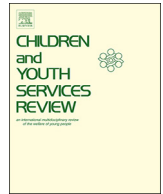




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Stressful events, life satisfaction, and positive and negative affect in youth at risk

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ABSTRACT

The aim of this study was to perform a cross-sectional assessment of the relationships between stressful events, life satisfaction, and positive and negative affect experienced by socially vulnerable children and adolescents in Brazil. The sample comprised 1080 youth, aged between 7 and 16 years old, who lived either in a shelter institution or with their families. This sample exhibited characteristics of vulnerability, including low family income, parents' low educational level and parents' unemployment. Data revealed differential risk and protective factors associated with various forms of social vulnerability, in which those living with their families experienced fewer stressful events, were more satisfied with their families and with themselves, having also less negative affect and more positive affect when compared to participants that were institutionalized. Institutionalized children and adolescents exhibited a larger number and stronger impact of stressful events, accompanied by higher levels of negative affect compared to those living with their families, yet reporting more life satisfaction thought non-violent behavior. A logistic regression analysis was deployed in order to further establish the impact of institutionalization. Considering altogether, the variables explained 41% of the variance in institutionalization. This study suggests the importance of family life for the positive development of children and adolescents, as well as the need to offer a qualified intervention in institutionalizing situations, in order to overcome the vulnerabilities, present in these contexts.

1. Introduction

It has been estimated that one in five children from countries in Latin America and the Caribbean are at risk of not reaching developmental potential (Black et al., 2017). This includes lack of nurturing and responsive care, health and nutrition deficits, problems with safety and violence, as well as troublesome homes and difficulties at school. Albeit youth from these regions certainly possess certain characteristics that are unique due to contextual factors, they have overlapping difficulties, which can also be experienced by children and adolescents living in adverse contexts elsewhere. Especially in today's world, the welfare of youth under numerous refugee crisis is at crucial levels. One overarching understanding is that cumulative deficits in several areas – including biopsychosocial domains – impact on important variables

assumed to foster adaptive outcomes (Ng, Huebner, & Hills, 2015). Countries within South America and the Caribbean place youth at greater risks for poor health outcomes due to changes linked not only with physical and biological threats (Laborde et al., 2015), but are intensified by little resources to fund public policies in health and education, leading to a cascade of effects for optimal development (Macedo, Foschiera, Bordini, Habigzang, & Koller, 2019).

Even so, the more resilient children and adolescents are too unfavorable and stressful situations, the more actively they will engage in strategies benefitting their development and will act to change their environment (Hernangómez, Vázquez, & Hervás, 2009), resulting in better school functioning (Lewis, Huebner, Malone, & Valois, 2011), less problematic behavior (Sun & Shek, 2013) and overall better outcomes into later developmental stages (Ben-David & Jonson-Reid,

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2017). Resilience, therefore, might be considered central in promoting life satisfaction and subjective well-being amongst youth at risk, even when the context is marked by the significant occurrence of stressful situations (Koller & Lisboa, 2007; Wilson & Gottman, 1996).

In this study, we investigated biopsychosocial characteristics, stressful events, life satisfaction and positive and negative affect as reported by youth at risk living under both institutional care and with their families. Social vulnerability was defined by the living conditions of the groups, including exposure to personal, social, or environmental risk factors that can produce negative developmental and psychological outcomes (Black et al., 2017; Devi, Sharma, & Shekhar, 2015; Masten & Garnezy, 1985; Noble et al., 2015). Factors that might have possibly denoted adaptive resources to cope with adversities included the experience of positive affect and self-reported life satisfaction (Park, 2004). Our attempt was to not only elucidate risk factors for children and adolescent at risk but also exploring variables that might promote positive alternatives to youth development (Sun & Shek, 2013). Our study is guided by the Positive Youth Development (PYD) framework, an approach that gives emphasis on individuals' resources to adapt in numerous challenging environments; instead of assuming that at-risk youth are somewhat destined to lead disturbed lives, they are comprehended in terms of potentials to be stimulated and cared for, in close attention to dynamic, ecological interactions between individuals and contexts of development (Lerner, Lerner, & Benson, 2011; Sanders, Munford, & Liebenberg, 2017).

1.1. Stressful events, life satisfaction, and positive and negative affect in youth

Stressful events - when occurring in early stages of human development - have the likelihood of compromising several areas of a developing individual, thus disrupting the flourishing of full potentials. Data from youth regularly attending school suggest that deficits in the levels of life satisfaction and in affective domains (i.e., lower positive affect and higher negative affect) might follow stressful experiences (McCullough, Huebner, & Laughlin, 2000; McKnight, Huebner, & Suldo, 2002). The more severe the intensity of these stressful events, the greater the impact on development (Shonkoff et al., 2012).

Studies on stressful events in youth have commonly focused on topics such as social adversity, sexual and physical abuse, general poverty and impoverishment, wars and other forms of trauma (Poletto, Koller, & Dell'Aglio, 2009). These stressors were once believed to have a direct impact on individuals. In other words, an isolated occurrence of a severely stressful event was assumed to negatively impact on positive youth development. However, the way people deal with stressful events is mediated by several factors, including the severity, the intensity, the frequency and the duration of stressors. Individual differences indicate that the way people perceive a stressful event is crucial in determining its consequences. Indeed, some children are able to face and overcome stressful events as quickly as possible, while others suffer from greater intensity (Wilson & Gottman, 1996). Thus, biopsychosocial factors - combined with emotional capabilities - must be examined when attempting to obtain clearer insights on the consequences of stressful events on youth development (Lerner et al., 2011; Park, 2004; Poletto et al., 2009; Sanders et al., 2017). Previous research conducted in the United States has shown that stressful life events can be accompanied by diminished life satisfaction in middle school students (Chappel, Suldo, & Ogg, 2014) and during early adolescence (Lyons, Huebner, & Hills, 2016).

Kristensen, Leon, and D'Incao (2004) reported that typical Brazilian adolescents are more frequently faced with stressful events involving the occurrence of school testing, disagreement with friends, death in the family, obeying to parents' instructions and fighting with siblings. As for the impact, the same group of youth perceived greater consequences with themes like sexual abuse, separation from parents and being institutionalized. More recently, Roberts, English, Thompson, and

White (2018) reported on data from 847 at-risk youth from the United States, showing that neglect (58.6%), emotional maltreatment (35.5%) and physical abuse (34.9%) were amongst the most frequent forms of stressful events experienced by the sample. Moreover, 6.79% of participants reported exposure to violence, 3.27% declared difficulties in changing homes and 3.06% complained about family stress. There were significant links between youth maltreatment and academic difficulties, as well as between maltreatment and risky behaviors such as drug use (Roberts et al., 2018).

Institutionalization is one of the most established risk factors for compromising children and adolescents behavioral and neural development (Berens & Nelson, 2015; Bick et al., 2015; Teicher & Samson, 2016). Fernández-Daza and Fernández-Parra (2013) reported that participants who were at an institution demonstrated greater difficulties in cognitive and social domains when compared to children and adolescents living with their families. Moreover, the study indicated that institutionalization was accompanied by greater symptoms of depression, anxiety, and aggression (Fernández-Daza & Fernández-Parra, 2013). Moreover, institutionalization is assumed to negatively impact on life satisfaction in youth (Llosada-Gistau, Casas, & Montserrat, 2017). Life satisfaction is a judgment about individuals' own lives, involving rational and intellectual thought processes. Such judgments may be global and could involve a subject's assessment of life as a whole, but they might also focus on specific domains such as the family or school (Diener et al., 2017; Ng, Huebner, Hills, & Valois, 2018). Life satisfaction has shown negative associations with social vulnerability amongst Brazilian adolescents, is likewise associated with a greater number of stressful events (de Abreu et al., 2016). Poletto and Koller (2011) examined positive and negative affect, as well as levels of life satisfaction, in children and adolescents who were at youth offenders institutions. The results revealed that levels of negative affect were higher for those living in youth offender institutions when compared to a contrast group, albeit no significant differences were found for positive affect and for life satisfaction.

The scarcity of data from Latin American samples in relation to institutionalized children and adolescents is well-established (Fernández-Daza & Fernández-Parra, 2017). Moreover, research comprising youth at risk is also limited, which has severe implications for delivering effective programs intending to assist these individuals. Consequently, the study's goal was to describe the biopsychosocial characteristics, stressful events, life satisfaction and positive and negative affect as experienced by children and adolescents living in institutional care (G1) and living with their families (G2). The specific aims were: a) to investigate possible intergroup (G1 vs. G2) differences in the studied variables, and b) to investigate the correlation between life satisfaction, positive and negative affect, and the frequency and impact of stressful events in the G1 and G2. Following past research, we expected to verify a greater number of stressful events and diminished levels of life satisfaction amongst institutionalized participants (Llosada-Gistau et al., 2017). Moreover, we have hypothesized that negative affect would be higher for those living in institutions (Bos et al., 2011; Smyke et al., 2007), being likewise inversely linked with life satisfaction (Poletto & Koller, 2011).

2. Material and methods

2.1. Participants and design

A total of 1080 Brazilian children and adolescents (50.3% male) participated in this cross-sectional study, being 283 in G1 (46.3% male) and 797 in G2 (51.8% male). The criteria for the G1 group was being at least one month in the institution. Participants' ages varied from 7 to 16 ($M = 11.20$; $SD = 1.91$), with an average of 11.23 years in the G2 sample ($SD = 1.89$) and an average of 11.13 years in the G1 sample ($SD = 1.97$). Participants in G1 had more siblings ($M = 4.47$; $SD = 2.62$) compared to those in G2 ($M = 2.95$; $SD = 2.08$). In G2,

36.8% of the participants ($n = 293$) lived with up to three people, 62% ($n = 495$) lived with more than four, and 10 participants did not answer this item. Approximately 41.6% ($n = 166$) of the participants in G1 had siblings living with them, and the average length of institutionalization was 28.75 ($SD = 32.47$) months. Most participants did not know the educational level and occupation of their parents, especially those in the G1. Slightly $> 10\%$ ($n = 140$) of the parents of those in G2 and 5% ($n = 20$) of those in G1 had completed elementary education. Regarding parental work situation, informal and under-employment occupations prevailed (e.g., building and cleaning services). Participants attended elementary public schools between first and eighth grades; most were third through sixth graders. Although there was no age difference between G1 and G2, there were significant differences in their educational levels ($t(1) = 10.73$; $p < .001$; $G2 > G1$; $M_{G1} = 3.28$; $SD_{G1} = 1.62$; $M_{G2} = 4.52$; $SD_{G2} = 1.42$).

The group of institutionalized youth was under measures of judicial protection. The reasons for family separation included abandonment, physical and/or psychological violence and abuse, amongst others. Nearly eight out of ten institutionalized youth maintained contact with their relatives, although not always in high frequencies. Nearly 60% of those in G1 had other institutionalized siblings (45.1% in the same institution). The institutions offer mental health care and there is a follow-up evaluation every six months that aims to establish an individual plan of care. This procedure includes preparation for the termination of institutionalization when this is a possible alternative. According to current Brazilian legislation, the length of institutionalization shall not exceed 24 months; however, some individuals in our sample were placed in institutional care for up to 215 months. In young children (e.g., under 6 years), the total time spent in institutions is usually much lower.

2.2. Procedures

One important aspect at the time of data collection included the role played by key variables that happened to the individual before the institutionalization, and how this could be linked to positive or negative developmental outcomes. Of course, the severity of the events that supported the decision to be removed from the family, and how the events were perceived by the individual could have had strong influences, but other issues that emerged when contacting the institutions and children included the quality of the relationship with the professionals who worked at these institutions (institutionalized children felt more welcome and secure, especially when compared to the instability they had lived with their original families). For this reason, our proposed mechanisms also included the examination of several variables associated with life satisfaction (in the context of self and compared self, friendships, experiences with violence, and so on). This study followed the principles from the Declaration of Helsinki, as well as the specificities in collecting data with at-risk populations in Brazil (Neiva-Silva, Lisboa, & Koller, 2005). Ethical approval was obtained from the Federal University of Rio Grande do Sul Ethics Committee (UFRGS). The inclusion criteria were based on age (7 to 16 years old) and regular attendance to school. Participants were excluded if they were diagnosed with any mental and/or cognitive pathology that could impair their understanding of the surveys, as reported by their schoolteachers and institutional caregivers. Thus, G1 comprised participants in institutional care who were selected from both government-run public institutions, as well as from non-government and philanthropic institutions from different cities in southern Brazil. The institutions that agreed to participate were included in the present study. G2 included youth from 14 public schools, which were selected due to their homogeneous characteristics across the state. Schools were selected in neighborhoods with low socioeconomic levels (p. e., poor housing conditions, violence), characterizing a situation of social vulnerability. As for the operationalization of data collection, institutions and school principals were first contacted. In these occasions, the goals of this

investigation were explained. When approval was obtained, both school principals and participants' legal guardians signed consent forms, according to formal requirements for data collection with this population (Neiva-Silva et al., 2005). Finally, children and adolescents were invited to participate and signed the informed consent forms.

2.3. Measures

Inventory of Stressful Events in Childhood and Adolescence (Kristensen et al., 2004). This checklist identified the occurrence of 60 stressful events and the respondents' perception of their impact. In this checklist, the presence or absence of each type of event is recorded as yes (1) or no (0), respectively. The events' intensity is indicated through a Likert scale (1 - not stressful at all; 2 - somewhat stressful; 3 - more or less stressful; 4 - very stressful; 5 - totally stressful). Two scores were then calculated: one corresponding to the sum of stressful events occurrence, and the other presenting the events average impact. The impact scale showed unifactorial proprieties with a Cronbach's alpha of 0.92.

Multidimensional Life Satisfaction Scale (Giacomoni & Hutz, 2008). Comprises 50 items that evaluate children's life satisfaction in six specific domains: self, composed of items that describe the self as positive, with positive characteristics such as good humor; comparative self, grouping items that are characterized by performing comparative evaluations with peers; non-violence, including items that have content associated with aggressive behaviors; family, involving a healthy, harmonious, affective family environment; friendship, characterized by relationships with peers and satisfaction with these relationships; and school, assessing the importance of the school, school environment, interpersonal relationships and level of satisfaction with and at the school. The answers are given in a 5-point scale (1 - not at all; 2 - a little; 3 - more or less; 4 - a good deal; 5 - a lot). In this study, the Cronbach's alphas were 0.79 for the subscale self (10 items), 0.79 for compared self (8 items), 0.76 for non-violence (4 items), 0.77 for family (11 items), 0.69 for friendship (10 items), and 0.80 for satisfaction with school (7 items).

Positive and Negative Affect Schedule for Children (Watson, Clark, & Tellegen, 1988; adapted by Giacomoni & Hutz, 2006) is a 40-items measure organized into two subscales: positive (20 items) and negative affect (20 items). Positive affect encompasses individuals' motivation, activity, and alertness, and it also includes some specific emotions, like joy, gratefulness, hope, and pride, while negative affect includes a range of aversive mood states, such as anger, guilt, disgust, fear, anguish, and dissatisfaction (Diener, Suh, & Oishi, 1997). Answers are given to indicate how much they were feeling according to the item on a 5-point scale (1 - not at all; 2 - a little; 3 - more or less; 4 - a good deal; 5 - a lot). In this study, the structure with two factors was clear, considering eigenvalues higher than 5.5 for both factors, explaining 34.6% of the total variance of the scale. The Negative Affect subscale had a Cronbach's alpha of 0.91, while the Positive Affect subscale had an alpha of 0.87. The total Cronbach's alpha for the measure was 0.85.

2.4. Data analysis

t -Tests (with a significance level of $p < .05$) were applied to compare the differences between the two groups (G1 and G2) in both the frequency and impact of stressful events, positive and negative affect, and the six dimensions of life satisfaction: family, friendship, school, self, compared self, and non-violence. Subsequent t -tests were used comparing boys and girls in these variables with the intent of checking, in an exploratory fashion, if gender has an effect on stressful events, life satisfaction, and positive and negative affect. Pearson's correlations were deployed to investigate the associations between variables, is presented separately for the developmental setting (e.g., G1 and G2). Finally, a logistic regression using the enter method was performed to further examine variables that were more strongly linked with

Table 1
Descriptive statistics and intergroup comparisons (n = 1080).

		Groups <i>M(SD)</i>		<i>t(df)</i>	<i>p</i>	<i>d</i>
		G1	G2			
Stressful events	Frequency	26.94 (10.18) ^a	16.26 (9.14)	15.44(1072)	< 0.001	-1.11
	Impact	3.24 (0.83) ^a	2.97 (0.89)	4.37 (1071)	< 0.001	-0.31
Life satisfaction	Self	3.76 (0.70)	3.89 (0.66) ^a	2.67 (1060)	0.007	0.18
	Compared self	3.06 (0.92)	3.03 (0.94)	0.54 (1058)	0.587	-0.04
	Non-violence	3.76 (0.98) ^a	3.10 (1.28)	8.83 (1072)	< 0.001	-0.57
	Family	4.09 (0.71)	4.27 (0.56) ^a	3.80 (1068)	< 0.001	0.28
Affect	Friendship	3.98 (0.61)	3.95 (0.58)	0.564 (1066)	0.573	-0.04
	School	4.12 (0.73)	4.12 (0.74)	0.004 (1071)	0.997	-0.01
	Negative	2.49 (0.84) ^a	2.14 (0.83)	6.11 (1078)	< 0.001	0.17
	Positive	3.71 (0.66)	3.82 (0.67) ^a	2.41 (1078)	0.016	-0.42
		Female		Male		
Stressful events	Frequency	19.2 (10.8)	18.6 (10.2)	0.60 (1074)	0.552	0.03
	Impact	3.17 (0.87) ^a	2.92 (0.88)	4.65 (1071)	< 0.001	0.28
Life satisfaction	Self	3.87 (0.69)	3.85 (0.68)	0.41 (1078)	0.680	0.03
	Compared self	3.06 (0.98)	3.02 (0.90)	0.74 (1078)	0.458	0.04
	Non-violence	3.27 (1.29)	3.29 (1.21)	-0.28 (1078)	0.775	-0.01
	Family	4.18 (0.66)	4.26 (0.57) ^a	-2.04 (1078)	0.042	-0.12
Affect	Friendship	3.98 (0.60)	3.95 (0.59)	0.96 (1078)	0.335	0.06
	School	4.15 (0.73)	4.1 (0.75)	1.18 (1078)	0.239	0.08
	Negative	2.28 (0.89)	2.19 (0.80)	1.62 (1078)	0.107	0.14
	Positive	3.77 (0.68)	3.81 (0.65)	-0.92 (1078)	0.352	-0.02

^a Higher mean; *d* = Cohen's *d*.

institutionalization for this sample of Brazilian vulnerable youth. The procedure used the history of institutionalization as the outcome, and all the variables significantly correlated in the former analysis were then set as predictors.

3. Results

Table 1 shows descriptive statistics (e.g., means and SD's) as well as comparisons according to the developmental settings and gender, while Table 2 presents the associations between variables. In the supplement materials, the frequency of all stressful event are displayed comparing each group (Table S1) As for a descriptive characterization of the sample, a number of significant differences were found, namely: in the number of siblings between the G1 and the G2 ($t(2) = 9,71; p < .001$); in the frequency and impact of stressful events, negative affect, and life satisfaction subscales of self, non-violence, and family (G1 exhibited higher frequency and impact of stressful events, negative affect, and non-violence subscales compared to G2. G2 exhibited higher satisfaction with the family and in respect to themselves; Table 1).

Table 2

Correlations between study's variables in the group of institutionalized (G1; n = 283 - over the diagonal) and non-institutionalized youth (G2; n = 797 - under the diagonal).

	Age	SEF	SEI	LSS	LSCS	LSNV	LSF	LSFr	LSSc	PA	NA
Age	-	0.27**	0.13*	-0.18**	0.04	-0.01	-0.25**	0.01	-0.12*	-0.21	-0.03
Stressful events frequency (SEF)	0.28**	-	0.43**	-0.17**	-0.07	-0.13*	-0.19**	-0.16**	-0.08	-0.10	0.34**
Stressful events impact (SEI)	0.01	0.36**	-	-0.14*	-0.11	-0.10	-0.09	-0.04	0.01	-0.06	0.34**
Life satisfaction self (LSS)	-0.15**	-0.22**	0.01	-	0.10	0.28**	0.48**	0.60**	0.60**	0.67**	-0.26**
Life satisfaction compared self (LSCS)	-0.08*	-0.07	-0.05	0.04	-	0.27**	0.14*	0.22**	0.05	0.09	-0.32**
Life satisfaction non-violence (LSNV)	-0.07*	-0.02	-0.01	0.02	0.44**	-	0.30**	0.36**	0.31**	0.10	-0.30**
Life satisfaction family (LSF)	-0.19**	-0.26**	-0.03	0.62**	0.16**	0.16	-	0.41**	0.45**	0.39**	-0.23**
Life satisfaction friendship (LSFr)	-0.10**	-0.24**	-0.02	0.60**	0.27**	0.28**	0.61**	-	0.59**	0.47**	-0.26**
Life satisfaction school (LSSc)	-0.28**	-0.27**	-0.04	0.64**	0.08*	0.06	0.57**	0.52**	-	0.44**	-0.15*
Positive affect (PA)	-0.19**	-0.18**	0.08	0.65**	-0.09*	-0.03	0.48**	0.42**	0.50**	-	-0.09
Negative affect (NA)	-0.01	0.24**	0.22**	-0.16**	-0.07*	-0.01	-0.24**	-0.20**	-0.20**	-0.07	-

* $p < .05$.

** $p < .001$.

3.1. Relationships between frequency and impact of stressful events, life satisfaction, and positive and negative affect in different developmental settings (G1 and G2)

A logistic regression analysis was deployed in order to further establish the impact of institutionalization using all variables that were significantly correlated (Table 3). The model classifies correctly 80.13% of cases and explained 41% of the variance. Considering all together, institutionalized participants had a higher negative affect, stressful events frequency, and a higher life satisfaction concerning friendship and non-violence. In the other hand, participants who lived with their families presented a higher impact for stressful events and higher life satisfaction related to the family.

4. Discussion

The study's goals were to describe the biopsychosocial characteristics experienced by children and adolescents at risk, living in institutional care or with their families (i); to investigate differences in respect to the frequency and impact of stressful events, life satisfaction, positive and negative affect (ii); and to examine the associations between stressful events, life satisfaction and positive and negative affect

Table 3
Summary of Logistic Regression Analysis for Variables Comparing Children with and without a history of Institutionalization.

Variable	B	Sig.	Exp(B)	95% C.I. to EXP(B)	
				Lower	Upper
Age	−0.26	< 0.001	0.77	0.70	0.86
Stressful events frequency (SEF)	0.13	< 0.001	1.14	1.11	1.17
Stressful events impact (SEI)	−0.31	0.01	0.73	0.58	0.93
Life satisfaction compared self (LSCS)	−0.02	0.13	0.98	0.95	1.01
Life satisfaction non-violence (LSNV)	0.15	< 0.001	1.17	1.12	1.22
Life satisfaction family (LSF)	−0.05	< 0.001	0.95	0.92	0.98
Life satisfaction friendship (LSFr)	0.04	0.03	1.04	1.00	1.09
Life satisfaction school (LSSc)	0.04	0.12	1.04	0.99	1.09
Positive affect (PA)	−0.01	0.41	0.99	0.98	1.01
Negative affect (NA)	0.01	0.03	1.01	1.00	1.02
Nagelkerke R^2	0.41				
Chi-square	14.37	($p = .73$)			

(iii). In terms of the biopsychosocial characteristics, one prominent fact was the family size in both G1 and G2. Institutionalized participants had at least four siblings, being most of them also institutionalized. Although the number of siblings was lower in the group living with their families (or G2), the configuration of family indicated a that more than half of the houses had more than four people (Table 1). This proportion is twice the average number of inhabitants per household in Brazil (Brazilian Institute of Geography and Statistics - IBGE, 2015). Studies have indicated that larger families, especially those under social vulnerability, might be less stimulating in the Latin context, being considered risk factors for positive youth development (Andraca, Pino, La Parra, Rivera, & Castillo, 1998; Soares et al., 2015). The best type of family configuration to enhance positive youth development is controversial. In large and single-parent families from low socioeconomic statuses (i.e., unemployed parents or in informal jobs), older siblings are often compelled to care for the younger ones, so that parents can be free to seek for the family's survival. The large number of residents per household in G2 also implies a high household density, blurring family roles; arguably, grandparents, uncles, and aunts often contribute to the families' needs by providing aid and support.

4.1. Differences between institutionalized and non-institutionalized youth with respect to stressful events, life satisfaction, and positive and negative affect

Institutionalized participants exhibited a greater frequency and magnitude of stressful events, also displaying higher levels of negative affect compared to G2. These results were expected as institutionalized children usually experience higher levels of stressful events prior of being admitted to institutions, being physical/sexual violence and deprivation of care the most common forms of stressors (Vasconcelos, Yunes, & Garcia, 2009). As a consequence, they are directed to institutional shelters until their families are better equipped to properly care for them, or until a new family is assigned (Vasconcelos et al., 2009). These results showing negative consequences of stressful events on at-risk youth have some overlap to what has been reported by Roberts et al. (2018). Using latent class analysis, three groups of youth were formed: chronic, moderate/declining, and low levels of stressful events. The results reinforced that chronic exposure to stressful events had unique effects on affect - including anger and depression - as well as predicted intrusive experiences and symptoms of dissociation at age 18, even after accounting for gender, race, and exposure to maltreatment (Roberts et al., 2018).

There were a number of intriguing differences between G1 and G2 when it comes to life satisfaction. Participants living with their families were more satisfied with themselves than the institutionalized participants (see Table 1). Upon assessing themselves (i.e., life satisfaction/self), G2 was more satisfied with their lives; however, upon comparing

themselves to their peers (life satisfaction/compared self), the groups did not exhibit significant differences. Participants living with their families also felt more satisfied with their families than the institutionalized ones. The usual family profile of institutionalized youth often reveals unfavorable socioeconomic conditions, parental low education, and informal parental jobs (Siqueira, Spath, Dell'Aglio, & Koller, 2011), as found in the present study. Considering the mentioned factors, it is not surprising that institutionalized children and adolescents were less satisfied with their families.

Interestingly, institutionalized youth reported greater life satisfaction through the non-violence dimension compared to those living with their families. One possible explanation might be linked to a previous history of exposure to violence. Under institutional care, children and adolescents are assisted in their rights and needs; thus displaying greater satisfaction for being less exposed to violence (James et al., 2017). Therefore, although institutionalization might not be the most desirable solution, it can be successful in removing the children from negative influences of the family environment.

4.2. Associations between frequency and impact of stressful events, life satisfaction, and positive and negative affect according to developmental settings

Few studies have examined the associations between stressful life events and life satisfaction in adolescent populations (Ng et al., 2018), and a much lesser extent of investigations have included youth at risk. The current research gives continuity to previous studies showing the impact of stressful events on life satisfaction (Chappel et al., 2014; Lyons et al., 2016), extending past research by examining the relationships between stressful events, life satisfaction and negative and positive affect in groups of youth at risk. In sum, greater consequences were mostly noted for the group of children and adolescents institutionalized.

4.2.1. Stressful events, life satisfaction and positive and negative affect in institutionalized participants (G1)

One of our hypotheses stated that institutionalized youth would present higher levels of stressful events, which would then be linked to deficits in self-reported life satisfaction (cf. Losada-Gistau et al., 2017). As discussed in Section 4.1, institutionalized children did differ from their non-institutionalized counterparts. The frequency of stressful events was positively linked with the impact of these events for participants belonging to G1 ($r = 0.43, p < .001$) and negatively associated with life satisfaction/self ($r = -0.18, p < .001$), life satisfaction/family ($r = -0.21, p < .001$) and life satisfaction/school ($r = -0.12, p < .05$). The impact of stressful events, however, was only associated with one dimension of the measure of life satisfaction, namely the one assessing individuals' satisfaction with themselves ($r = -0.14,$

$p < .05$). An examination of correlations revealed some degree of overlap with investigations conducted outside Latin America. For instance, Chappel et al. (2014) found that stressful, major life events were negatively associated with life satisfaction in a sample of middle school students in the United States ($r = -0.48, p < .05$). More recently, Lyons et al. (2016) found a negative association between stressful life events and life satisfaction in early adolescents, also from the United States ($r = -0.29, p < .05$).

In respect to the relationship between stressful events and positive and negative affect, Table 2 revealed moderate, positive correlations between both the frequency and the impact of stressful events with negative affect only (r 's = 0.34, $p < .001$). This association was predicted and seems to add to a rather robust literature indicating the deleterious effects of institutionalization on individuals' affective competencies (Bos et al., 2011; Smyke et al., 2007).

Following on Poletto and Koller (2011) study, we have set a hypothesis in which negative affect would be negatively associated with life satisfaction amongst institutionalized youth. This prediction was confirmed, precisely between negative affect and all the domains of life satisfaction assessed in this study (r 's_{range} = -0.23 to $-0.32, p$'s < 0.001; Table 2). As for positive affect, significant associations were found with life satisfaction/self, life satisfaction/family, life satisfaction/friendship and life satisfaction/school (r 's_{range} = 0.39 to 0.67, p 's < 0.001; Table 2). Briefly, these results reinforce that negative affect is linked with diminished levels of life satisfaction in children and adolescents institutionalized, which can have long-lasting consequences for PYD (Bos et al., 2011).

4.2.2. Stressful events, life satisfaction and positive and negative affect in non-institutionalized participants (G2)

Participants from G2 were also characterized by social vulnerability, and this can partly explain the results showing negative associations between the frequency of stressful events with levels of life satisfaction (r 's = $-0.22, -0.26, -0.24$ and -0.27 for life satisfaction/self, life satisfaction/family, life satisfaction/friendship and life satisfaction/school, respectively; all p 's < 0.001; Table 2). Albeit no firm prediction was made in respect to the relationship between stressful events and positive and negative affect in non-institutionalized youth, G2 showed weaker correlations between both the frequency and the impact of stressful with negative and positive affect in relation to G1. Indeed, Table 2 revealed a significant association between the frequency of stressful events with positive affect ($r = -0.18, p < .001$) and significant links between both frequency and impact of stressful events and negative affect (r 's = 0.24 and 0.22, respectively; p 's < 0.001). Interestingly, institutionalized participants did not show significant correlations with positive affect, albeit participants in G2 did.

When examining the links between positive and negative affect with life satisfaction in non-institutionalized youth, a differential pattern of associations emerged. For instance, while negative affect showed weak, yet significant correlations with life satisfaction (domains self, compared self family, friendship and school; r 's_{range} = -0.07 to -0.24), the subscale of positive affect had moderate to strong associations with life satisfaction/self, life satisfaction/family, life satisfaction/friendship and life satisfaction/school (r 's = 0.65, 0.48, 0.42 and 0.50, respectively; all p 's < 0.001), as well as a weak association with life satisfaction/compared self ($r = -0.09, p < .05$).

4.2.3. Predicting association of history of institutionalization, limitations, and implications of this research

Regression analysis showed that, when all the variables were accounted, institutionalized youth (G1) had a higher frequency of stressful events and higher impact of these same events when compared to non-institutionalized youth. Moreover, institutionalized participants reported higher negative affect. These variables seem to indicate additional risk factors, while the results using regression procedures also displayed protective factors, such as life satisfaction with friendships

and life satisfaction in respect to non-violence that was higher in G1 compared to G2. Children and adolescents living with their families reported higher levels of life satisfaction in this dimension. Variables displayed in Table 3 accounted for 41% of the variance in institutionalization. As such, other variables, not included in this study, might explain the remainder of variance for the difference between the groups.

Albeit there are quite a few strong aspects of the current investigation, it is important to emphasize some of its main limitations. Firstly, this study included a non-probabilistic sample, which precludes the possibility of generalizing findings. Thus, the results are only applicable to the studied sample. Nonetheless, the present study suggested that children and adolescents living either with their families or placed under institutional care exhibited features that characterize vulnerability, including low family income, residence at the town outskirts, low parental education, parents' unemployment, and informal parental occupations. These characteristics are not exclusive to youth at risk in Brazil. Indeed, vulnerability involves collective and contextual factors that result in increased susceptibility to physical or mental suffering (Sánchez & Bertolozzi, 2007).

Vulnerability also relates to the lack of resources for protection, as the sample of the present study showed; in the other hand, participants of this investigation also presented positive signs suggestive of processes of resilience that were triggered by internal resources, positive affect, and life satisfaction. As shown earlier, both groups reported good relationships with their peers and siblings and with their social and emotional support network. These components may protect or buffer vulnerable individuals to overcome adverse situations. In accordance with a PYD perspective, this study suggests the importance of family life for the positive development of children and adolescents. Children and adolescents who lived with their families - even with some adversities - showed that their ties to the school and family were preserved; these findings are important and might be useful in designing effective interventions (Maya, Lorence, Hidalgo, & Jiménez, 2018). Indeed, this group had lower levels of negative affect, also reporting greater satisfaction with themselves when compared to institutionalized youth. A recent study testing a family-based intervention claimed that efforts in delivering treatment for adolescents with problematic behaviors should take into account the nature and frequency of stressful events experienced by youth (Maya et al., 2018). According to Maya et al. (2018), adolescents faced with a profile marked by individual stressors and stressors within the family had a suboptimal response to interventions, while those with a low profile of stressful events responded better to the treatment.

Secondly, a correlational approach hinders the understanding of the direction of effects; hence, emphasis should be given to longitudinal studies and, ideally, studies testing interventions aiming to promote positive youth development. Thirdly, perhaps the use of self-report measures might be less than optimal when attempting to identify risk and protective factors for PYD amongst children and adolescents at risk. In this sense, there is an exciting avenue for using different methods for collecting data in order to capture ecologically-valid information on risk and protective factors associated to PYD in youth at risk (Koller & Lisboa, 2007; Lerner et al., 2011; Sanders et al., 2017). There are also limitations regarding the internal validity since the sample are not matched on demographic variables. Nevertheless, given the difficulty to sample this population in a medium-income country such as Brazil, we believe that our study provides first steps toward a broader line for future researches in this field.

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Conflict of interest

The authors report no conflict of interest.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.childyouth.2019.04.028>.

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