

PARENTAL STRESS IN POOR FAMILIES¹

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ABSTRACT. This study's purpose was to investigate possible relationships between poverty, its dimensions and parental stress. This research was quantitative, with a cross-sectional design and probabilistic sample of 433 participants registered in the Federal Government's CadastroÚnico. The instruments used were the Sociodemographic Inventory, the Family Poverty Index (IPF) and the Parental Stress Index (PSI). To assess the relationship between the variables, the participants were divided into two groups based on the instruments measuring poverty (more and less poor) and stress (normal and high stress). Strongly significant associations were found between the poorer categories and high stress, in terms of both multidimensional poverty and some of its dimensions (access to knowledge, income and child development). The results related major difficulties in parenting practices to vulnerability aspects traditionally identified in studies about poor families, such as income and knowledge, and also highlight the hardships inflicted by poverty on children and adolescents.

Keywords: Low income families; stress; social programs.

ESTRESSE PARENTAL EM FAMÍLIAS POBRES

RESUMO. O objetivo deste estudo foi investigar possíveis associações entre a pobreza, suas dimensões e o estresse parental. Essa pesquisa teve caráter quantitativo, delineamento transversal e amostra probabilística, constituída por 433 participantes cadastrados no Cadastro Único do Governo Federal. Foram aplicados o Inventário Sociodemográfico, o Índice de Pobreza Familiar (IPF) e o Índice de Estresse Parental (PSI). Para relacionar as variáveis dividiram-se os participantes em dois grupos a partir dos instrumentos de pobreza (mais e menos pobres) e estresse (estresse normal e alto). Foram encontradas associações fortemente significativas entre as categorias 'mais pobres' e 'estresse alto', tanto na pobreza multidimensional como em algumas de suas dimensões (acesso a conhecimento, renda e

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desenvolvimento infantil). Os resultados relacionaram maiores dificuldades nas atividades parentais a aspectos de vulnerabilidade tradicionalmente identificados em estudos de famílias pobres, como renda e conhecimento, e ainda, apontam para as mazelas trazidas pela pobreza às crianças e aos adolescentes.

Palavras-chave: Famílias de baixa renda; estresse; programas sociais.

ESTRÉS PARENTAL EN FAMILIAS POBRES

RESUMEN. El objetivo de este estudio fue investigar posibles asociaciones entre la pobreza, sus dimensiones y el estrés parental. Esta investigación tuvo carácter cuantitativo, delineamiento transversal y muestra probabilística, constituida por 433 participantes registrados en el Catastro Único del Gobierno Federal. Se aplicaron el Inventario Sociodemográfico, el Índice de Pobreza Familiar (IPF) y el Índice de Estrés Parental (PSI). Para relacionar las variables se dividieron los participantes en dos grupos a partir de los instrumentos de pobreza (más y menos pobres) y estrés (estrés normal y alto). Se encontraron asociaciones fuertemente significativas entre las categorías más pobres y el estrés alto, tanto en la pobreza multidimensional como en algunas de sus dimensiones (acceso a conocimiento, renta y desarrollo infantil). Los resultados relacionaron las mayores dificultades en las actividades parentales a aspectos de vulnerabilidad tradicionalmente identificados en estudios de familias pobres, como ingresos y conocimiento y, además, apuntan a las molestias traídas por la pobreza a los niños y adolescentes.

Palabras clave: Familias de bajos recursos; estrés; programas sociales.

Introduction

Poverty as a research phenomenon has undergone several changes and is now seen in a pluralistic and systemic way, from a human development perspective and related social and political aspects. This fact shows that the elements that constitute the reality of individuals and groups are part of a multidetermined web, and as such, investigating this reality needs to be based on an integrative and systemic approach that highlights the biopsychosocial processes of the human being. As the macrosystemic aspects are exposed, this study focuses on the specific context of the family, given its primary importance as representing one of the main settings in which human competence and character are shaped (Bronfenbrenner & Morris, 2006).

Adults play a central role in the family system, where those who perform parental functions are subject to a special type of stress, called parental stress. It is widely accepted in the literature that living in poverty leads to increased levels of parental stress and affects the quality of the relationships that provide support for children's formation and development. This is because adverse situations brought on by poverty increase the psychological distress of parents, thus reducing their ability to provide the appropriate responses to and interactions with children that are essential for stimulating their growth, development and socioemotional security, which limits parental capabilities (Chaudry & Wimer, 2016).

The term parenting is polysemic and used in the most varied situations, with parenting in adverse conditions, such as poverty, one of the categories identified in a review on the subject (Carvalho-Barreto, 2013). This term is increasingly used to discuss the importance of the bond between adults and children, especially between parents and children (Souza & Fontella, 2016).

The influential elements in the parenting process are multidetermined and respond to the idiosyncrasies of the environment in which families live and their interaction patterns. Therefore, studies investigating poor families in different settings are essential in debates about human development (Bem & Wagner, 2006).

Poverty

Since the Indian economist and philosopher Amartya Sen (2000) first proposed his Capability Approach, initiating a theoretical debate, poverty has been presented and seen as a multidimensional phenomenon characterized by the lack or scarcity of resources that enable human beings to develop in a healthy way and enhance their capabilities.

This concept considers aspects related to a logic centered on the functionalities obtained through the resources available in a situation of scarcity of basic needs and not only the simple lack of means related to income or goods for individuals to be classified as poor. This approach is therefore closely linked to a view of poverty inspired by the human development perspective and considers its plurality, taking into account indicators such as education, access to work and knowledge, schooling, and health, among others (Barros, Carvalho, & Franco 2006).

Nevertheless, monetary parameters contribute to the comparison between economic groups between and within societies and have been the historically dominant approach to studying poverty. This is because the scale representation of this phenomenon is facilitated by the criterion 'lack of income,' which is naturally scalar, and also by the fact that families access the goods and services that directly affect their well-being through markets that demand monetary resources. Therefore, a lack of income ends up being a major determinant of the poverty of families (Barros, Carvalho, & Franco, 2006).

This discussion shows that, although there is consensus among researchers that poverty is a multidimensional phenomenon, there is disagreement as to the possibility of aggregating the various dimensions of poverty into a scalar measure. Accordingly, the study by Barros, Carvalho and Franco (2006) arose from a demand for the creation of an index identifying poor Brazilian families from a multidimensional perspective using the *Cadastro Único* (which translates as 'Single Registry').

In that study, the Family Poverty Index (IPF, for its initials in Portuguese) was created, which is based on multidimensional synthetic indicators of poverty, trying to overcome the difficulty of estimating the poverty level of each family instead of just the average poverty level of a country, state, municipality or neighborhood. To illustrate the applicability and versatility of this tool, Barros, Carvalho and Franco (2006) estimated the multidimensional poverty of Brazilian families in samples of the National Household Sample Surveys (PNADs, for its initials in Portuguese) collected in 1993 and 2003.

Based on this application, the authors emphasize that their methodological proposal has advantages as it enables the calculation of the poverty level of each family. They show the relevance of this type of information through an analysis of the type of poverty of the ten poorest families included in the PNAD – 2003 sample as well as that of particularly

vulnerable groups (such as female-headed households), among other applications. The methodological resource provided by that study served as the basis for the development of the research herein.

The IPF provides a measure of poverty that ranges from 0 to 100 percent, with these values representing the two ends of multidimensional poverty: from no family poverty to family living in absolute poverty. The indicators and dimensions that make up this index help to identify the fragile points that explain family poverty (Barros, Carvalho, & Franco, 2006).

The evaluation of poverty from a multidimensional perspective is recent, and it is frequent to find in the literature studies that investigate the role of poverty in the life of the people only from a monetary perspective. Rocha and Carvalho (2015), for example, considered that, even though Brazil is ranked higher in terms of income when compared with 80% of the rest of the world, income inequality is still problematic. These economic inequalities are reflected in inter- and intra-regional social realities.

The poorest areas of the country are the North and Northeast regions, as the North region accounted for only 5.4% of Brazilian GDP in 2010. The average Municipal Human Development Index (MDI) of the municipalities in the North region is 15% lower than in the South and Southeast regions.

Belém, the state capital of Pará, located in the North region of Brazil, is the most populous municipality in its metropolitan region and, among its inhabitants, 59% of people who constitute families are considered poor in multidimensional terms. In spite of some improvement in the years 2000 to 2010, the Metropolitan Region of *Belém* remains second to last among the sixteen metropolitan regions analyzed by the Atlas of Human Development (2013) in the development ranking in Brazil (Rodrigues, Santos, & Fernandes, 2015).

Considering such realities, projects implemented by the Brazilian government since 2001 in cooperation with the Fund for Combating and Eradicating Poverty are part of a global proliferation of debates that emerged at the beginning of the century and are predicated on greater attention to the fight against poverty. Lavinhas, Cobo and Veiga (2012) argue that initiatives such as the *Bolsa Família* [Family Grant] Program (PBF, for its initials in Portuguese) are contemporary to the neoliberal era of Latin American countries. Within the centrality of the concept of 'poverty' since the early 1990s, which mainly results from its wide use in reports from international organizations and documents for the development and evaluation of public policies (Ugá, 2004), it is possible to identify antagonisms, with the adoption, on the one hand, of restrictive policies that promote public spending cuts based on the logic of macroeconomic political dimensions that lead to a higher degree of commoditization of services and, on the other hand, of social minimum programs for poor families using women as a mobilization vector, 'empowering' them as legitimate providers of an efficient use of scarce resources.

In this sense, the debate on the impact of income transfers on the autonomy of poor women in the context of gender relations, using the PBF as reference, emphasizes that income alone is not enough to promote the empowerment of poor women, the majority of whom are heads of households, and that there is no appreciation for women's work. In addition, one cannot forget that female heads of households live mostly in a situation of vulnerability, which strongly contributes to increasing the parental stress of these women (Lavinhas, Cobo, & Veiga, 2012).

Some studies (Kemp, Bradshaw, Dornan, Finch, & Mayhew, 2004; Hoff, Laursen, & Tardif, 2002) have provided an overview of the situation of families living in poverty. Bradshaw and Main (2016) consider that the well-being of children is strongly affected by poverty or its elements. A review of the consequences of poverty showed the deep impact

of poverty on health during the prenatal period, birth and childhood. There is evidence that poverty is associated with lower levels of breastfeeding, premature births, and higher rates of infant mortality and maternal depression. Impacts on education are most often associated with difficulties in the development of cognitive processes in childhood. According to the authors, low levels of schooling are associated with low skills and low-paying jobs, elements that tend to be preserved throughout family generations and have negative effects on the development of parents and children.

These elements of poverty that restrict the healthy development of children and adults have a significant effect on parental styles and practices, increasing the level of risk to the mental health of poor populations, which can result in high levels of stress or anxiety, thus reducing parental investment (Jocson & McLoyd, 2015). Although all Brazilian families are subject to social risks such as violence, crime and drug-related problems, it is clear that poor families are more vulnerable to these factors and many others such as poor health, housing, sanitation, etc. because they have fewer resources and support networks that can help them. In this sense, it is no exaggeration to say that poor families have to cope with challenging tasks that weaken the whole system, especially affecting the parents, stressing them, and thus negatively affecting their parenting. In this context, parental stress may act as another aspect that hinders development in families that are surrounded by risk factors, and therefore, it hampers the parent-child relationship in regard to the emotional investment in parenting (Evans & Kim, 2013).

Parental stress

Stress can be defined, in general, as a non-specific response of the organism to a situation seen as threatening. This response arises in order to recover a state of equilibrium, which was challenged by a mobilizing demand on the individual. That said, while a situation interpreted as a threat to survival can trigger stress, so can excess positive emotional states because the individual is required to re-adapt. The development of stress may then depend on the individual's assessment of the situation, which indicates that stress is not merely a response but a process (Sardá, Legal, & Jablonski, 2004).

The stress experienced by father and mother figures is called parental stress. Factors influencing parental stress are associated with parent characteristics, child characteristics, social and economic factors, and cultural contexts. When stress levels are considered adequate, it can be a motivational factor that drives parents to perform their tasks. However, very high levels of stress can compromise family functioning with negative consequences for parents and children (Cunha, Pontes, & Silva, 2017).

This highlights the great importance of the roles played by adults with parental responsibilities in family environments, forming a system that dictates the importance of these roles also in the nuances of the relationships that unfold in social reality (Hoghughi, 2004). Thus, the variables involved in human development form a multifactorial network, focusing here on poverty and stress of the family, more specifically, of people with parental roles. Thus, the objective of this work is to relate the level of poverty of families with levels of parental stress.

Method

The present research has a quantitative and cross-sectional design. The sample used was representative, calculated from a database of the Ministry of Social Development, and resulted in a probabilistic sample stratified by mainland *Belém* districts.

Participants

The study included 433 families represented by parents, guardians or caregivers registered in the Federal Government's *Cadastro Único* (*CadÚnico*). This is a database that gathers information on Brazilian families living in poverty and extreme poverty. The parameters of the *CadÚnico* encompass families that make up to half the minimum wage per person or up to 3 minimum wages in total monthly income and who visit the Social Assistance Reference Center (CRAS, for its initials in Portuguese) of the municipality for enrollment in social benefits, such as the *Bolsa Família*.

Participants were organized using a probabilistic sample stratified according to the mainland *Belém* neighborhoods. To participate in the research, in addition to being registered in *CadÚnico*, as identified by their Social Identification Number (NIS, for its initials in Portuguese), caregivers had to meet two criteria: to have or be the guardian of children from 5 to 18 years old and to live in the studied locations.

Study site

The data were collected in 10 CRASs of mainland *Belém*, which were selected because they serve people from different neighborhoods. These CRASs were Cras Icoaraci, Cras Tapanã, Cras Benguí, Cras Aurá, Cras Guamá, Cras Quarreira, Cras Jurunas, Cras Barreiro, Cras Cremação and Cras Terra Firme, which together serve more than 30 neighborhoods.

The CRAS is a state-owned territorial unit established under the Unified Social Assistance System (SUAS, for its initials in Portuguese) and located in socially vulnerable areas, which works with families and individuals within the community, providing guidance and supporting family and community living. It offers the Comprehensive Family Care Program, providing a regionalized service very important for the basic care of families (Brasil, 2004).

Instruments

Three instruments were used in this study: the Sociodemographic Inventory (ISD, for its initials in Portuguese), the Family Poverty Index (IPF, for its initials in Portuguese) and the Parental Stress Index (PSI). The Sociodemographic Inventory was used to record general family data, family composition, and data on family members and the economic characteristics of the participating families in order to characterize the participants and to establish an initial contact. This instrument was developed by researchers from the Laboratory of Developmental Ecology - UFPA and is commonly used in research (Mendes, Pontes, Silva, Bucher-Maluschke, Reis, & Baía-Silva, 2008).

The Family Poverty Index (IPF) is an instrument aligned with the concept of multidimensional poverty, as it investigates different dimensions of the family setting. Developed by Barros, Carvalho and Franco (2006), it includes a total of six dimensions, 26 components and 48 indicators and is used to measure the level of multidimensional poverty both in demographic groups and at the family level. The 48 indicators are structured as questions, which the primary caregiver can answer with 'yes' or 'no'. The 'yes' represents an unmet need, a deprivation or source of vulnerability, thus increasing the poverty indicator. The 'no' represents the opposite, a satisfied need, which reduces the poverty level.

The index ranges from 0 (no family poverty) to 100 (Family living in absolute poverty). The six dimensions of poverty assessed are: a) vulnerability; b) access to knowledge; c) access to work; d) scarcity of resources; e) child development; and f) housing needs.

The Parental Stress Index (Parenting Stress Index Short Form- PSI/SF, Abidin, 1995) was used to measure the level of parental stress perceived by caregivers. The Portuguese version adapted by Santos (1992) was used here. This instrument assesses the level of stress experienced by parents or caregivers. It has previously been used in Brazil in theses and dissertations, mainly for evaluating parental stress in parents of children with abnormal development (Cunha, 2016).

The PSI/SF consists of a 36-item scale divided into three subscales (with each subscale comprising 12 items): (a) the Parental Distress Subscale, which evaluates the perceptions of the feelings experienced by the parent in his/her role as father/mother; (b) the Parent/Child Dysfunctional Interaction Subscale, which evaluates the perceptions of parents regarding their children and what perceptions are compatible or not with their expectations and which also evaluates the perceptions regarding mother/child interactions that reinforce the father/mother roles; and (c) the Difficult Child Subscale, which specifies various basic characteristics of the child that facilitate or not the management of their behaviors. The sum of the points assigned to each item defines the total score, which can range from 36 to 180. This sum considers all the subscales, using values on a Likert scale (1=totally disagree, 2=disagree, 3=undecided, 4=agree and 5=totally agree).

The scores obtained in the total analysis of PSI items and for its dimensions are then classified as low, normal or high. The study by Santos (1992) obtained a Cronbach's Alpha of 0.91 for the total stress coefficient with high internal consistency of the measures used to describe parental stress.

Procedure

This study is part of a macroproject titled *Pobreza e ecologia do desenvolvimento*, which was submitted to the Research Ethics Committee of the Center for Tropical Medicine of the Federal University of Pará and approved under opinion no. 865.235. In addition, the present study was approved by the CRAS administrators of each neighborhood visited.

Caregivers who visited a CRAS for re-enrollment in the *Bolsa Família* Program or another type of social service were approached while waiting to be seen, and the research objectives listed in the Informed Consent Terms were explained to them.

Once the volunteer agreed to participate, the researcher conducted the interview using the instruments described above. All the interviews were conducted individually and at a single time with each participant. After administration of the instruments to participants from all mainland *Belém* neighborhoods, the data were entered into the statistical package SPSS® version 23.0, and descriptive statistical analyses were performed.

Data analysis

Participants were classified according to their level of parental stress (normal or low stress; high stress) and to their multidimensional poverty level (poorer; less poor), according to the scores obtained in the IPF and PSI instruments.

The parameters used for the separation into these categories were based on the PSI scores in the case of parental stress, wherein stress is considered high for scores of 94 points or higher; this threshold is 33 points in the parental distress subscale, 28 in the parent/child relationship subscale, and 37 points in the difficult child subscale. These parameters were established through validation of the instrument.

In regard to the IPF, for the breakdown of poverty categories, the criterion used was to divide the groups using the median ($=14$; $\approx 29\%$), separating the upper half of the sample, i.e., those above the median (poorer), and the lower half, below the median (less poor), both for total poverty and its dimensions. It should be noted that each dimension has a specific number of items (Vulnerability= 10 ; Access to knowledge= 6 ; Access to work= 6 ; Access to resources= 4 ; Development= 11 ; and Housing= 12). The poverty level of each family was calculated by a rule of three, considering the total score obtained in each dimension and with regard to multidimensional poverty.

To relate the two variables, statistical tests were applied according to the structure of the data (categorized continuous). The technique used for this purpose was Correspondence Analysis. Thus, the study was developed in several stages, following the assumptions for the validation of this technique. According to Fávero, Belfiore, Silva and Chan (2009), correspondence analysis is an exploratory statistical technique used to test associations or similarities between qualitative variables or categorized continuous variables.

After applying the tests required by this technique, to calculate the probability of one variable category being associated with another, it was necessary to calculate the confidence coefficient. In all tests, $\alpha = 5\%$ ($p \leq 0.05$) was adopted for rejection of the null hypothesis. The correspondence analysis was performed using Statistica software, version 6.0.

Results

The study findings were organized as follows: (1) sociodemographic characteristics, (2) descriptive data on family poverty and parental stress, and (3) relationship between family poverty and parental stress.

Sociodemographic characteristics

The mean age of the participants was 36.6 years ($SD=8.7$). The mean age of the children (children and adolescents) was 10.4 years ($SD=3.7$). In addition, most families (79.9%) had at least one child (aged up to 12 years) among their dependents.

There was also a predominance of women as primary caregivers (96.5%), and among all participants, 46% were married and 54% were single, of which 4% (81) never married legally, 7.0% were divorced or separated and 1.6% were widowed. With regard to schooling, just over half (52%) of the participants had completed secondary school, 25% had

completed elementary school, 21% had not completed elementary school, 1% were illiterate, and 1% had completed higher education.

Regarding work, 54% said they had some type of job, most of whom (66.5%) were informal workers, and 46% said they did not work. It is worth mentioning that in 83.8% of these families, there was no middle- or high-skilled worker, and in the majority (94.5%) of these families, there was no member with an income higher than two minimum wages.

In regard to housing, the average number of residents per household was 4.2 people ($SD=1.282$), and in 68.8% of the houses, there was a density of 2 or more residents per bedroom. The family configurations of the 433 participants were as follows: 35.6% of families were headed by single mothers or fathers (mostly mothers); 31.9% of families consisted of married couples and their children; 20.6% were composed of married and single mothers and fathers living with their parents (grandfathers and grandmothers) and children; and 6.7% of the families were reconstituted, with couples formed by stepmothers or stepfathers and a biological relative. Other configurations found were grandparents and grandchildren, single mothers and parents with their children and grandchildren, and one case of a sibling in a parental role.

Descriptive data on poverty and parental stress

The mean value for the poverty level of the 433 families was approximately 14.4 (30%; $SD=8.1$), which can be considered low given the parameters of the instrument, wherein the poorest families are those closest to 100% (which would correspond to absolute poverty). However, the result found is higher than the national average for family poverty (25%), as determined by Barros, Carvalho and Franco (2006) in a study of multidimensional poverty at the national level. The level of poverty was also close to that found by these authors for particularly vulnerable sociodemographic groups, in which the poverty level for the members of female-headed households was 28%.

The PSI data revealed that most caregivers (60.5%) presented low or normal stress. A more in depth look at the data indicated that in general, the participants were classified with normal or low stress in the three dimensions, with the percentage for each dimension being 56.4% in the 'parental distress' dimension, 61.9% in the 'parent/child dysfunctional interaction' dimension, and 79.7% in the 'difficult child' dimension. Thus, 43.6% of the parents were classified as high stress in the parental distress dimension, 38.1% in the parent/child dysfunctional interaction dimension and 20.3% in the difficult child dimension.

Specifically in the group rated with high stress ($n=171$), the 'parent/child relationship' dimension was the one with the highest percentage of parents with high stress (81.3%), followed by the 'parental distress' dimension, with 77.2% of parents with high stress. The 'difficult child' dimension had the lowest percentage of parents with high stress in this group (52%).

Family poverty and parental stress

Descriptive level values (p) lower than the significance level of 0.05 (5%) and Beta (β) values greater than or equal to 3 indicate that both the variables and their categories are dependent (Table 1). In addition, the sum of the percentages of inertia indicates that more

than 70% of the data was explained by the Correspondence Analysis. Therefore, all the assumptions required for using the Correspondence Analysis technique were met.

Table 1: Statistics resulting from the application of the correspondence analysis technique to the variables: Stress, IPF, IPFK, IPFI and IPFCD

Variables	χ^2	L	W	β	% Inertia	P
IPF <i>versus</i> Stress	4.53	2	2	3.53	100.00	0.033
IPFC <i>versus</i> Stress	8.64	2	2	7.64	100.00	0.003
IPFR <i>versus</i> Stress	10.72	2	2	9.72	100.00	0.001
IPFDI <i>versus</i> Stress	39.21	2	2	38.21	100.00	0.000

Note: χ^2 - Chi-square value; L - Number of Categories of the Variable in the Row; C - Number of Categories of the Variable in the Column; p - Descriptive Level and β - Value of the Beta Criterion.

Note: IPF – Family's Poverty Index; IPFK – Family's Poverty Index in Access to Knowledge; IPFI – Family's Poverty Index in Access to Income; IPFRCD – Family's Poverty Index in Child Development.

Source: The author's.

Table 1 shows the poverty variable, assessed by the IPF instrument, and which of its dimensions were dependent on the parental stress variable according to the statistical tests. It is observed that the 'multidimensional poverty' variable, as well as the dimensions 'Access to Knowledge', 'Access to Income' and 'Child Development', responded positively to all the Correspondence Analysis assumptions, indicating that this variable – multidimensional poverty – and the dimensions mentioned are dependent on the variable 'parental stress'.

Based on these results, the confidence coefficient was calculated to determine the probability of one variable category being associated or presenting similarity with another, taking into account that the variables and their categories are dependent. The results can be seen in Table 2, which shows the information obtained from the categories of each variable in relation to poverty (the less poor and poorer groups) and in relation to stress (the normal and high-stress groups). The associations between categories are considered significant when the confidence coefficient value indicates moderately significant probabilities, that is, when $50\% \leq \gamma \times 100 < 70\%$ or when the confidence coefficient value indicates strongly significant probabilities, i.e., when $(\gamma) \geq 70.00\%$.

Table 2 - Statistics resulting from the application of the correspondence analysis technique to the variables: Stress, IPF, IPFV, IPFK, IPFW, IPFI, IPFCD and IPFH

Variables	Categories	Categories	
		Normal	High
IPF	Less Poor	0,92(64,30)**	-1,12(0,00)
	Poorer	-0,98(0,00)	1,20(77,05)*
IPFV	Less Poor	$p = 0,445$	
	Poorer		
IPFC	Less Poor	1,14(74,72)*	-1,40(0,00)
	Poorer	-1,47(0,00)	1,80(92,74)*
IPFT	Less Poor	$p = 0,293$	
	Poorer		
IPFR	Less Poor	1,17(75,70)*	-1,42(0,00)
	Poorer	-1,72(0,00)	2,09(96,37)*
IPFDI	Less Poor	2,55(98,93)*	-3,11(0,00)
	Poorer	-3,04(0,00)	3,71(99,98)*
IPFH	Less Poor	$p = 0,444$	
	Poorer		

Nota: **Moderately significant probabilities because $50\% \leq \gamma \times 100 < 70\%$. *Strongly significant probabilities because $\gamma \times 100 \geq 70\%$

Nota: IPF – Family's Poverty Index; IPFV – Family's Poverty Index in Vulnerability; IPFK - Family Poverty Index in Access to Knowledge; IPFW – Family's Poverty Index in Access to Work; IPFI - Family's Poverty Index in Access to Income; IPFRCD – Family's Poverty Index in Child Development; IPFH – Family's Poverty Index in Housing.

Source: The author's.

Table 2 shows all six dimensions of IPF, even those that were not dependent on the stress variable, as they have a p-value greater than the significant level. The data show which interactions in the table were statistically significant, namely strongly significant [*] or moderately significant [**].

Table 2 clearly shows a strongly significant relationship between the categories 'poorer' and 'high stress', as their variables were dependent, as observed in Table 1. Thus, the poorer individuals are also the most stressed ones, as opposed to the less poor.

In addition, the table also reveals strong relationships between the 'poorer' category of IPF (total poverty) and the category 'high stress'.

The data in Table 2 also show strong relationships between the 'less poor' and 'normal stress' categories and also between the poorer and high stress categories in the following dimensions: 'Access to Knowledge' (IPFK), 'Access to Income' (IPFI) and 'Child Development' (IPFCD).

Discussion

This research revealed that primary caregivers in families are mostly women, a characteristic that is in agreement with the traditional role of the woman as the main caregiver, and also that women are increasingly head of the family, constituting factors that make this group the most vulnerable one. In addition, there is a preference in the *Bolsa Família* program for the recipient to be a woman, a criterion that reiterates the issue of gender relations by making women a mobilization vector of the program (Mendes, 2016).

It is relevant to note as a striking characteristic of this population the fact that, among working adults, most of them are informal workers, that is, they do not have a fixed income. These indicators are in line with the results presented by Magalhães, Cotta, Martins, Gomes and Siqueira-Batista (2013) in a survey of families enrolled in the *Bolsa Família* program.

The IPF and PSI data revealed that greater multidimensional poverty, lack of access to knowledge, lack of access to knowledge income and lower child development in families were strongly associated with a high level of parental stress in the primary caregiver.

Access to knowledge refers to the education level of the primary caregiver and all adults living in the household, and one of the findings was that 93.3% of the families had no adult with higher education. This result is noteworthy because according to Gomes and Pereira (2005), in addition to income distribution, education is also an inequality factor because it can perpetuate the poverty cycle throughout generations, as parents with low levels of schooling have difficulty ensuring a higher level of schooling for their children.

The dimension 'access to income' takes monetary aspects into account and reveals how much the family has access to resources that enable them to meet their basic needs. One of the findings was that 94.5% of families had no adult with an income above two minimum wages. The level of stress was also high for families with lower access to income. It is important to note that, although income is a very important factor that influences the quality of life of the population, it is not the only factor involved.

Access to work is the main source of family well-being, as expected given the limited Brazilian protection system (Lavinhas, Cobo, & Veiga, 2012). This result is in line with the fact that most adults who work are informal workers (Magalhães et al., 2013), which is highly inconstant and brings hardly any security or stability to families, thus promoting high parental stress in caregivers or parents.

The child development dimension consists of indicators that reveal situations of vulnerability or problems related to family dependents (children and adolescents) and takes into account four components: child labor, school dropout, grade retention and child mortality (Barros, Carvalho, & Franco 2006). The poorer families in this dimension were those that presented high parental stress.

This result indicates that poverty affects these families in a variety of ways, impacting parents and children, and by preventing children from maximizing their opportunities for development, it creates difficulties for the family in regard to these children. This is true both in the child-parent direction of the relationship and in the parent-child direction because neither have their expectations met, which is reflected in the stress experienced in the parental role. Indeed, poverty makes this process more exhausting for the caregiver, making it less effective and more erratic and negatively affecting the members of the dyad. These data are in agreement with the results of Jocson and McLoyd (2015), where elements related to poverty led to higher levels of distress or parental stress.

In this study, the opposite is also true: the less poor families in all the dimensions, such as child development, were those whose caregivers had lower levels of parental stress.

In addition, it is important to mention the fact that most caregivers (60.5%) in this study revealed low or normal stress. These factors may indicate protective aspects of the population involved in this process that help the family system structure itself in a healthier way (Pesce, Assis, Santos, & Oliveira, 2004).

In this sense, the study by Ghatte and Hazel (2002, p. 16), which examined a sample consisting mainly of mothers living in areas that were "[...] high in certain indicators of community and individual disadvantage and poverty [...]", revealed that poverty often does not directly affect the perceptions of those living under those conditions and therefore the stress involved in the activities of a primary caregiver within the family. Instead, it has a distal effect, that is, it affects peripheral elements that together can increase the vulnerability, risk or parental stress of these caregivers. This makes sense considering the dimensions of poverty and how specific aspects such as work, income, knowledge and child development were, together, strongly associated with high parental stress.

Final considerations

The contribution of the present study was to suggest that poverty levels influence the levels of stress found in the families investigated. Accordingly, a high level of stress was observed in the group classified as poorer both in multidimensional poverty and in some of its dimensions (access to knowledge, access to income and child development). In addition, normal stress levels were observed in the group classified as less poor.

These results allowed us to identify what dimensions or aspects of poverty are most associated with obstacles to parenting. Poverty overall was associated with high stress, i.e., more than its isolated dimensions, the set of difficulties created by poverty puts families at risk. In addition, aspects of the persons involved in the parental relationship were also considered, so that elements of the adult domain (access to knowledge, household income) and the dependent domain (child development) were strongly associated with high parental stress.

The limitations of this study include in particular the sample population, which consisted only of the poor families who visit the CRASs of Belém and are registered in CadÚnico. It is possible that families that are not enrolled in federal programs have higher poverty levels because they do not receive financial support and may also exhibit other poverty profiles, given its multidimensional nature.

Considering the contributions and limitations of this study, it reveals that studies that take into account cultural idiosyncrasies and try to follow a systematic line of research are important. The data presented here reveal relationships that should be investigated in more depth, such as, for example, what dimensions of poverty most contribute to classifying a family as poorer in a given population context. With regard to parental stress, it should be determined what dimensions of parental stress better explain a high stress level for that family typology. In addition, considering that most of the parents in this study had normal or low levels of stress, studies focused on the protective aspects surrounding the poor families of Belém-PA can help identify strengthening factors that allow this population to face adversities in a healthy way.

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