

Parental Perceptions of their Child's Over-Excitability and Coping Resources

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ABSTRACT

Children with Over-Excitability (OE) have higher than average responsiveness to experiences of inner and external stimuli. This study explores the role of the "Goodness of Fit" (match/mismatch) of parental estimations between the actual and desired levels of their child's OE (OE-GoF) on their children's self-esteem, hope, and well-being. We expected better matching to be related to higher levels of coping resources. This hypothesis was partly confirmed among sample of 107 parent-child pairs (54.2% precocious, 53% boys, aged 8-14 years). Emotional and sensory types of OE-GoF were strongly related to the three coping resources, and also mediated the relationship between actual OE level and coping resources. Based on these results, guidelines for an intervention program are suggested.

Keywords: Over-Excitability (OE); Goodness of Fit (GoF); Self-esteem; Hope; Well-being; Child-parent relationship

INTRODUCTION

Dabrowski defined Over-Excitability (OE) as a higher-than-average responsiveness to intensive physiological experience of sensory stimuli caused by increased sensitivity of the nervous system [1]. OE is expressed in five areas: Psychomotor, sensual, intellectual, imaginal, and emotional, or a combination between them [1]. The main theoretical assumption is that OE influences the diversity and intensity of the individual's experience and increases the "channels of information flow" [2]. However, Dabrowski calls OE a "tragic gift" because although the richer, more intensive experience of sensory stimuli might increase a person's potential for development, it might also increase psychological, emotional, and sensory regulation difficulties [1,3]. In order for this double-edged sword to power outstanding personality development in children, proper parental attitude toward OE is necessary. Otherwise, improper parental attitude will negatively impact children's mental health, and hinder their positive development. Therefore, improving parenting and caregiving capacities has an indisputable impact on the developmental trajectory of children with OE.

Several variables have been suggested as related to the ability of a child or an adult with OE to move from the "tragedy" end of the spectrum to the "gift" end. These include intelligence, talents, motivation to develop and environmental resources

[1,4]. Nevertheless, while most previous studies mainly focused on intelligence, talent and motivation factors among precocious children with OE [3,5], the current study investigated the role of parental perceptions of OE on the development of self-esteem, hope, and well-being among precocious and unversed children.

Over-excitability: From pathology to a salutogenic approach

The concept of OE plays a central role in the theory of positive disintegration [1,6], which offers a unique perspective on the role of individuals' over excitabilities and their emotional manifestations as they relate to developmental potential and developmental growth, and to the prominent contribution of family interactions for successful realization of this growth. According to the theory of positive disintegration [1], individuals with OE potentially suffer from greater psychological distress, and internal and external conflicts because of their tendency to have stronger physical and emotional reactions to daily life experiences. Dabrowski and Piechowski claimed that this process and these mental states are necessary for personality development [7]. They pointed out that disharmony and disintegration pertain to OE and also to developmentally positive forms of neuroses and psychoneuroses, without which multilevel personality development would not be possible. Therefore, OE, which is often associated with developmental asynchrony, leads to disharmony and chaos by its very presence. However, it simultaneously engenders

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developmental dynamisms i.e., the instinctive-emotional-cognitive forces that accelerate and shape emotional development [1,5].

The salutogenic role of OE and its contribution to child development have been explored over the last 30 years, mainly among precocious children and adolescents. These studies revealed that precocious individuals tend to score higher than unversed individuals on some forms of over excitability [4,3,8]. However, higher levels of OE were also related to increased difficulties in emotional regulation, sensory processing disorders and lower self-regulation [9,10]. Higher levels of OE were also related to pathologies such as anxiety, Attention Deficit Hyperactivity Disorder (ADHD), sneurotic tendencies, and emotional intensity [11,12].

The factors that enable children with OE to move from the “tragic” to the “gift,” from the pathogenic pole to the salutogenic one remain unclear [8]. The current study attempts to fill this lacuna by exploring the relationships between the parental perceptions of their child’s OE, and the development of coping resources of self-esteem, hope, and well-being, among precocious and unversed children.

Parental perceptions of their child’s over-excitability

The current study adopts the “Goodness-of-Fit” (GoF) approach [13,14] which focuses on the influence of temperament on parent-child relationships. The term “Goodness-of-Fit” suggests that an optimal interaction between the child’s temperament and environment, i.e., when their temperament matches the expectations of the environment, results in ideal developmental outcomes. This means that an individual’s temperament alone has less influence than the degree of match between children and their parents [15,16]. Previous studies have confirmed that “Goodness-of-Fit” has greater influence than over the isolated temperament [17]. Its supremacy has been established in many research contexts, e.g., for children with challenges in sensory-processing behaviour’s [18], emotional regulation [19] and externalizing behaviour’s [20,21]. In the current study we propose the term “OE Goodness of Fit” (OE-GoF) to express the degree of matching or mismatching between parents’ estimations of the actual level and the desired levels of their child’s OE. We predicted that OE-GoF will mediate the relationships between the parents’ estimation of the actual level of Over-Excitability (actual OE) and the child’s coping resources, and thereby reduce the negative effect of OE on coping resources.

This study explores general levels of OE-GoF and specific levels of OE-GoF for each type of OE (psychomotor, sensual, intellectual, imaginal, and emotional). According to the theory of positive disintegration, children and adults who exhibit OE usually have one type that is particularly dominant. However, a person can have all types of OE, a few, or none at all [1]. The theoretical assumption is that the more types of OE a person has, the greater their intensive inner flow of information and sensitive experience of the world. Dabrowski [1] and later Falk described the following types of OE-

Psychomotor OE: It manifest as a surplus of energy and expressions of emotional tension in the child. Surplus energy might be evident in a love of movement, intense physical activity and marked enthusiasm, while emotional tension might lead to impulsive actions, nervous habits and acting out.

Sensual OE: It manifest as enhanced sensory and aesthetic pleasure, for example, sensory pleasures derived from touching objects, tasting food, and smelling. Nevertheless, this type of enhanced sensitivity can also result in displeasure when the stimulation is

experienced as overpowering and unpleasant.

Emotional OE: It has extensive array of expressions. Intense feelings and emotions, strong somatic expressions, powerful affective expressions, but also capacity for intense attachments and deep relationships, and well differentiated feelings toward oneself.

Imaginational OE: It manifest as free play of the imagination, capacity for living in a world of fantasy, spontaneous imagery as an expression of emotional tension, and low tolerance for boredom.

Intellectual OE: Is expressed as intensified activity of the mind, a penchant for probing questions, problem-solving and reflective thought.

Child’s coping resources

Three complementary, individual coping resources were explored: The child’s evaluation of his/her worth (self-esteem), the child’s evaluation of his/her capability to achieve expected goals in the far and near future (hope), and the child’s evaluation of his/her life (well-being).

Self-esteem

Self-esteem refers to an individual’s subjective evaluation of his/her worth as a person [22]. Self-esteem does not necessarily reflect a person’s objective abilities and skills, or even the evaluation of others, but rather mostly involves feelings of self-acceptance and self-respect [23]. Self-esteem is different from exaggerated feelings of self-importance and excessive need for admiration and self-glorification that characterizes narcissistic individuals [24]. Parental support and a lower level of family stress is strongly related to a child’s self-esteem [25,26]. Only few studies concerning the theory of positive disintegration explore the relationship between different types of OE, as reported mainly by precocious children and adolescents and their self-esteem [27,28]. The relationships between adolescents’ psychomotor OE scores were more positively correlated with self-esteem subscale scores for peer relations, physical appearance, general school, general self, and physical abilities subscale scores, than the other OE scores [27]. Similarly, Rinn, et al. [28] revealed that adolescents with low psychomotor OE scored lower on most of the self-concept subscales than students with other types of OE.

Hope

Hope has been defined as “the perceived capability to derive pathways to expected goals, and to motivate oneself via agency thinking to use those pathways” [26]. According to Snyder, hope consists of two major factors-Agency and pathways [29]. “Agency” refers to a sense of efficacy in working toward one’s goals, and can be understood as the perceived capacity of the individual to initiate and sustain movement along a pathway until the goal is reached. Pathway thinking indicates the ability to develop plans to achieve expected goals, identify barriers and plan alternative paths, and feel confidence in one’s capability to identify these paths. According to Snyder [29], “high-hopers are less likely than low-hopers to view impediments as sources of stress, approach their goals with more positive emotions and energy, and experience positive emotions upon reaching their goals, whereas low-hopers experience negative effect when they do not attain their goals” [30]. Studies revealed that hope serves as a buffer against the impact of negative and stressful life events [31]. For example, children with learning difficulties and special needs show lower levels of hope [32]. To the best of our knowledge, hope has not been explored in the context of positive

disintegration theory.

Well-being

Subjective well-being refers to relatively stable evaluations of one's life and emotional experiences [4,33]. Accumulated studies support the notion that well-being is an important construct for understanding overall mental health [34], and is also associated with a range of positive behavioural and social outcomes [35,36]. Well-being is not a constant trait, rather it is heavily influenced by situations and life-circumstances [37], such as environment, health, achievements, and social life [38]. It is also related to parenting style [39]. Feelings expressed by parents in their routine, daily interactions with their child were found to be strongly related to the development of the child's well-being [40].

The literature review regarding OE and its psychological implications reveals inconsistent findings. On the one hand, OE may increase distress and reduce emotional stability [27]; on the other hand, it might also enhance well-being indirectly, mediated through cognitive reappraisal strategies for emotion regulation [11,41].

Research hypothesis

- We expect to find higher levels of over-excitability among precocious children compared to unversed children.
- We expect to find negative correlations between the child's coping resources (self-esteem, hope, and well-being) and the parents' perceptions of actual OE, desired OE, and the match between them (OE-GoF). Based on the studies of temperament, we expect to find stronger correlations found between OE-GoF and the coping resources, than between the coping resources and actual or desired OE.
- We predict that OE-GoF will mediate the relationships between the level of actual OE and the child's coping resources of self-esteem, hope, and well-being. Thus, the negative effect of over-excitability on the child's coping resources will be stronger when the parents tend to perceive a higher gap between the actual and the desired levels of his/her child's OE. We expected to find this pattern for each type of OE, and for each coping resource (e.g., actual psychomotor OE > psychomotor OE-GoF > self-esteem).

MATERIALS AND METHODS

Research methods and participants

Prior to data collection, we obtained approval from the ethical committee of the Peres Academic Center. To collect the data, we used a list-based sampling strategy, conducted on the internet via social media networks (e.g., Facebook, Instagram), and e-mail, using Qualtrics. The invitation letter was distributed only to adults, through a large variety of social networks and e-mail lists. To reduce the sample selection problem, we also used snowball sampling, and asked participants to help us in further distributing the link to the questionnaire. This method is a nonprobability, cost-efficient method to quickly obtain large amount of data [42]. In the invitation letter, we explained that the research objective was to understand parent-child relationships. Information regarding the nature and purpose of the research, expected benefits and risks, confidentiality, and the right to withdraw preceded voluntary

completion of the questionnaire. The anonymity of the participants and their child was guaranteed, and no identifying data were collected in the questionnaire. Parents completed questionnaires on their children's OEs, and children completed questionnaires regarding their own coping resources. Parents were required to sign a consent form regarding their children's participation in the research before allowing their child fill in the questionnaire. The sample of parents included 107 parents, of them 56 (52%) were mothers and 51 (48%) were fathers; 77% were married, 16% were divorced, 7% were single or widow. The sample of children included 107 children, of them 57 (53%) boys and 50 (47%), all in the age range of 8-14 (Mean age=10.83, SD=1.97). Of these, 44 (41.1%) were first child in their families; 15 (14%), the second child; and 30 (28%), the third. Parents reported that 58 (54.2%) of the children are precocious and 46 (43%) were not so defined. Three parents did not answer on this question, and were omitted from the study.

We used ElemenOE-2, an altered version of ElemenOE [43], to assess the actual and desired levels of the five Dabrowskian overexcitabilities (i.e., psychomotor, sensual, intellectual, imaginal, and emotional OE) among elementary-aged students.

Actual level of OE: The ElemenOE-2 is a 38-item, Likert-scaled observation checklist that requires the caregiver to rate how frequently the child engages in certain behaviour's, i.e., it assesses the child's actual level of each type of OE (1=not at all, 2=less than other children, 3=as often/much as other children, 4=more so than other children, 5=much more so than other children). The parents were directed to estimate the frequency of their child's current behaviour. Cronbach's alpha was calculated for each type of OE.

Psychomotor OE ($\alpha=0.72$) included six items, e.g., "seems always to be in motion or "on the go." Sensual OE ($\alpha=0.64$) included six items, e.g., "one of the first to complain when things are too loud, or is fearful of loud noises." Imaginal OE ($\alpha=0.79$) included 7 items, e.g., "daydreams frequently." Emotional OE, ($\alpha=0.79$) included 7 items, e.g., "Displays a wide range of emotion, from exuberance and joy to depression and grief." Intellectual OE ($\alpha=0.88$) included 11 items, e.g., "Asks questions that are open-ended or philosophical." Cronbach's alpha for the general scale, as reported in a former study was $\alpha=0.88$ [43], and in the current study it is $\alpha=0.89$. Based on sufficient reliability [44], the means were calculated for general actual OE, and for each type of actual OE.

Desired level of OE: The questionnaire composed for this part of the study was also based on the ElemenOE-2 scale. Items similar to those mentioned were presented to the participants, but with different instructions, i.e., "Please estimate how frequently would you like your child to engage in the following behaviour's" (on Likert scale, 1=not at all, 2=less than other children, 3=as often/much as other children, 4=more so than other children, 5=much more so than other children). Cronbach's alphas were calculated for the reliability of the general scale ($\alpha=0.93$) and for each type of desired OE: Psychomotor ($\alpha=0.64$), sensual ($\alpha=0.67$); imaginal ($\alpha=0.76$), emotional ($\alpha=0.66$) and intellectual ($\alpha=0.82$). Based on the sufficient reliability, items mean was calculated for the general desired OE, and for each type of desired OE.

OE Goodness-of-Fit (OE-GoF): The gap between actual and desired levels of OE were measured as the absolute value of the general difference between the levels. A lower value (i.e., less

difference between actual and desired OEs) represents better OE-GoF. Cronbach's alpha for the reliability of the OE-GoF scale in our study is 0.93. Based on this high reliability, the Mean was calculated for general OE-GoF, and for the OE-GoF of each type of OE.

Rosenberg self-esteem scale

Children's self-esteem was measured with the Rosenberg Self-Esteem Scale (RSES); [45,46] which is a 10-item self-report instrument using a 4-point Likert-type scale with possible responses ranging from 1 (strongly agree) through 4 (strongly disagree). Half of the items are worded positively (e.g., "On the whole, I am satisfied with myself"), and the other half negatively (e.g., "At times I think I am no good at all"). Higher scores indicate higher self-esteem and feelings of worth. Internal consistency reliability coefficients ranged from 0.85 to 0.88 [45], and the 2-week test-retest correlation was 0.85 [47]. In our study, Cronbach $\alpha=0.76$.

Children's Hope Scale (CHS)

The Children's Hope Scale (CHS) [48] assesses children's beliefs regarding their ability to pursue expected goals and employ the strategies needed to achieve them (e.g., "I can think of many ways to get things in life." "I think I am doing pretty well."). The Hebrew adaptation [49] of the Hope Scale consists of six items to which children responded on a 6-point Likert-type scale ranging from 1 (never) to 6 (all of the time), with a higher score reflecting a higher level of hope. Internal consistency for the Hebrew adaptation of the Hope Scale in a former study ranged from 0.72 to 0.89 [49]. In the current study, Cronbach $\alpha=0.83$.

Stirling children's well-being scale

The Stirling Children's Well-being Scale (SCWBS) [50] draws on current theories of well-being and positive psychology to assess well-being in people ages 8 to 15. It is a holistic, positively worded measure of emotional and psychological well-being that presents 12 positive statements for participants to rank on a 5-point Likert scale (1=never, 5=all of the time) based on the frequency that the statement applies in their life (e.g., "I think good things will happen in my life" relates to a positive outlook; "I've been feeling calm" relates to a positive emotional state). Higher scores indicate a higher level of well-being, i.e., a more positive emotional state and positive outlook. The internal reliability coefficient in a former study was 0.85 [50] and in the current study, Cronbach $\alpha=0.88$.

Demographic questionnaire

In addition, a demographic questionnaire was developed to gather information about the participants: Gender and ages of parents and children, number of children in the family, the child's position (age order) in the family, and parents' marital status. The parents were also asked if their child was diagnosed as precocious, and if he/she participates in special academic programs for precocious children. It should be noted that parents are informed of this diagnosis in the local school system with a high consistency rate. In addition, the criteria for competences were conveyed to the parents by email.

Procedure

Preliminary analysis consisted of an ANOVA test to examine the differences between the groups. Pearson correlations were

computed to examine associations between the research measures. To investigate whether OE-GoF mediated relations between the level of OE as perceived by the parent and the child's coping resources (as reported by the child), we used a mediation model based Preacher and Hayes's [51] bootstrapping method with 5,000 resamples with replacement. Bootstrapping was used because it provides a reliable estimate of indirect effects and does not assume normality. Rather, it evaluates general, direct and indirect effects [51]. Moreover, it tests the mediating variables' indirect effect as a whole model. Bootstrapping also has higher power and better type I error control than other mediation analyses. Significance was determined by examining the 95% confidence interval produced by these mediation analyses. To attain significance, the confidence interval must not include zero [52].

Since the percentage of missing data was less than 1% of observations, we used the Full Information Maximum Likelihood (FIML) method [53]. The FIML approach computes a case-wise likelihood function with actual variables for each case and estimates parameters based on the complete available data, as well as the implied values of the missing data, based on the actual data. The FIML was calculated using R software (Lavaan package). All other statistical calculations were calculated using IBM® SPSS® Statistics Version 20. Pairwise deletion was used for missing data.

RESULTS

Differences between OE levels of precocious and unversed children

ANOVA analysis was conducted to test the differences between precocious and unversed children in the levels of coping resources and their actual level of OE. Precocious children were reported as having higher levels of OE than unversed children, as follows: Sensual OE ($M=2.89$, $SD=53$; $M=2.64$, $SD=53$, $F(1,103)=5.40$, $p<0.005$); intellectual OE ($M=2.84$, $SD=57$; $M=2.56$, $SD=54$, $F(1,103)=6.17$, $p<0.005$); emotional OE ($M=3.55$, $SD=70$; $M=3.05$, $SD=60$, $F(1,103)=15.19$, $p<0.0001$); and global level of OE ($M=3.03$, $SD=46$; $M=2.82$, $SD=46$, $F(1,103)=5.52$, $p<0.005$). No significant differences were found between precocious and unversed children in levels of self-esteem, hope, and well-being.

To test the differences between the gender groups, ANOVA analyses were conducted to test the differences between mothers and fathers in their parental perceptions of their child OE (actual OE, desired OE, and OE-GoF for general and specific types of OE). No significant differences were found. ANOVA analysis was also conducted to test the differences between boys and girls in the levels of coping resources and their actual level of OE. No significant differences were found.

Relationships between parents' perceptions of their child's OE and the child's levels of self-esteem, hope, and well-being

Pearson correlation analyses were performed to test the second research hypothesis related to the relationships between parents' perceptions of their child's actual and desired OE (OE-GoF), and the child levels of self-esteem, hope, and well-being. As shown in Table 1, the coping resources, self-esteem, hope, and well-being, were not significantly related to the general scores of actual and desired levels of OE. However, as predicted, the general score for OE-GoF was strongly and negatively related to the child's self-esteem ($r=0.44$, $p<0.01$), hope ($r=0.259$, $p<0.05$) and well-being

($r=0.32$, $p<0.01$).

When exploring the relationships between each type of OE and the coping resources (Table 1), we found that while the relationships between perceptions of other types of OE and coping resources were negative, perceiving the child as having a higher level of intellectual OE was related to higher levels of coping resources. OE-GoF was strongly and negatively related to self-esteem, hope, and well-being only in cases of emotional ($r=-0.38$, $p<0.01$; $r=-0.21$, $p<0.05$; $r=-0.30$, $p<0.05$, respectively) and sensual types ($r=-0.44$, $p<0.01$; $r=-0.25$, $p<0.05$; $r=-0.41$, $p<0.01$, respectively); psychomotor GoF was related only to self-esteem ($r=-0.26$, $p<0.05$). Imaginational OE (actual, desired and OE-GoF) was not significantly correlated with the coping resources (Table 1).

Table 1: Correlations with coping resources.

S.No	Variables	Self-esteem	Hope	Well-being
1	Self-esteem	-	-	-
2	Hope	0.50**	-	-
3	Well-being	0.55**	0.61**	-
4	Actual motor	-0.23*	-0.13	-0.12
5	Actual sensual	-0.12	-0.13	-0.19
6	Actual intellectual	0.14	0.21*	0.11
7	Actual imaginational	-0.12	-0.11	-0.12
8	Actual emotional	-0.20*	-0.10	-0.21*
9	Desired motor	-0.01	0.03	0.08
10	Desired sensual	0.05	0.09	-0.04
11	Desired intellectual	0.14	0.22*	0.15
12	Desired imaginational	-0.02	-0.05	-0.09
13	Desired emotional	0.11	0.03	-0.07
14	GoF motor	-0.34**	-0.19	-0.19
15	GoF sensual	-0.44**	-0.25**	-0.41**
16	GoF intellectual	-0.28**	-0.17	-0.16
17	GoF imaginational	-0.1	-0.08	-0.11
18	GoF emotional	-0.38**	-0.21*	-0.30**
19	Actual total OE	-0.14	-0.07	-0.15
20	Expected total OE	0.07	0.03	0
21	Total OE-GoF	-0.44**	-0.26**	-0.32**

Note: N=107; *: Denote statistical significance at $p<0.05$; **: Denote statistical significance at the $p<0.01$ level; OE=Over-Excitability; GoF=Goodness-of-Fit.

Mediating role of OE-GoF for the relationships between OE and coping resources

Mediation analysis, as described above, was used to test the mediating role of OE-GoF for the relationships between over-excitability (levels of actual OE, of each type, were used as the independent variables), the coping resources (levels of self-esteem, hope, and well-being were used as the dependent variables), and children's and parents' gender, and competence were the covariates. Separate analyses were conducted for each OE type and for each coping resource (Table 2). Similar patterns were revealed: The direct effects of actual OE for the different types of over-excitability on the coping resources (c) were low and insignificant, the relationships between actual OE and OE-GoF for the different types of over-excitability (a) were positive, significant, and strong, while the relationships between OE-GoF on the coping resources (b) were negative, significant, and strong. The indirect effects of OE-GoF on the relationships between actual OE and the children's coping resources (c) were significant or nearly significant for general, sensual, emotional and psychomotor OE. Gender and competences did not significantly predict levels of coping resources.

Sensual OE: For self-esteem, the 95% confidence interval was (-0.12, -0.03) with an indirect effect value of -0.09 ($p<0.05$); for well-being, the 95% confidence interval was (0.21, -0.03) with an indirect effect value of -0.11 ($p<0.05$). The conditional, indirect effect differs significantly from 0, at $p<0.05$. For hope, the 95% confidence interval was (-0.18, 0.00) with an indirect effect value of -0.08 ($p<0.05$). However, because this interval contains 0, the conditional indirect effect is nearly significant.

Emotional OE: For self-esteem, the 95% confidence interval was (-0.45, -0.15) with an indirect effect value of -0.30 ($p<0.05$). For hope, the 95% confidence interval was (-0.37, -0.01) with an indirect effect value of -0.18 ($p<0.05$). These conditional indirect effects differ significantly from 0, at $p<0.05$. The conditional indirect effects differ significantly from 0, at $p<0.05$. As for well-being, the 95% confidence interval was (-0.39, 0.00) with an indirect effect value of 0.18 ($p<0.05$). Since this interval contains 0, the conditional indirect effect is nearly significant.

General OE: For self-esteem, the 95% confidence interval was (-0.19, -0.02) with an indirect effect value of -0.09 ($p<0.05$) and for well-being, the 95% confidence interval was (-0.15, -0.01) with an indirect effect value of -0.07 ($p<0.05$). These conditional indirect effects differ significantly from 0, at $p<0.05$. For hope, the 95% confidence interval was (-0.14, 0.00) with an indirect effect value of -0.06 ($p<0.05$). Since this interval contains 0, the conditional indirect effect is nearly significant.

Psychomotor OE: For self-esteem, the 95% confidence interval was (-0.45, -0.03) with an indirect effect value of -0.24 ($p<0.05$). Because this interval did not contain 0, the conditional indirect effect differ significantly from 0, at $p<0.05$. The mediation models including hope and well-being as dependent variables were not significant.

These results provide partial support for hypothesis 3 concerning OE-GoF as mediator of the relationship between parental perceptions of the child actual OE and the coping resources of the child (Tables 2-5).

Table 2: Mediating role of Oe-GoF between psychomotor OE and the coping resources.

OE type	Coping resource	Effect	B	SE	t	95% CI	
						Lower	Upper
Psychomotor	Self-esteem	Effect of motor on GoF (a)	0.74***	0.25	10.51	2.088	3.06
		Effect of GoF on self-esteem (b)	-0.32*	0.02	-0.2.37	-0.0.089	0.008
		Effect of motor on self-esteem (c)	0	0.07	-0.01	-0.144	-0.143
		Effect of child's gender on self-esteem	-0.12	-0.07	1.27	-0.052	-0.237
		Effect of parent's gender on self-esteem	-0.19*	0.07	-2	-0.283	0.001
		Effect of genius on self-esteem	-0.13	-0.07	-1.39	-0.245	0.043
		Indirect effect of motor on self-esteem through GoF (ab)	-0.24*	0.11	0	-0.453	-0.028
		Total effect of motor on self-esteem (c)	-0.24*	0.05	2.46	0.225	0.024
	Hope	Effect of motor on GoF.M (a)	0.74***	0.25	10.51	2.088	3.06
		Effect of GoF on hope (b)	-0.17	0.06	-1.16	-0.201	0.053
		Effect of motor on hope (c)	-0.01	0.23	0.07	-0.435	0.465
		Effect of child's gender on hope	-0.01	0.23	-0.05	-0.465	0.443
		Effect of parent's gender on hope	0.03	0.22	0.33	-0.369	0.518
		Effect of genius on hope	-0.01	0.23	-0.13	-0.481	0.422
Indirect effect of motor on hope through GoF (ab)		-0.13	0.12	0	-0.374	0.095	
Total effect of motor on hope (c)		-0.12	0.16	-1.12	0.485	0.135	
Well-being	Effect of motor on GoF (a)	0.74***	0.25	10.51	2.088	3.06	
	Effect of GoF on well-being (b)	-0.17	0.03	-1.19	-0.089	0.022	
	Effect of motor on well-being (c)	0	0.1	-0.02	-0.2	-0.196	
	Effect of child's gender on well-being	0.04	0.1	0.44	-0.156	0.244	
	Effect of parent's gender on well-being	-0.14	0.1	-1.44	-0.337	0.054	
	Effect of genius on well-being	-0.13	0.1	-1.32	-0.33	0.067	
	Indirect effect of motor on well-being through GoF (ab)	-0.13	0.13	0	-0.398	0.118	
	Total effect of motor on well-being (c)	0.13	0.07	1.29	-0.225	0.048	

Note: N=107; *: Denote statistical significance at $p < 0.05$; **/***: Denote statistical significance at the $p < 0.01$ and $p < 0.001$ level; Respectively. GoF=Goodness-of-Fit; (a): Positive, significant, and strong; (b): Negative, significant, and strong; (c): Low and insignificant.

Table 3: Mediating role of OE-GoF between sensual OE and the coping resources.

OE type	Coping resource	Effect	SE	Lower
Sensual	Self-esteem	Effect of sensual on GoF. S (a)	0.32	-0.452
		Effect of GoF on self-esteem (b)	0.02	-0.099
		Effect of sensual on self-esteem(c)	0.06	-0.095
		Effect of child's gender on self-esteem	0.07	-0.106
		Effect of parent's gender on self-esteem	0.07	-0.106
		Effect of genius on self-esteem	0.07	-0.213
		Indirect effect of sensual on self-esteem through GoF (ab)	0.06	-0.236
		Total effect of sensual on self-esteem (c)	0.18	3.061
	Hope	Effect of sensual on GoF (a)	0.32	0.452
		Effect of GoF on hope (b)	0.05	-0.228
		Effect of sensual on hope (c)	0.18	-0.486
		Effect of child's gender on hope	0.22	-0.557
		Effect of parent's gender on hope	0.22	-0.26
		Effect of genius on hope	0.22	-0.394
Indirect effect of sensual on hope through GoF (ab)		0.05	-0.178	
Total effect of sensual on hope (c)		0.17	0.605	
Well-being	Effect of sensual on GoF (a)	0.32	0.452	
	Effect of Gof on well-being (b)	0.02	-0.124	
	Effect of sensual on well-being (c)	0.08	-0.199	
	Effect of child's gender on well-being	0.09	-0.208	
	Effect of parent's gender on well-being	0.1	-0.265	
	Effect of genius on well-being	0.1	-0.275	
	Indirect effect of sensual on well-being through GoF (ab)	0.05	-0.209	
	Total effect of sensual on well-being (c)	0.08	-0.284	

Note: (a): Positive, significant, and strong; (b): Negative, significant, and strong; (c): Significant or nearly significant.

Table 4: Mediating role of OE-GoF between emotional OE and the coping resources.

OE type	Coping resource	Effect	SE	Lower
Sensual	Self-esteem	Effect of A. Emotional on GoF (a)	0.37	2.632
		Effect of GoF on self-esteem (b)	0.01	-0.075
		Effect of A. Emotional on self-esteem (c)	0.07	-0.083
		Effect of child's gender on self-esteem	0.07	-0.046
		Effect of parent's gender on self-esteem	0.07	-0.276
		Effect of genius on self-esteem	0.07	-0.223
		Indirect effect of emotional on self-esteem through GoF (ab)	0.08	-0.452
		Total effect of emotional on self-esteem(c)	0.05	-0.213
	Hope	Effect of emotional on GoF (a)	0.37	2.632
		Effect of GoF on hope (b)	0.04	-0.17
		Effect of emotional on hope(c)	0.21	-0.294
		Effect of child's gender on hope	0.23	-0.441
		Effect of parent's gender on hope	0.23	-0.35
		Effect of genius on hope	0.22	-0.446
		Indirect effect of emotional on hope through GoF (ab)	0.09	-0.69
		Total effect of emotional on hope (c)	0.16	-0.469
	Well-being	Effect of emotional on GoF (a)	0.37	2.632
		Effect of GoF on well-being (b)	0.02	-0.074
		Effect of emotional on well-being (c)	0.09	0.211
		Effect of child's gender on well-being	0.1	0.164
		Effect of parent's gender on well-being	0.1	0.342
Effect of genius on well-being		0.1	0.307	
Indirect effect of emotional on well-being through GoF (ab)		0.1	0.391	
Total effect of emotional on well-being (c)		0.07	-0.29	

Note: (a): Positive, significant, and strong; (b): Negative, significant, and strong; (c): Significant or nearly significant.

Table 5: Mediating role of total OE-GoF and the coping resources.

OE type	Coping resource	Effect	SE	Lower	
	Self-esteem	Effect of GoF total on total (a)	2.19	0.906	
		Effect of GoF total on self-esteem (b)	0	-0.021	
		Effect of total on self-esteem (c)	0.07	-0.186	
		Effect of child's gender on self-esteem	0.07	-0.065	
		Effect of parent's gender on self-esteem	0.07	-0.27	
		Effect of genius on self-esteem	0.07	-0.255	
		Indirect effect of total on self-esteem through GoF total (ab)	0.04	-0.189	
		Total effect of total on self-esteem (c)	0.08	-0.268	
	Sensual	Hope	Effect of GoF total on A total (a)	2.19	0.906
			Effect of GoF total on hope (b)	0.11	-0.046
			Effect of total on hope(c)	0.24	-0.535
			Effect of child's gender on hope	0.22	-0.477
			Effect of parent's gender on hope	0.22	-0.394
			Effect of genius on hope	0.23	-0.508
Indirect effect of total on hope through GoF total (ab)			0.04	-0.143	
Total effect of total on hope (c)			0.24	-0.666	
	Well-being	Effect of GoF total on A.total (a)	2.19	0.906	
		Effect of GoF total on well-being (b)	0.01	-0.022	
		Effect of total on well-being (c)	0.1	-0.299	
		Effect of child's gender on well-being	0.1	-0.163	
		Effect of parent's gender on well-being	0.1	-0.322	
		Effect of genius on well-being	0.1	-0.329	
		Indirect effect of total on well-being through GoF total (ab)	0.04	-0.152	
		Total effect of total on well-being (c)	0.1	-0.368	

Note: (a): Positive, significant, and strong; (b): Negative, significant, and strong; (c): Significant or nearly significant.

DISCUSSION

The current study adopts Dabrowski's salutogenic approach to over-excitability [7]. According to this approach, the family environment of children with OE is among the characteristics that accelerates his/her developmental process [1]. Therefore, the current study explored the relationships between of the parental perceptions of their child's over-excitability (actual OE, desired OE, and OE-GoF) and the child's coping resources (self-esteem, hope, and well-being). The research questions were investigated in study of 107 parent-child pairs, in which 54.2% of the children were defined as precocious.

Previous studies revealed higher levels of OE among precocious and creative children and adults [3,5]. Therefore, we expected to find higher levels of actual OE among the group of the precocious children. As expected, parents described the precocious children as having higher levels of sensual, intellectual, emotional, and general OE than the unversed children. This finding supports the basic salutogenic assumption of the theory of positive disintegration [1,6], that richer, more intensive experience of sensory stimuli might promote the development of special capacities and abilities, and increase a person's development. However, no significant differences were found between the levels of coping resources (self-esteem, hope, and well-being) in precocious and unversed children. This finding can also be explained by the theoretical assumption that the "tragic gift" of over-excitability could increase psychological difficulties, but there are individual and environmental resources that facilitate the ability to move from the "tragedy" to the "gift" spectrum [1,4]. Our main aim was to explore the role of parental perceptions of their child's OE, as one such environmental resource.

We apply the term "Goodness-of-Fit" to parents' perceptions of their temperamental traits and behaviour's [13-16] and suggest a new concept, "Over-excitability Goodness-of-Fit" (OE-GoF), which relates to the extent of matching or mismatching between parental estimations of their child's actual level of OE and their ratings of their own desires related to the child's OE. As expected, general OE-GoF was negatively correlated with the child's self-esteem, hope, and well-being, while levels of actual and desired general OE were not significantly related to the child's coping resources. This finding confirmed similar directions described in temperament studies concerning the supremacy of the influence exerted by "Goodness-of-Fit" over the isolated influence of the temperament per se [17-21].

However, differences were found between OE-GoF types. While sensory and emotional types of OE were significantly and negatively related to all three coping resources, psychomotor and intellectual OE-GoF were significantly and negatively related only to self-esteem, and imaginal OE was not significantly correlated with any of the coping resources. Similar directions revealed from the mediation models: The indirect effects of GoF on the relationships between actual over-excitability and the child coping resources were significant or nearly significant only related for general, sensual, emotional and psychomotor OE. It seems that the effect of the mismatch between the parents' perceptions of their child's actual and desired levels of OE is stronger in cases of children with sensory, emotional and psychomotor OE, perhaps because these types might be related to increased conflicts between the child and the environment [8]. The relationships between social context, cultural perceptions, and the different types of OE should be

investigated in future studies.

Raising a child with OE or a difficult temperament is a particularly challenging and sometimes frustrating mission [54]. The results of this study might help parents and therapists to move from a pathogenic perspective on OE to a salutogenic one. An evidence-based intervention for psychoeducational process of reframing OE as a "gift" and not as a "tragedy," could be based on the following phases:

- Preliminary assessment and identification of children with sensory, emotional, and psychomotor OE as a target group for intervention, since they are more vulnerable to their parents' "OE goodness-of-fit." Introducing the parents to the theory of positive disintegration [1,6] and the cumulative findings concerning the positive relationships between OE and competences in different areas. This will assist them in understanding that intensive experiences of inner or external stimuli could be a "gift" and promote the development of special capacities and abilities.
- Describing the important role of "OE Goodness-of-Fit" as a better predictor of the child's coping resources compared with actual and desired parental perceptions. Reinforcing this understanding with similar findings in studies of temperament, sensory-processing and externalizing behaviour's [17,18,20,21,55]. Thus, parents could come to understand that their ability to accept their child's OE is crucial for helping him/her moving from a "tragedy" to a "gift" [56,57].

Before concluding, it is important to mention some limitations of this study. The levels of child's OE and also the distinction between precocious and unversed groups were based only on the parents' reports. Although this subjective perspective is very relevant for our current study, it would also be important to include objective data, e.g., formal assessments, and professionals' or teachers' evaluations of competence and OE levels.

CONCLUSION

To conclude, the parent's ability to perceive their child's struggle with more intensive internal and external conflicts than other children as part of his/her long pathway to developing a complex personality and special abilities could help the child to develop coping resources. Therefore, guiding parents to move from a negative perception of OE as "tragic" towards a perception of it as a "gift" is of great importance. Therefore, studies and interventions that adopt a salutogenic approach to OE could help parents, educators and therapists to move towards a more complex social representations of OE, not only as a disorder and pathology, but also as a factor that can enhance abilities and capacities.

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