

Differences in averages are not a criterion for identification: conceptual and psychometric limitations of overexcitability as a marker of giftedness.

Mean differences are not identification criteria: conceptual and psychometric limits of overexcitabilities as a marker of giftedness.

The difference between averages is not an identification criterion: the conceptual and psychometric limits of overexcitability as a marker of giftedness

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ABSTRACT: This article discusses the use of overexcitabilities (OEs), derived from Kazimierz Dabrowski's Theory of Positive Disintegration (TPD), as markers, typical characteristics, or criteria for identifying high abilities/giftedness (HA/G). It is a narrative literature review, emphasizing meta-analytic, psychometric, and conceptual studies on the relationship between overexcitability, giftedness, personality, and mental health. It argues that the available literature does not support the conversion of OEs into an identification criterion: the effects found are heterogeneous, concentrated mainly in the intellectual dimension, vary according to the operationalization of giftedness, and partially overlap with constructs established by the Theory of Positive Disintegration.

The psychology of personality, especially openness to experience, is considered. It is concluded that OEs may have value as phenomenological descriptors, but should not be treated as sufficient evidence of giftedness nor as a psychometric basis for screening in the educational context.

Keywords: high abilities/giftedness; overexcitability; Dabrowski; identification; openness to experience.

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Keywords: giftedness; overexcitability; Dabrowski; identification; openness to experience.

1. INTRODUCTION

The Positive Disintegration Theory, proposed by Kazimierz Dabrowski, is a recurring reference.

in the literature on giftedness/high abilities to interpret socioemotional characteristics attributed to individuals gifted individuals. Originally formulated as a theory of personality development, it

describes processes of internal tension, psychic conflict, and moral reorganization that could, in

For some individuals, this fosters emotional and ethical development. In this context, the so-called...

over-excitabilities (psychomotor, sensory, imaginative, intellectual and emotional) were conceived as manifestations of high responsiveness to stimuli and as components of a



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broader potential for personality development (Dabrowski, 1964; Dabrowski and Piechowski, 1977; Mendaglio, 2012). In the field of giftedness/high abilities, however, this construct has become... circulate in a relatively autonomous way, as if the OEs constituted typical, distinctive traits. or even defining characteristics of gifted individuals (Piechowski, 1979; Silverman, 2000; Winkler, 2014).

This reception has produced a recurring association between giftedness and intensity. In texts Aimed at educators, families, and healthcare professionals, gifted children and adolescents are often described as more sensitive, imaginative, restless, emotionally intense, curious or reactive more than their peers. Although such descriptions may have phenomenological value, In some cases, it corresponds to the subjective experience of gifted individuals, their Transforming this into an identification criterion or a general characteristic of giftedness/high abilities requires caution. There are a substantive difference between stating that certain gifted students exhibit traits of intensity and maintain that such traits constitute valid indicators of giftedness (Mendaglio, 2012; Winkler and Voight, 2016; Rinn, 2024).

This distinction is crucial because identifying giftedness/high abilities has concrete educational consequences.

When behavioral characteristics associated with overexcitability are incorporated into

In triage or referral processes, there is a risk of producing a circular definition:

Students are identified as gifted in part because they exhibit traits described as typical of giftedness, and these same traits are later interpreted as

Evidence suggests that gifted individuals, as a group, are more intense. Recent literature has...

drawing attention to this problem, especially when the OEs are mobilized in instruments,

Lists of characteristics and materials for teacher training, without sufficient demonstration of validity.

discriminative (Carman, 2011; Mendaglio, 2012; Olszewski-Kubilius et al., 2026).

The possibility of using OEs as a means of identification is not mere speculation. Winkler and

Voight (2016) observes that Piechowski (1979), when introducing OEs to the education community

Regarding gifted individuals, he argued that they could be better predictors of giftedness than...

Traditional methods of identification, such as IQ tests, are also used. The authors also note that other methods include...

Studies have begun to consider high levels of essential oils as a possible method of identification.

of gifted students. Thus, the critique of the classificatory use of this construct responds to a

This proposal is genuinely present in the literature, and not a caricature of the field.

This article argues that overexcitabilities may have descriptive value in understanding the

The subjective experience of some gifted students is supported by this, but the available literature does not back this up.

its conversion into a psychometric marker or identification criterion.



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2. REVIEW PROCEDURE

This article adopts the format of a narrative literature review. It was not intended to be a comprehensive review. Not an exhaustive systematic approach, but rather an organization of conceptual, psychometric, and meta-analytical evidence relevant for assessing the legitimacy of using overexcitabilities as markers of AH/SD.

Studies on the relationship between giftedness and talent, and the overlap between them, were prioritized. personality constructs, classification validity problems, and the effects of bias.

identification in research on high abilities.

3. From Over-Excitabilities in Dabrowski to Educational Use in

AH/SD

In the Positive Decay Theory, overexcitabilities are integrated into a broader model of

Development of personality, not an autonomous list of traits of gifted individuals.

They demonstrate enhanced responsiveness across five domains: psychomotor, sensory, imaginative, intellectual, and emotional, whose relevance, according to Dabrowski, depends on its articulation with dynamics, levels of development and processes of positive disintegration (Dabrowski, 1964; Dabrowski and Piechowski, 1977; Mendaglio, 2012).

In the field of gifted education, however, OEs have become frequently used.

presented as recurring characteristics of these individuals. This displacement was

historically mediated by the reception of Dabrowski in North American literature on education.

for gifted children (gifted education), especially based on the work of Michael Piechowski, who introduced OEs as a lens for understanding emotional and behavioral experience.

of the gifted (Piechowski, 1979; Winkler, 2014; Winkler and Voight, 2016). From there, the

The construct began appearing in books, websites, family manuals, and parenting texts.

teachers as an explanation for sensitivity, restlessness, affective intensity, and imagination.

vivid and intellectual curiosity (Silverman, 2000).

Over-excitabilities, then, cease to function as components of a theory of

personality development and they begin to operate as group descriptors: the gifted.

would, by definition or tendency, be more intense than the others (Mendaglio, 2012; Vuyk, Kerr and Krieshok, 2016).

The problem is not in empirically studying OEs, but in assuming that their presence

constitute evidence of giftedness. A child may be sensitive, imaginative, curious, or

restless for multiple reasons: temperament, personality, family background, anxiety, ADHD,

ASD, school experiences, lack of stimulation, or simply normal variation of development. None of these possibilities is, by itself, equivalent to high capacity cognitive, high performance, potential for accelerated learning, or talent in a domain specific (Rinn, 2024; Williams et al., 2023).

4. A CONTROVERSY ALSO WITHIN THE DABROWSKI TRADITION

Criticism of the isolated use of over-excitabilities should not be confused with a rejection.

Dabrowski's generic term. Part of the controversy stems precisely from the fact that educational use

The placement of EOs does not always correspond to the place they occupied in the Theory of Positive Decay.

Mendaglio (2012) observes that much of the recent research treats OEs as variables.

continuous, normally distributed, and directly comparable among groups of higher intelligence.

high and lower. For the author, this practice is methodologically conventional, but theoretically

problematic, as it does not respect the internal coherence of the TDP.

Winkler (2014) describes the field as divided between proponents and skeptics regarding the relationship between

giftedness and over-excitability. On one side, authors such as Piechowski, Silverman and

Collaborators argued that gifted individuals exhibit higher levels of OEs.

with special attention to intellectual, imaginative, and emotional dimensions. On the other hand, authors

Like Mendaglio, Tillier, Pyryt, and Piirto, they questioned the strength of empirical evidence, the interpretation

of the available instruments and the extrapolation of small studies to general statements about the

personality traits of gifted individuals (Winkler, 2014; Winkler and Voight, 2016). This disagreement shows

that, even among authors who cite Dabrowski as a reference, there is no consensus on the role of

Giftedness (G) and the autonomy of the G construct in relation to other elements.

from TDP.

5. EMPIRICAL EVIDENCE: ASSOCIATION IS NOT A MARKER

Empirical literature does not allow for a simple conclusion. There are studies that find differences.

between gifted and non-gifted groups in some dimensions of OE; there are studies that obtain

partial results; and there are findings that depend heavily on how giftedness was assessed.

defined. This makes it inappropriate to infer that overexcitabilities constitute

core characteristics of giftedness. The most prudent approach is to state that there are specific associations,

heterogeneous and context-dependent (Winkler, 2014; Winkler and Voight, 2016; Olszewski-

Kubilius et al., 2026).

In the meta-analysis by Winkler and Voight (2016), gifted samples showed higher averages. Gifted children were more gifted than non-gifted children, but the pattern was uneven. The psychomotor dimension did not show a statistically significant effect; the emotional and sensory dimensions showed small effects; and the intellectual and imaginative dimensions showed medium effects. This result is important because it contradicts the strong version of the global intensity narrative: the evidence does not show that gifted individuals are uniformly more intense across all domains, and much more so in the emotional intensity is the most robust axis of difference (Winkler; Voight, 2016).

The meta-analysis by Olszewski-Kubilius et al. (2026), based on 230 effects extracted from 20 studies, reinforces that interpretation. Although I found a generally positive association between OEs and giftedness, the strength of the relationship varied according to the dimension analyzed and the definition of giftedness. The association was stronger for intellectual giftedness and weaker for other giftedness dimensions, such as emotional and sensory. More importantly, the relationship was nonexistent when giftedness was operationalized as general intelligence or cognitive ability, and stronger when the condition of being gifted was defined by prior identification in programs or services. (Olszewski-Kubilius et al., 2026).

Table 1 - Summary of average effect sizes by OE dimension in Olszewski-Kubilius et al. (2026)

OE Dimension	Hedges g	95% CI	Interpretation in the article
Intellectual	0.41	0.28 to 0.53	strongest association
Imaginative	0.24	0.14 to 0.35	small effect
Small sensory effect	0.19	0.10 to 0.28	Psychomotor
	0.13	0.02 to 0.24	small effect
Emotional	0.09	-0.04 to 0.22	not significant

Source: drawn from Olszewski-Kubilius et al. (2026).

This finding suggests that part of the association between giftedness and OEs may reflect the individual's own... Identification practices. Students previously identified as gifted may have been selected by teachers, families, or programs that already valued signs of curiosity, intensity, restlessness, or apparent creativity. In these cases, the subsequent difference in Overexcitability would not necessarily demonstrate an intrinsic property of giftedness, but rather the presence of criteria or expectations that were part of the identification process. (Olszewski-Kubilius et al., 2026; Rinn, 2024).

Comparison with other meta-analytic findings in the field helps to quantify this problem. Ogurlu (2020), in a review of meta-analyses on giftedness, reports that Martin, Burns and Schonlau (2010) found significantly lower levels of anxiety in young people.

gifted individuals, with an effect size of $d = -0.72$. Judged solely by the magnitude of the effect, this result would be stronger than any average effect observed in over-excitabilities. However, lower anxiety would hardly be considered a defining trait or criterion of Identification of giftedness. The contrast highlights the effect size and validity. Classification issues are distinct matters.

6. OVER-EXCITABILITY OR OPENNESS TO EXPERIENCE?

In addition to limited empirical strength, there is a problem of discriminant validity. If the over-Excitabilities describe behaviors already captured by established models of Personality, its theoretical and practical usefulness also depends on demonstrating validity. incremental, that is, an explanatory or predictive gain in relation to already established constructs. (Limont et al., 2014; Vuyk, Krieschok, and Kerr, 2016). The main candidate for this overlap is openness to experience, one of the dimensions of the model. One of the Big Five personality factors. Openness to experience involves curiosity. Intellectual capacity, imagination, aesthetic sensitivity, receptiveness to emotions, and an interest in new ideas. These characteristics closely resemble descriptions of imaginative, sensory OE. emotional and intellectual, with the latter being the one most strongly associated with giftedness. Limont et al. (2014) examined gifted and control adolescents and found differences. among the groups in intellectual OE, imaginative OE and openness to experience, but not in OE emotional. As the differences were concentrated in dimensions close to curiosity, imagination and openness to ideas, the results favor an interpretation in terms of traits of personality and cognitive interests, and not an overall intensity characteristic of giftedness.

Vuyk, Krieschok and Kerr (2016) formulated the critique more directly: when removed from In the context of TDP, the OEs seem to correspond to facets of openness to experience. In their analysis, conceptually corresponding pairs (such as fantasy and imaginative OE, aesthetics and sensory OE, feelings and emotional OE, ideas and intellectual OE) showed high proximity, leading the authors argue that the field of giftedness should adopt more comprehensive psychological constructs. Consolidated, instead of preserving Dabrowskian terminology, without any clear gain in precision. (Vuyk; Krieschok; Kerr, 2016; Vuyk; Kerr, 2021).

This discussion is similar to the so-called jangle fallacy: the error of assuming that two constructs are They are different only because they have different names. If a measure of over-excitability and a Measures of personality traits capture virtually the same psychological domain, so the

The use of the first requires additional justification. Otherwise, the vocabulary of the OEs may create the impression of specificity when, in fact, it describes general dimensions of personality. It gives the impression of specificity when, in fact, it describes general dimensions of personality. human (Vuyk; Kerr, 2021).

This objection does not imply that openness to experience explains all the phenomenology attributed to OEs. The literature itself acknowledges that the overlap may not be complete, especially in dimensions less aligned with openness, such as psychomotor skills (Olszewski-Kubilius et al., 2026).

Still, the overlap is enough to warrant caution: before using OEs as a language

While privileged in understanding giftedness, it would be necessary to demonstrate that they explain something more of constructs that are better established in the psychological literature (Limont et al., 2014; Vuyk, Krieschok and Kerr, 2016; Fries et al., 2022).

7. THE PSYCHOMETRIC LEAP: FROM AVERAGE DIFFERENCES TO IDENTIFICATION INDIVIDUAL

The central psychometric point can be formulated simply: the difference between non-standard means. It is an identification criterion. One group may have a higher average than another in given variable, and yet the overlap between the distributions may be too great. so that this variable accurately classifies individuals. This frequently occurs in psychology and education, fields in which many effects are statistically significant, but insufficient for diagnostic or classification decisions.

For a variable to be used in identification, it is necessary to know how it behaves in Real screening samples. Sensitivity, specificity, and positive predictive value indicate, respectively, the ability to correctly detect individuals from the target group, to exclude correctly identify the others and estimate how many of the cases classified as positive actually are belong to the target group. These indices depend not only on the effect size, but also of the prevalence of the identified condition (Glover and Albers, 2007; Haynes and Lench, 2003).

Even a variable moderately associated with giftedness may have a low value. positive predictive value when applied to large school populations, in which the prevalence of high skills, according to stricter criteria, are relatively low. Thus, a student with high

An intellectual OE can simply be curious, verbally active, open to experience, or interested in academic content. Without further evidence of ability, performance or

Regarding learning potential, the score in OE does not allow for a reliable inference of giftedness. (Carman, 2011; Olszewski-Kubilius et al., 2026).

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The reverse problem also matters. If the identification materials emphasize intensity of emotional intelligence, vivid imagination, or sensory sensitivity are characteristic of gifted students with a more sensitive profile. Discreet, stable, reserved, or inexpressive individuals may be under-identified. This is especially true when worrying in contexts where identification is already influenced by social class, gender, race, school performance and teacher expectations (Ogurlu, 2020; Rinn, 2024). The adoption of non-specific approaches tends to benefit students who align with the cultural stereotype of the gifted, not necessarily those with the greatest need for educational support. Specialized (Rinn, 2024; Vuyk and Kerr, 2021).

Therefore, psychometric criticism has consequences for educational justice. A weak criterion can produce false positives by attributing giftedness to high-achieving students without evidence of sufficient numbers of high abilities, and false negatives, by making students with high potential invisible who do not exhibit the expected behaviors. In both cases, identification fails to provide guidance in adequately providing access to educational opportunities that are compatible with the real needs of learning and development.

8. Implications for Identification and Care in High Abilities/Giftedness

Over-excitabilities can have descriptive utility for understanding subjective experiences of intensity, sensitivity, or imaginative involvement. However, recognizing these characteristics do not equate to establishing a criterion for giftedness (Mendaglio, 2012; Vuyk and Kerr, 2021).

In identification processes, the available literature suggests that OEs should not play a role in their classification function, but they could also contribute as auxiliary information about the profile of the student's socio-emotional development. Socio-emotional characteristics help to understand how a student learns, reacts to the environment, deals with frustration, or engages in complex tasks, but they do not replace evidence of cognitive ability, advanced performance, and output in a specific domain, demonstrable creativity, or learning potential. In terms of educational identification, the question should be: what type of opportunity, acceleration, enrichment or support does this student need? No to the question: does this student resemble... What is the cultural image of the highly gifted individual?

Caution is also warranted given the overlap between some descriptions of OE and signs usually discussed in the contexts of psychological assessment, neurodevelopment, or health. Descriptions of psychomotor OE may approximate behaviors associated with ADHD; descriptions of sensory OE may overlap with sensitivities discussed in ASD or in

Divergent sensory processing profiles; and descriptions of emotional OE include anxiety, Fear, depression, interpersonal difficulties, and rumination. These signs should be interpreted preferentially. How manifestations of giftedness can delay proper assessment, minimizing suffering or transform clinically relevant symptoms into valued identity traits (Vuyk; Kerr, 2021; Rinn, 2024).

Recent literature on intelligence and mental health reinforces the need to separate samples. Selective population-based evidence. Studies with members of Mensa, an association for Gifted individuals may experience high prevalence rates of certain psychological conditions and health conditions, but these groups involve prior identification of AH/SD and self-selection, by through voluntary membership in a high-IQ society (Karpinski et al., 2018; Fries et al., 2022). In contrast, large population studies indicate that high intelligence is not associated with greater general predisposition to mental disorders, which may even act as a protective factor for some. outcomes (Williams et al., 2023).

Thus, the prudent educational use of OEs requires shifting the focus from identification to the Instead of asking if the intensity proves giftedness, one should ask how the service is being handled. certain characteristics (intense curiosity, sensitivity, imagination, restlessness or (emotional involvement) affects a specific student's school experience. This displacement preserves what is phenomenologically relevant in the notion of intensity, without convert it into a ranking marker.

FINAL CONSIDERATIONS

The literature on overexcitability and high abilities/giftedness reveals a tension. persistent relationship between descriptive value and classificatory validity. The language of OEs can be subjectively recognized and, in some contexts, useful for naming experiences of intensity, but the phenomenological familiarity of a concept is not enough to transform it into a marker of giftedness.

The available evidence indicates that the associations between giftedness and special abilities are heterogeneous. dependent on the definition of giftedness and more consistent in the intellectual dimension than in the emotional, sensory, or psychomotor dimensions. Furthermore, part of the construct overlaps with established personality models, especially regarding openness to experience. Even when Average differences are observed, but they do not, by themselves, provide a sufficient basis for identification. individual.



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In summary, over-excitability can be a dimension of some individuals' experience.

gifted individuals, but the existing literature does not support its conversion into a marker of

Giftedness. Confusing subjective descriptive language with a psychometric criterion.

It weakens empirical research and transforms an interpretive tool into a rule of thumb.

identification without demonstrated validity.

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