between SES and internalized behaviors is strongly shown to be mediated by levels of parental stress.

The need to understand the specific processes through which socio-economic determinants influence development has been highlighted by several researchers[40-43]. A greater understanding of these processes allows the development of models of action in a broader and more specific social context, as well as more pertinent. Specifically, the results of this study highlight the need to be worried about family relationships, as well as their perception of supporting the demands of parenting, and all the resources in order to be considered in childhood policies with the importance that it requires[44-47].

One of the strengths of this study is the extent and the level of representation of the LSEC study database, from which the sample is taken from. However, the large amount of data lost in relation to the SES must be considered, although the multiple account model used was strong. Another limitation is that, although both CBCL and PSI are self-report instruments with discriminative capacity[17,36], both are answered by the same person, or source, which generates an inflation effect of the relationship between variables by shared variance.

As a conclusion, parental stress showed a clear relationship with the presence of externalized and internalized behaviors, stronger than the SES. The consideration of parental stress in the relationship between SES and externalized and internalized behaviors is important; in order to understand the processes that affects the development of children.

Ethical Responsibilities

Human Beings and animals protection: Disclosure the authors state that the procedures were followed according to the Declaration of Helsinki and the World Medical Association regarding human experimentation developed for the medical community.

Data confidentiality: The authors state that they have followed the protocols of their Center and Local regulations on the publication of patient data.

Rights to privacy and informed consent: The authors have obtained the informed consent of the patients and/or subjects referred to in the article. This document is in the possession of the correspondence author.

Financial Disclosure

Thanks to CONICYT for their financial support through the National Master's Scholarship 2014.

Conflicts of Interest

Authors state that any conflict of interest exists regards the present study.

References

1. Heckman J. Skill formation and the economics of investing in disadvantaged children. Science. 2006;312:1900-2.
2. Shonkoff J. Leveraging the biology of adversity to address the roots of disparities in health and development. PNAS. 2012;109:17302-7.
3. Bronfenbrenner U, Ceci S. Nature-nurture reconceptualized: A bioecological model. Psychol Rev. 1994;101:568-6.
4. Solar O, Irwin A. Towards a Conceptual Framework for Analysis and Action on the Social Determinants of Health. Discussion paper for the Commission on Social Determinants of Health. Geneve: Comission of Social Determinants of Health, who; 2005.
5. Siddiqi A, Irwin LG, Hertzman, C. The Total Environment Assessment Model of Early Child Development. Vancouver: Organización Mundial de la Salud; 2007.
6. Campo L. Características del desarrollo cognitivo y del lenguaje en niños de edad preescolar. Psicogente. 2009;12:341-51.
7. Lacunza A, Contini N, Castro A. Las habilidades cognitivas en niños preescolares. Un estudio comparativo en un contexto de pobreza. Act Colom Psicol. 2010;13:25-34.
8. Ministerio de Salud. Departamento de epidemiología. II Encuesta de Calidad de Vida y Salud, Chile 2006. Santiago: Subsecretaría de Salud Pública; 2006.
9. Schonhaut BL, Rojas NP, Kaempffer RAM. Factores de riesgo asociados a déficit del desarrollo psicomotor en preescolares de nivel socioeconómico bajo: Comuna urbano rural, Región Metropolitana, 2003. Rev Chil Pediatr. [Internet] 2005; 76 (6): 589-98. Disponible en: http://dx.doi.org/10.4067/S0370-41062005000600006 [citado el 10 de mayo de 2016].
10. Ministerio de Desarrollo Social. CASEN 2013, una medición de la pobreza moderna y transparente para Chile. Santiago: Ministerio de desarrollo social; 2015.
11. Lecannelier F, Pérez J, Groissman S, et al. Validación del Inventario de Conductas Infantiles para niños de entre 1½-5 años (CBCL1½-5) en la Ciudad de Santiago de Chile. Univ Psychol. 2014;13:491-500.
12. Bedregal P. Levantamiento y análisis de información sobre desarrollo infantil y sus principales determinantes sociales y económicas, en el contexto del sistema Chile Crece Contigo. Santiago: MIDEPLAN; 2010.
13. Bedregal P. Levantamiento y análisis de información sobre desarrollo infantil y sus principales determinantes sociales y económicas, del grupo de niños/as pertenecientes al PADB, en el contexto del Subsistema de Protección a la Infancia Chile Crece Contigo. Santiago: Ministerio de desarrollo social; 2013.
14. Seguel X, Edwards M, Hurtado M, et al. ¿Qué Efecto Tiene Asistir a Sala Cuna y Jardín Infantil Desde los Tres Meses Hasta los Cuatro Años de Edad? Estudio Longitudinal en la Junta Nacional de Jardines Infantiles. Psykhe. 2012;21: 87-104.
15. Raczynski D. Política de infancia temprana en Chile: condicionantes del desarrollo de los niños. Chile: Expansiva; 2006.
16. Pérez J, Rodríguez R, Montealegre M, et al. Estrés adulto y problemas conductuales infantiles percibidos por sus progenitores. Infad Psicol Infanc Adolesc. 2011;1:531-40.
17. Abidin, R. Parenting Stress Index. Florida: Psychological Assessment Resources; 1995.
18. Bourke J, Ricciardo B, Bebbington A, et al. Maternal physical and mental health in children with Down syndrome. J Pediatr. 2008;153:320-6.
19. Kazdin A, Whitley M. Treatment of parental stress to enhance therapeutic change among children referred for aggressive and antisocial behavior. J Consult Clin Psychol. 2003;71:504-15.
20. Harden B, Denmark N, Holmes A, Duchene M. Detached parenting and toddler problem behavior in early head start families. Infant Ment Health J. 2014;35:29-543.
21. Chen H, Hou T, Chuang C. Applying data mining to explore the risk factors of parenting stress. Expert Syst Appl. 2010;37:598-601.
22. Baker B, McIntyre L, Blacher J, et al. Preschool children with and without developmental delay: behavior problems and parenting stress over time. J Intellect Disabil Res. 2003;47:217-30.
23. Long C, Gurka M, Blackman J. Family stress and children's language and behavior problems: Results from the national survey of children"s health. Top Early Child Spec. 2008;28:148-57.
24. Achenbach TM, Rescorla LA, Ivanova MY. International Epidemiology of Child and Adolescent Psychopathology I: Diagnoses, Dimensions, and Conceptual Issues. J Am Acad Child Psy. 2012;51(12):1261-72.
25. Egger HL, Angold A. Common emotional and behavioral disorders in preschool children: presentation, nosology, and epidemiology. J Child Psychol Psyc. 2006;47(3-4):313-37.
26. Hofstra MB, van der Ende J, Verhulst FC. Child and adolescent problems predict DSM-IV disorders in adulthood: A 14-year follow-up of a Dutch epidemiological sample. J Am Acad Child Psy. 2002;41(2):182-9.
27. Dearing E, McCartney K, Taylor BA. Within-child associations between family income and externalizing and internalizing problems. Dev Psychol. 2006;42(2):237-52.
28. Rijlaarsdam J, Stevens GWJM, van der Ende J, Hofman A, Jaddoe VWV, Mackenbach JP, et al. Economic Disadvantage and Young Children's Emotional and Behavioral Problems: Mechanisms of Risk. J Abnorm Child Psych. 2013;41(1):125-37.
29. Reising MM, Watson KH, Hardcastle EJ, et al. Parental Depression and Economic Disadvantage: The Role of Parenting in Associations with Internalizing and Externalizing Symptoms in Children and Adolescents. J Child Fam Stud. 2013;22(3):335-43.
30. Kumsta R, Rutter M, Stevens S, Sonuga-Barke EJS. Ix. Risk, Causation, Mediation, and Moderation. Monogr Soc Res Child. 2010;75(1):187-211.
31. Encuesta Longitudinal de Primer Infancia. Diseño muestral y factores de expansión segunda ronda encuesta longitudinal de la primera infancia. Santiago: Universidad de Chile, Departamento de economía, Centro de micro datos; 2012.
32. León de Viloria C. Estudio descriptivo, comparativo y relacional del desarrollo infantil integral en una muestra de niños y niñas de diferentes edades, niveles socioeconómicos y regiones de Venezuela. Rev ORBIS Cs Hum. 2007:3(7):64-124.
33. Asociación Investigadores de Mercado. El Nivel Socio Económico Esomar: Manual de Aplicación. Santiago: Adimark; 2000.
34. Asociación Investigadores de Mercado. Descripción grupos socioeconómicos 2008. Santiago: Asociación chilena de empresas de investigación de mercado; 2008.
35. Encuesta Longitudinal de Primer Infancia. Presentación segunda ronda encuesta longitudinal de la primera infancia. Santiago: Universidad de Chile, Departamento de economía, Centro de micro datos; 2012.
36. Achenbach TM, Rescorla LA. Manual for the ASEBA Preschool Forms & Profiles. Burlington: University of Vermont, Research Center for Children, Youth & Families; 2000.
37. Aracena M, Gómez E, Leiva L, Undurraga C. Evaluando la parentalidad en atención primaria: validez y confiabilidad del PSI-SF. En: Facultad de Medicina, Universidad de Chile, editores. XXX Jornadas chilenas de Salud Pública. Santiago: Facultad de Medicina, Universidad de Chile; 2012. p. 95-6.
38. Hayes AF, Preacher KJ. Statistical mediation analysis with a multicategorical independent variable. Brit J Math Stat

Psy. 2014; 67:451-70.
39. Zhao X, Lynch J, Chen Q. Reconsidering Baron and Kenny: Myths and Truths about Mediation Analysis. J Consum Res. 2010;37:197-206.
40. Morales-Villegas R, Montelongo-Rodríguez, Haro-Cabrero. Análisis de confiabilidad del inventario de estrés parental en un escenario: rural marginado. En: Ojeda MG, Padilla N, Navarro MG, editores. Diversidad Cultura y salud. México: 2º Foro Internacional sobre multiculturalidad; 2011. p. 28-39.
41. Pérez J, Menéndez S, Lorence B. Estrategias de afrontamiento y estrés en familias en riesgo psicosocial. Influencia en las prácticas parentales. En: Quevedo-Blasco R, Quevedo-Blasco V, editores. Avances en psicología clínica. Granada: Asociación Española de Psicología Conductual; 2012. p. 499-502.
42. Mistry R, Stevens G, Sareen H, et al. Parentingrelated stressors and self-reported mental health of mothers with young children. Am J Public Health. 2007;97:1261-8.
43. Valdés M, Spencer R. Influencia del nivel socioeconómico familiar sobre el desarrollo psicomotor de niños y niñas de 4 a 5 años de edad de la ciudad de Talca-Chile. Theoria. 2011;20:29-43.
44. Kaaresen P, Ronning J, Ulvund S, Dahl L. A randomized, controlled trial of the effectiveness of an early-intervention program in reducing parenting stress after preterm birth. Pediatrics. 2006;118:9-19.
45. Nam S, Chun J. Influencing factors on mothers' parenting style of young children at risk for developmental delay in South Korea: The mediating effects of parenting stress. Child Youth Serv Rev. 2014;36:81-9.
46. Gómez E, Kotliarenco M, Muñoz M, Assef V. Centro crecer en comunidad: despertando la resiliencia familiar. Díaz D, editor. Perspectivas CEES-UC. Santiago: CEES-UC; 2011.
47. Griffin C, Guerin S, Sharry J, Drum M. A multicentre controlled study of an early intervention parenting programme for young children with behavioural and developmental difficulties. Int J Clin Hlth Psyc. 2010;10:279-94.