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Perception about adult caregiving among Chilean adolescents

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ABSTRACT

***Background**: Chronic stress has short and long-term consequences during child and adolescent development if the stress is not mediated by adult caregiving. **Aim**: To assess the perceptions of parental responsiveness, demand, and monitoring among seventh grade students. **Material and Methods**: We applied the Brief Parental Scale (developed and validated locally) asking 12 items about three dimensions, namely responsiveness, demand, and monitoring to 524 seventh grade students aged 12 years, 48% females, from eight public and private schools at Santiago. **Results**: The overall response rate was 85%. While the scores were higher for mothers, a significantly constant gradient for the same dimensions (demand > responsiveness > monitoring) was verified for both parents. **Conclusions**: The main hypothesis emerged from our study is that adolescents seem to perceive a discrepancy in terms of a relatively high demand and lower monitoring from parents/guardians towards them. The differences between fathers and mothers in adolescent care and the different perceptions by gender of adolescents about parental caregiving, require a further analysis.*

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***Key words:** Adolescent Development; Adolescent Health; Parenting.*

Percepción acerca del cuidado de los adultos en adolescentes chilenos

***Antecedentes:** El estrés crónico ha demostrado tener efectos a corto y largo plazo en el desarrollo infantil y adolescente, especialmente si el estrés no es mediado por el cuidado adulto responsable. **Objetivo:** Evaluar la percepción de capacidad de respuesta, demanda y monitoreo parental en adolescentes de séptimo año básico. **Material y Métodos:** Se aplicó la Escala Parental Breve (desarrollada y validada localmente) consultando 12 ítems en relación a 3 dimensiones: capacidad de respuesta, demanda y monitoreo a 524 estudiantes de séptimo año básico de 12 años de edad (48% mujeres) de ocho establecimientos educacionales públicos y privados de Santiago. **Resultados:** La tasa de respuesta promedio fue de 85%. Si bien los puntajes fueron superiores para madres, se verifica una gradiente significativamente constante para las mismas dimensiones (demanda > capacidad de respuesta > monitoreo) en ambas figuras parentales. **Conclusiones:** La principal hipótesis que emerge de nuestro estudio es que los*

adolescentes parecen percibir una discrepancia en términos de una relativa alta demanda de las figuras parentales y menor monitoreo por parte de estos hacia ellos. Otros aspectos que se deben profundizar están relacionados con las diferencias observadas entre los niveles de involucramiento de padres o madres y lo posiblemente reportado por niños/niñas sobre estas experiencias.

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Palabras clave: *Desarrollo del Adolescente; Salud del Adolescente; Parentalidad.*

Research has demonstrated that chronic stress is a significant harmful factor in adolescent development. In the absence of protective relationships with parents or other significant adults, is also known as "toxic stress" and is associated with deleterious effects on learning and behaviour, as well as on general health, both in short and long term, with higher probabilities of lifelong multiple health disadvantages[1-9].

By contrast, protecting the young from these consequences using adequate parental care that may function as a "buffer" is being recognized as a crucial developmental health factor. That is, parental involvement, understood as the engagement of adults in to accompanying adolescents in their development process, is one main axis of the so called "ecobiodevelopmental framework"[10] and structural or environmental prevention[11,12]. Both systemic approaches, in contrast to theory of change, a paradigmatic but individual oriented health promotion approach[13].

Considering recent national health survey and burden disease estimations for Chile states great challenges that are related with sequels of toxic stress suffered during adolescence, the proper period of still maturating imbalance of vulnerabilities-potentialities. Among others, obesity, hypertension, diabetes, coronary disease and neuropsychiatric disturbances such as depression and dementia[14-16] could be better attended using these broader preventive strategies.

Therefore, adolescent health level, which appears to be of prognostic value in terms of future Chilean population health, has many drawbacks that are only recently being considered. Many of these drawbacks seem to be related with deficiencies in parental and adult caregiving: adolescent sexuality, pregnancy, substance abuse, school failure and criminality, among others[17]. Understanding the present and prognostic importance of this common mechanism of toxic stress for long-life, the goal of the present article is to explore how adolescents perceive their caregiving by adults using a scale developed and validated in Chile[18].

Materials and Methods

Our sample came from two stages process. The first one was high schools' selection in Metropolitan Region by socioeconomic status considering at least 3 of the 5 income quintiles using Chilean Ministry of Education information. The second stage was students´ selection from seventh grade classes. A total of 524 students from 8 schools in 7 municipalities (4 with public administration and 4 privates with subsidized administration) were included. Other methodological aspects are publicly available[19-21].

The variables extracted were: sex (dichotomous nominal: woman/man), age (continuous in completed years), educational establishment (polychotomous nominal, 8 schools), school community (polychotomous nominal, 7 communities). The dependent variable was the score (Likert scale: 1 strongly disagree to 5 strongly agree) of each of the 12 items from three dimensions of Brief Parental Care Scale (BPS): responsiveness, demand and monitoring[18]. Items and associated dimensions in its original language and translated in English are the following:

Parental responsiveness

- Puedo contar con su ayuda si tengo problemas (*I can count on her/his help if have problems*).
- Se da tiempo para conversar conmigo (*She/He gives her/himself time to talk to me*).
- Sé que va a estar conmigo si lo necesito (*I know she/he's going to be with me if I need her/him*).
- Disfruta estando conmigo (*Enjoys being with me*).

Parental demand
- Espera que trate de hacer mis cosas lo mejor que puedo (*Hopes I try to do my thing the best I can*).
- Espera que me comporte responsablemente (*Expects me to behave responsibly*).
- Espera que le diga dónde estoy y a qué hora voy a llegar a la casa *(Expects me to tell her/him where I am and what time I'm going to be home).*
- Espera que sea respetuoso/a y considerado/a con la gente *(Expects me to be respectful and considerate of people).*

Parental monitoring
- Le gusta que le informe de lo que hago *(She/He likes me to tell her/him what I do).*
- Se preocupa de averiguar con qué amigos me junto *(She/he worries about figuring out what friends I'm with).*
- Se preocupa de averiguar qué hago después del colegio *(She/he worries about figuring out what I do after school).*
- Se preocupa de averiguar cómo me comporto en el colegio *(She/he worries about figuring out how I behave at school).*

Regarding BPS application procedure, the following activities: sending letters to adolescents´ home describing the study, informed consent of the parents/guardians and the assent of each student; purpose and answer alternatives were explained before questionnaires were applied; application was at school environment.

Analyses examined data integrity and completeness, checking for missing and duplicate data. Summary measurements, central tendency and dispersion were estimated, according to the nature of each variable (central tendency, position, and dispersion for variables age and BPS score; proportions for number of students). Ninty nine % confidence intervals were considered. To assess possible differences between dimensions and between mothers/fathers, Kruskal-Wallis and Mann-Whitney tests were used. The normality assessment was carried out using the Shapiro Wilk test and Q-Q plot. A significance level of 5%, 2-tailed, was considered. Stata 13.0® statistical software was used.

The Pontificia Universidad Católica de Chile Ethics Committee approved the project (registration: # 150810001).

Results

Adolescents´ median age was 12 years (11 to 15), 52.5% were male. Regarding missing values, 3.8% (n = 20) and 3.4% (n = 18) for the variables sex and age respectively, were not considered in the total data. Other students´ details in Table 1.

Tables 2 and 3 below show the perception scores of adolescents on the level of parental care for mother and father. Total rates of responses for questions for mother and father were over 85%, with slightly higher rates for mothers.

Table 1. Characterization of students who answered Brief Parental Scale (BPS). Santiago, 2017 (n = 524)

School	Degree	n (%)	Median age (sd)	Male (n)	Female (n)	Commune
1	2	81 (15,5)	12,1 (0,42)	37	42	La Cisterna
2	3	67 (12,8)	12,6 (0,91)	28	36	Maipú
3	1	44 (8,4)	12,1 (0,39)	44	0	Independencia
4	3	97 (18,5)	12,3 (0,62)	44	52	Lo Barnechea
5	1	35 (6,7)	12,2 (0,36)	19	14	Santiago
6	2	61 (11,6)	12,2 (0,49)	37	23	Ñuñoa
7	3	109 (20,8)	12,2 (0,57)	47	53	Recoleta
8	1	30 (5,7)	12,6 (0,73)	19	9	Recoleta
Total	16	524	12,3 (0,62)	275	229	

Table 2. Total scores for mothers, by Item of Brief Parental Scale (BPS)

	Median	Mean (sd)	CI (95%)	
Item 1	5	4,35 (0,05)	4,25	4,44
Item 2	4	4,13 (0,05)	4,03	4,23
Item 3	5	4,53 (0,04)	4,44	4,61
Item 4	5	4,36 (0,05)	4,27	4,45
Item 5	5	4,51 (0,04)	4,43	4,59
Item 6	5	4,60 (0,04)	4,52	4,68
Item 7	5	4,47 (0,04)	4,39	4,56
Item 8	5	4,65 (0,04)	4,58	4,72
Item 9	5	4,31 (0,05)	4,21	4,40
Item 10	4	4,08 (0,05)	3,98	4,18
Item 11	5	4,04 (0,06)	3,93	4,15
Item 12	5	4,29 (0,05)	4,19	4,38

Table 3. Total scores for fathers, by Item of Brief Parental Scale (BPS)

	Median	Mean (sd)	CI (95%)	
Item 1	4	3,89 (0,06)	3,76	4,01
Item 2	4	3,69 (0,06)	3,57	3,81
Item 3	5	4,12 (0,06)	4,01	4,24
Item 4	5	4,18 (0,06)	4,07	4,29
Item 5	5	4,32 (0,05)	4,22	4,42
Item 6	5	4,36 (0,05)	4,26	4,46
Item 7	5	4,09 (0,06)	3,97	4,20
Item 8	5	4,45 (0,05)	4,35	4,55
Item 9	4	3,99 (0,06)	3,88	4,11
Item 10	4	3,58 (0,06)	3,46	3,71
Item 11	4	3,61 (0,07)	3,48	3,75
Item 12	4	3,86 (0,06)	3,73	3,98

Table 4. Total scores for mothers and fathers, by Dimension of Brief Parental Scale (BPS)

Dimension	Median	Mean(sd)	Kruskal-Wallis (p-value for mean's differences (chi2))	Mann-Whitney (p-value for median's differences)
Mothers				
Responsiveness	4,75	4,34 (0,89)	< 0,0001*	R-D: < 0,0001*
Demand	5	4,56 (0,73)		R-M: 0,0003*
Monitoring	4,5	4,18 (0,89)		D-M: < 0,0001*
Fathers				
Responsiveness	4,25	3,97 (1,01)	0,0001*	R-D: 0,0001*
Demand	4,75	4,31 (1,16)		R-M: 0,0043*
Monitoring	4	3,76 (1,11)		D-M: 0,0001*

*p-value < 0,05.

Scores of the 12 responses are all at favourable level, with mean scores higher for mothers, which also show less variability than those for fathers.

Table 4 shows the results of the Kruskal-Wallis test assessing differences between the three BPS dimensions and the Mann-Whitney test differences of each dimension within mothers and fathers.

Analysing by dimensions, it stands out that the 3 categories have different scores from each other (p value < 0.05), being the demand dimension the one with the highest score, followed by responsiveness, while the monitoring dimension was the one with the lowest score. Same pattern for 3 dimensions was observed for both parents.

Discussion

Unlike individual-centred strategies to prevention in health, such as the theory of change[13,22], the best adolescent health outcomes come from an environmental prevention strategy. Its foundations consider that adults' engagement/involvement ("hands on parents") play a significant role designing and implementing the framework that influences adolescents' socialization[11,12].

At a first glance, our findings exhibiting scores above the cut-off point (3.5) with values close to the conceptual optimum, one possible conclusion could be that these data show a favourable

outcome of parental behaviour which would be associated with low levels of risk or "low stress". But if the caregiving was adequate, we would do not have the Chilean adolescents´ health at levels that place them at the top of the international rankings, being substance use one of the most urgent[23,24].

In Chile, adolescents present prevalence of alcohol, marijuana, and tobacco of 31.1%, 41.0%, and 4.3%, respectively[24] with an early age of onset, the main predictor of poor prognosis[24]. This fact, as an example of other usually clustered drawbacks, necessarily would lead us to conclude that what fathers and mothers put in parenting adolescents has not been enough to contain them. We are aware that what we are looking for, parents´ caregiving performance reported by adolescents, is sensitive matter susceptible to biases that could be partially corrected, for example, by peer methodology[25].

Iceland, a world benchmark in adolescents´ substance use control, achieved their outcomes based on an environmental approach implemented for three decades and went for the same substances from prevalences of 42%, 17%, 23% at the end of 1990´s to 6%, 7%, 2% in 2018[26,27]. And they identified that the critical factor of success was parental monitoring[28], precisely the BPS dimension in that we found the lower scores (Table 3). The same "monitoring" factor was founded involved in substance use in Chilean adolescents in 2006[29].

In other words, adolescents would perceive a disagreement between what is perceived by adolescents as the level of more concrete caregiving by parents (monitoring) compared with the demand and responsiveness dimensions. It appears also to be signals about higher mother than father level of parental involvement, which are probably related to historical and cultural factors in Chile[30]. We exclude here other contextual considerations for the Chilean family, parental roles, and the notion of authority, which are very well analysed in recent sociologic oriented textbook[31].

Among the limitations of our study, it is important to remember that it is an ecological study that covers early adolescence and different results could be found if we use a longitudinal approach capturing variations in processes throughout adolescence. Other limitations could be related with the way to collect the dimensions involved probably improved with the application of a battery of instruments together to data collection methods that minimize the potential biases of exploring sensitive issues[25].

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