

# Attention Changes and Victimization in a Sample of Adolescents Victims of Domestic Violence

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## Abstract

**Objective:** To report attention changes in a sample of adolescents victims of domestic violence and discuss how this change may be related to an addictive and complex cycle of victimization and abuse. **Methods:** 78 adolescents went through psychiatric and neuropsychological evaluation. The Kiddie-Sads-Present and Lifetime Version and the Brazilian version of the Childhood Trauma Questionnaire (CTQ) were applied. The neuropsychological assessment was conducted by trained professionals using the Wechsler Children's Global Assessment Scale, 3rd edition-WISC III. The sample was divided into 3 groups according to the intensity of the reported maltreatment-obtained by the CTQ score (comparison group, moderate degree of abuse and severe maltreatment). **Results:** The group that showed moderate maltreatment showed better performance in an attention task compared to the comparison group. At the severe maltreatment group, this difference was not observed. **Conclusions:** Children and adolescents who are victims of maltreatment are more alert to environmental details that surround them as a form of adaptation to defend themselves against potential threats. However, they could react precipitously with inappropriate behavior in some contexts. This can lead to a favorable environment for new and repeated situations of violence, abuse and a perpetuation of this victimization.

## Keywords

Neuropsychology, Children, Adolescents, Domestic Violence

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## 1. Introduction

The deleterious consequences of domestic violence in children and adolescents have been studied with great in-

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terest in the recent years [1] [2]. It is known that individuals exposed to adverse situations in early ages are at high risk of developing various physical and psychological disorders [3] [4]. Despite the magnitude of the problem, few studies about neuropsychological functioning of these individuals have been carried out in Brazil, impairing our understanding of this phenomenon and preventing that targeted and effective interventions are carried out. It is essential that studies are carried out in different locations, since the cultural aspects are fundamental in neuropsychological development of these individuals and their presentations of psychological distress [5]. The purpose of this brief communication is to report how maltreatment related to domestic violence impacts attention levels in a group of socially vulnerable adolescents and to discuss how this change may be related to an addictive and complex cycle of victimization and abuse.

## 2. Methods

A psychiatric and neuropsychological evaluation was conducted in 78 adolescents (range of age: 12 to 16 years) at Programa Equilíbrio (Department and Institute of Psychiatry-University of Sao Paulo, in partnership with the Sao Paulo city hall), which serves children and adolescents who were victims of domestic violence that are currently living in shelters or with their families. A psychiatric evaluation was performed through semi-structured interview (Kiddie-Sads-Present and Lifetime Version-K-SADS-PL) [6]. The Brazilian version of the Childhood Trauma Questionnaire [7] was applied and individuals underwent neuropsychological by trained professionals. For this evaluation the Wechsler Children's global assessment scale, 3rd. edition (WISC III) was used [8]. The C-GAS instrument (Children's global assessment scale) [9] was used to quantify the overall level of functioning at the time of evaluation.

The sample was divided into 3 groups according to the intensity of the reported maltreatment-obtained by the CTQ score 1) CG (comparison group)—no mistreatment or light mistreatment group (total score <36); 2) GMT1-moderate degree of abuse (total score between 37 - 51); 3) GMT2-severe maltreatment (total score >52). Although the frequency of mental retardation is high in children victims of abuse it was decided, in this study, to exclude individuals with an IQ below or equal to 70 due to the difficulty in neuropsychological assessment. The research project was approved by the ethics committee from the University of Sao Paulo School of Medicine. All subjects and their legal guardians signed a consent form.

The Anderson-Darling test was performed on all continuous variables. Comparisons between groups in terms of socio-demographic variables and Childhood Trauma Questionnaire scores were evaluated by the Student's t-test or chi-square test, according to variable normality. Categorical data were compared using Fisher's exact test. All analyses were performed with the Statistical Package for the Social Sciences, version 14.0.

## 3. Results

Regarding the socio-demographic profile of the groups, there were no significant differences in age, education, gender and laterality (Table 1).

Regarding the overall functioning of the participants, the group of severe maltreatment individuals presented lower overall functioning, according to the C-GAS assessment and lower measures of estimated intellectual functioning (Table 2).

**Table 1.** Sociodemographic variables (n = 78).

	GC	GMT1	GMT2	Total	P value
Gender <sup>1</sup>					
Male	25 (65.8)	13 (68.4)	8 (38.1)	46 (59.0)	0.07
Female	13 (34.2)	6 (31.2)	13 (61.9)	32 (41.0)	
Age <sup>2</sup>	13.42 (1.50)	13.63 (1.46)	13.66 (1.28)	-	0.58
Education <sup>2</sup>	5.92 (2.56)	6.52 (2.27)	6.42 (1.96)	-	0.18
Laterality <sup>1</sup>					
Right-handed	35 (92.1)	17 (89.5)	16 (76.2)	68 (87.2)	0.20
Left-handed	3 (7.9)	2 (10.5)	5 (23.8)	10 (12.8)	

<sup>1</sup>N (%), <sup>2</sup>M (SD).

**Table 2.** Summary of neuropsychological and Children's global assessment scale (GCAS) measures.

	GC		GMT1		GMT2		p-value		
	N = 38		N = 19		N = 21		3 groups	GMT1	GMT2
	Mean	SD	Mean	SD	Mean	SD	p-value	p-value	p-value
Estimated IQ	101.66	12.73	101.84	12.64	95.90	13.22	<b>0.10</b>	0.81	0.04*
Complete the Figures	10.84	3.33	13.16	2.24	10.38	3.89	<b>0.02*</b>	<b>0.01*</b>	0.65
CGAS measure	55.62	12.99	59.16	13.73	61.24	13.02	<b>0.01*</b>	0.08	<b>0.01*</b>

\* = p value less than 0.05, statistically significant.

The rate of psychiatric disorders on the sample was: 34.7% of internalizing disorders and 22.7% of externalizing disorders—at this current episode. The frequency of current externalizing disorders was higher in the severe maltreatment group. Regarding the neuropsychological assessment, the subtest “Complete the figures” by WISC-III was applied. It consists of a task in which the individual must identify and isolate the essential features of non-essential ones in familiar objects. This subtest is used to assess attention because it evaluates the perceived ability of part-whole relationships. The group that showed moderate maltreatment showed better performance compared to the control group and at the severe maltreatment group this difference was not observed. These results point to the impact of hypervigilance performance in this test.

#### 4. Discussion

In a preliminary study with 14 children performed by Frankel and collaborators [10], it was found that preschool children who have suffered abuse performed better on the “Complete the figures” subtest than those who did not suffer maltreatment and 30% still showed better results than the average population. It is postulated that children who were victims of abuse are more alert to environmental details that surround them as a form of adaptation to defend themselves against potential threats. Ogata and colleagues [11] found similar results in a study that evaluated adolescent victims of maltreatment and a control group. They found better results in the group with a history of sexual abuse in the “Complete the figures” subtest.

A previous study conducted at Programa Equilíbrio also found that children who were victims of abuse have greater difficulty in inhibitory control and thus greater symptoms of impulsivity (unpublished data. in preparation).

Thus these individuals would have a greater tendency to identify signals of possible threat to the environment and could react precipitously with inappropriate behavior in some contexts. It would be like a hypersensitivity to threats suggestions. Similarly to the picture observed in subjects with posttraumatic stress disorder [10]. It is vital that mental health professionals take this factor into consideration in the treatment. Since these and other changes that may be observed in these individuals can substantially impair the ability of reflection, learning, academic performance and other important activities in their daily lives. In many cases, even the caregivers of these children are also victims of abuse and may show these changes [12]–[14]. This can lead to a favorable environment for new and repeated situations of violence, abuse and a perpetuation of this victimization. Thus it is the duty of the professionals who serve this population to make rational use of this information and break this addictive circle. However, there are some limitations to consider at this study, such as the small sample size and absence of other quantitative measures of hyper vigilance.

#### 5. Conclusion

In summary, data indicate the presence of significant attention changes in adolescents who are victims of abuse and offer a vision of how these changes may be related to a perpetuation of victimization in these individuals.

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## Disclosure

The authors report no conflicts of interest.

## References

- [1] Currie, J. and Widom, C.S. (2011) Child Maltreatment 2010 Best Article Award: Long-Term Consequences of Child Abuse and Neglect on Adult Economic Well-Being. *Child Maltreatment*, **16**, 233.  
<http://www.ncbi.nlm.nih.gov/pubmed/21908477>  
<http://dx.doi.org/10.1177/1077559511418799>
- [2] Etter, D.J. and Rickert, V.I. (2013) The Complex Etiology and Lasting Consequences of Child Maltreatment. *Journal of Adolescent Health*, **53**, S39-S41. <http://www.ncbi.nlm.nih.gov/pubmed/24059938>  
<http://dx.doi.org/10.1016/j.jadohealth.2013.07.010>
- [3] Moylan, C.A., Herrenkohl, T.I., Sousa, C., Tajima, E.A., Herrenkohl, R.C. and Russo, M.J. (2010) The Effects of Child Abuse and Exposure to Domestic Violence on Adolescent Internalizing and Externalizing Behavior Problems. *Journal of Family Violence*, **25**, 53-63. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2872483/>  
<http://dx.doi.org/10.1007/s10896-009-9269-9>
- [4] Danese, A., Moffitt, T.E., Harrington, H., Milne, B.J., Polanczyk, G., Pariante, C.M., Poulton, R. and Caspi, A. (2009) Adverse Childhood Experiences and Adult Risk Factors for Age-Related Disease: Depression, Inflammation, and Clustering of Metabolic Risk Markers. *Archives of Pediatrics and Adolescent Medicine*, **163**, 1135-1143.  
<http://www.ncbi.nlm.nih.gov/pubmed/19996051>  
<http://dx.doi.org/10.1001/archpediatrics.2009.214>
- [5] Aggarwal, N.K. (2010) Cultural Formulations in Child and Adolescent Psychiatry. *Journal of the American Academy Child & Adolescent Psychiatry*, **49**, 306-309. [http://www.jaacap.com/article/S0890-8567\(10\)00075-4/abstract](http://www.jaacap.com/article/S0890-8567(10)00075-4/abstract)  
<http://dx.doi.org/10.1097/00004583-201004000-00005>
- [6] Kaufman, J., Birmaher, B., Brent, D., Rao, U., Flynn, C., Moreci, P., Williamson, D. and Ryan, N. (1997) Schedule for Affective Disorders and Schizophrenia for School-Age Children-Present and Lifetime Version (K-SADS-PL): Initial Reliability and Validity Data. *Journal of the American Academy Child & Adolescent Psychiatry*, **36**, 980-988.  
<http://www.ncbi.nlm.nih.gov/pubmed/9204677>  
<http://dx.doi.org/10.1097/00004583-199707000-00021>
- [7] Grassi-Oliveira, R., Stein, L.M. and Pezzi, J.C. (2006) [Translation and Content Validation of the Childhood Trauma Questionnaire into Portuguese Language]. *Revista de Saúde Pública*, **40**, 249-255.  
<http://www.ncbi.nlm.nih.gov/pubmed/16583035>  
<http://dx.doi.org/10.1590/S0034-89102006000200010>
- [8] Cruz, M.B.Z. (2005) WISC III: Escala de Inteligência Wechsler para crianças: Manual. *Avaliação Psicológica*, **4**, 199-201. [http://pepsic.bvsalud.org/scielo.php?script=sci\\_arttext&pid=S1677-04712005000200011](http://pepsic.bvsalud.org/scielo.php?script=sci_arttext&pid=S1677-04712005000200011)
- [9] Shaffer, D., Gould, M.S., Brasic, J., Ambrosini, P., Fisher, P., Bird, H. and Aluwahlia, S. (1983) A Children's Global Assessment Scale (CGAS). *Archives of General Psychiatry*, **40**, 1228-1231.  
<http://dx.doi.org/10.1001/archpsyc.1983.01790100074010>
- [10] Frankel, K.A., Boetsch, E.A. and Harmon, R.J. (2000) Elevated Picture Completion Scores: A Possible Indicator of Hypervigilance in Maltreated Preschoolers. *Child Abuse & Neglect*, **24**, 63-70.  
<http://www.ncbi.nlm.nih.gov/pubmed/10660010>  
[http://dx.doi.org/10.1016/S0145-2134\(99\)00110-6](http://dx.doi.org/10.1016/S0145-2134(99)00110-6)
- [11] Ogata, K. (2011) Intellectual Profile of Sexually Abused Children in Japan: An Analysis of WISC-III Subtests Compared with Physically Abused, Neglected and Non-Maltreated Children. *Psychology*, **2**, 169-172.  
<http://dx.doi.org/10.4236/psych.2011.23027>
- [12] Berlin, L.J., Appleyard, K. and Dodge, K.A. (2010) Intergenerational Continuity in Child Maltreatment: Mediating Mechanisms and Implications for Prevention. *Child Development*, **82**, 162-176.  
<http://www.ncbi.nlm.nih.gov/pubmed/21291435>  
<http://dx.doi.org/10.1111/j.1467-8624.2010.01547.x>
- [13] Dixon, L., Browne, K. and Hamilton-Giachritsis, C. (2005) Risk Factors of Parents Abused as Children: A Mediatonal Analysis of the Intergenerational Continuity of Child Maltreatment (Part I). *Journal of Child Psychology Psychiatry*,

**46**, 47-57. <http://dx.doi.org/10.1111/j.1469-7610.2004.00339.x>

- [14] Plant, D.T., Barker, E.D., Waters, C.S., Pawlby, S. and Pariante, C.M. (2013) Intergenerational Transmission of Maltreatment and Psychopathology: The Role of Antenatal Depression. *Psychological Medicine*, **43**, 519-528.  
<http://www.ncbi.nlm.nih.gov/pubmed/22694795>  
<http://dx.doi.org/10.1017/S0033291712001298>