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BORDERLINE INTELLECTUAL FUNCTIONING AND PARENTAL STRESS: AN ITALIAN CASE-CONTROL STUDY

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ABSTRACT

***Introduction**: Borderline intellectual functioning (BIF) children comprises a group of subjects whit intelligence quotient (IQ) ranging 71-85, with a prevalence about 13.6%. Several studies pinpointed the role of parenting on BIF management.*

Aim of present study was evaluating with objective and validated tool the parental stress rate in mothers of an Italian sample of BIF children.

***Materials and methods**: 26 BIF children (20 males and 6 females) aged 6-10 years (mean age 10.36± 2.03), according to DSM-5 criteria, and 53 (42 males and 11 females) typical developing children (mean age 10.58 ± 1.97) were recruited for present study.*

Mothers of all enrolled children underwent an evaluation with Parental Stress Index (PSI) test.

***Results**: The two studied groups were comparable for age (p = 0.646) and gender (p = 0.956).*

Table 1 shows comparison between BIF and Control groups among PSI-SF scale results (Table 1), specifically mothers of BIF children have a significantly higher levels of global parental stress (p <0.001), stress related to parenting (p <0.001), stress linked to difficult child (p <0.001) and stress related to parent-child interaction (p <0.001) than mothers of control children. (Table 1)

***Conclusion**: Several reports showed the key role of BIF as risk factor for psychiatric troubles and poor long-term adjustment.*

Our findings emphasize the need to approach this condition also from a family point of view, stressing that care should not be limited to child rehabilitative treatment but must also involve a family centered intervention.

***Keywords**: borderline intellectual functioning, BIF, parental stress index, PSI.*

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Introduction

Borderline intellectual functioning (BIF) children comprises a group of subjects whit intelligence quotient (IQ) ranging 71-85[(1)].

According to the normal Gaussian curve of intelligence distribution in general population, about 13.6% of individuals have BIF[(1)].

According to DSM-5 criteria, BIF is considered as a V-code 'exiled' to the chapter 'V-Codes' for Conditions Not Attributable to a Mental Disorder that are the Focus of Attention or Treatment' in the far back of the DSM. The V-code borderline intellectual functioning may be used only when the attentive focus or treatment is associated with BIF[(1)].

Several studies were conducted on psychosocial and behavioural impairment among subjects with BIF. Moreover, Fernell et al in 2010[(2)] stressed the 'invisible' nature of BIF impacting quality of life with consequent behavioral changes, impaired social skills, due to the higher required intellectual performance induced by present society.

On the other hand, several studies pinpointed the role of parenting on BIF management underlining the relevance of maternal and paternal behaviour on BIF children care[3,4].

Aim of present study was evaluating with objective and validated tool the parental stress rate in mothers of an Italian sample of BIF children.

Material and methods

26 children (20 males and 6 females) aged 6-10 years (mean age 10.36± 2.03) with BIF, according to DSM-5 criteria[1], and 53 (42 males and 11 females) typical developing children (mean age 10.58 ± 1.97) were recruited for present study.

Mothers of all enrolled children underwent an evaluation with Parental Stress Index (PSI) test[5,6] as previously reported[7-9].

Exclusion criteria were the following: overweight, obesity, cognitive disability (IQ <70),metabolic and thyroid troubles[10-14], sleep disturbances[15,16], neurological and psychiatric disorders[17-21], chromosomal defects, specific neuropsychological disorder, epilepsy[22-37].

All subjects of both groups were recruited within the same urban area, all were Caucasian and homogeneous for socioeconomic status

Ethical approval from the local Research Ethics Center and informed parental consent were obtained.

Parental Stress Index- Short Version (PSI-SF)

PSI-SF[5] is a standardized tool, which provides parental stress indices in four areas: parental difficulties (PD), parent-child dysfunctional interaction (PCID), difficult child (DC) and the total stress. Evaluation consists of 36 items. Each item allows a range of responses on a Likert-like 5-points scale. Higher scores indicate greater perceived stress from parents. The PSI / SF also produces a rating of 'defensive response' (referred to as DEF in our study), which probably indicates bias in the responses. A higher score at '85th percentile indicates high levels of stress. The PSI / SF has been widely used, and carried out psychometric tests support its reliability and validity[6]. The PSI / SF shows a high internal consistency (Cronbach's alpha = 0.92).

In this study, the PSI / SF was administered only to the mother, as the parent who usually spends more time with the kids

Statistical analysis

For comparison between the two groups (BIF and Controls) t- test and Chi-square analyses, where appropriate, were applied. p values<0.05 were considered statistically significant.

STATISTICA software (data analysis software system, version 6, StatSoft, Inc. (2001) was used for all analyses

Results

The two studied groups were comparable for age (p = 0.646) and gender (p = 0.956).

Table 1 shows comparison between BIF and Control groups among PSI-SF scale results (Table 1), specifically mothers of BIF children have a significantly higher levels of global parental stress (p <0.001), stress related to parenting (p <0.001), stress linked to difficult child (p <0.001) and stress related to parent-child interaction (p <0.001) than mothers of control children (Table 1).

	BIF N=26	Normal N=53	p
PD	33.059±10.439	23.865±4.650	<0.001
P-CDI	26.971±8.576	20.978±6.341	<0.001
DC	36.206±7.327	29.146±7.072	<0.001
DIF	19.559±5.753	13.753±2.881	<0.001
Stress Tot	96.235±22.972	76.989±13.048	<0.001

Table 1: shows comparison between Borderline Intellectual Functioning (BIF) and typical developing children (Normal) Parental Stress Index-Short Form (PSI-SF).

t-test analysis was applied. p level<0.05 was considered statistically significant

Discussion

Several reports showed the key role of BIF as risk factor for psychiatric troubles and poor long-term adjustment[38-50].

Nonetheless, poor attention was paid on BIF social and emotional profiles and their family environment and the role of parent-child interaction in the emergence of behavioral challenges in these subjects.

The main finding of present study was the reported high quote of parental stress in mothers of BIF children, confirming the results of Fenning et al in 2007 regarding the presence in mothers of children with borderline intelligence of less positive and less sensitive parenting behaviors than did other mothers[4].

Moreover, Fenning et al found BIF mothers least likely to display a style of positive engagement and even if BIF children were not observed to be more behaviorally problematic than other children, their mothers perceived more externalizing symptoms than did mothers of typically developing children[3]. In this perspective we could speculate that higher quote of stress linked to the perception of their son as difficult-child could be caused by mothers error of judgment on her son's abilities[38-50].

Our findings emphasize the need to approach this condition also from a family point of view, stressing that care should not be limited to child rehabilitative treatment but must also involve a family centered intervention[38-50].

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