

be met. Within the out-of-school setting, challenges and a caring interpersonal environment cultivated by adults can encourage the creative expression of gifted youths' innate drive to excel. As research on participation of gifted youth in out-of-school activities increases, we will have a better understanding of the processes that best encourage the development of these youths' abilities.

D. M. Hansen and T. L. Arrington

See also Summer Camps; Summer Programs

Further Readings

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OVEREXCITABILITIES

The concept of psychic overexcitabilities (OEs) emanated from Kazimierz Dabrowski's original concept of developmental potential, which he defined as a genetic endowment of traits that determine what level of moral development a person may reach under ideal circumstances. The five forms of OEs—psychomotor, intellectual, imaginal,

sensual, and emotional—are considered types of increased psychic excitability and specific types of nervous energy Dabrowski witnessed in gifted and creative individuals. The OEs are described as a special kind of understanding, experiencing, and responding to the world. Michael Piechowski hypothesized that these overexcitabilities may be more prevalent in gifted and creative individuals than in the general population. The OEs are emerging as important components of giftedness and creativity, especially in light of the particular social and emotional needs of gifted individuals. The following sections further describe the specific OEs and the research that has been conducted on the OEs in typical and gifted school-age children, college students, and adults.

Overexcitabilities and Gifted Individuals

The psychomotor mode is one of movement, restlessness, action, excess of energy. The sensual mode relies on sensory contact and a need for sensory stimulation, including sensuality. The intellectual mode is characterized by analysis, logic, questioning, the search for truth, and a need for continuous and intense intellectual stimulation. The imaginal mode combines vivid dreams, daydreams, fantasies, images, and strong visualizations of experience. The emotional mode is expressed in attachments and bonds with others, and feelings of empathy, loneliness, and the happiness and joy of love.

Gifted, talented, and creative individuals are known to be energetic, enthusiastic, task committed, endowed with vivid imaginations, and strongly sensual, but they are also known to be emotionally vulnerable. Some are known to be aggressive, others to be morally sensitive. They may react strongly to aesthetic, intellectual, emotional, sexual, and other stimuli. According to Piechowski, the overexcitabilities feed, enrich, empower, and amplify talent, but they may also intensify emotional and intellectual insight, creating a tendency toward perfectionism, unrealistic expectations, and social and intellectual asynchrony.

Research

Michael Piechowski, Linda Silverman, Frank Falk, and Nancy Miller were instrumental in introducing

the OEs to the gifted community through research studies utilizing various versions of the Overexcitability Questionnaire (OEQ), which has been used as an essay response instrument and as semistructured interview protocols. The most recent version of this instrument contains 21 questions such as, "Are you poetically inclined?" The instrument is holistically scored by trained raters. This line of research continues today and suggests that the overexcitabilities may be more prevalent among gifted, talented, or creative individuals, and that profiles of overexcitabilities differ among various groups. Researchers have found differences in the OEs among children and adolescents, with those identified as gifted scoring higher than those who are not identified as gifted. Some OEs were found to be strongest in artists when compared to the gifted and to have greater strength in more creatively gifted adolescents than less creatively gifted ones, but the artists in this study were self-identified, and not peer-recognized through the channels of the domain of visual arts. Other research has concluded that the Intellectual and Emotional OEs classified students as creatively or intellectually gifted and predicted group membership from among gifted, near-gifted, and non-gifted students. The authors of the original instrument found gender differences in which females had significantly higher emotional OE scores and males had higher intellectual OE scores. Others studied 9th- and 10th-grade gifted students enrolled in two private Catholic schools and found that they were differentiated from their non-gifted peers based on their higher psychomotor, intellectual, and emotional OE scores, with psychomotor providing the best predictor of giftedness.

More recent research, using a Likert-type instrument, the Overexcitabilities Questionnaire II (OEQII), found significant differences between males and females, gifted students and their parents, and gifted and typical students on the five OEs. Females scored higher than males on the Sensual and Emotional OEs. In addition, gifted students demonstrated higher Emotional and Intellectual OE scores, which may make them more insightful and volatile in their relationships with peers and others; this tension may also result in a discrepancy between how they perceive themselves and how they wish to be perceived. These two factors may help explain the asynchrony that gifted children often manifest when comparing

themselves to their peers and to their imagined ideal selves.

The presence of high Psychomotor, Intellectual, and Emotional OEs in gifted students may be problematic because it may lead to diagnoses of attention deficit hyperactivity disorder (ADHD) and other behavior disorders. Gifted students with ADHD demonstrate behaviors such as daydreaming, incessant talking, inability to sit still, and social immaturity; all potential characteristics of the various manifestations of overexcitability. Researchers in the area of gifted students with learning issues found that gifted students with learning disabilities were typically the most disruptive students in their classes. Additional research suggested that gifted children with disabilities understand faster, ask more questions, hurry through math, and may be terribly disruptive. This evidence muddies the literature on gifted students with learning disabilities or ADHD because it becomes difficult to separate the characteristics of students with learning disabilities or ADHD from behaviors and characteristics often associated with gifted or creative children.

In a subsequent study using the OEQII, the researcher found significant differences between males and females, elementary and middle students, and typical and gifted students on the composite OE subscales. Mean OE subscale scores were relatively stable for typical students, but varied greatly for gifted students. Gifted elementary students scored higher on all five OE subscales, whereas typical middle school students scored higher on the Sensual and Imaginational OEs. Post hoc probing suggested that the mean Intellectual and Imaginational OE scores represented a majority of the difference between typical and gifted students. Finally, cross-cultural studies of the OEs continue today across Europe, Asia, and the Middle East.

Further research is needed into the construct of the OEs and the validity of results obtained from the OEQ instruments. Future research on the use of the OEs as a tool for discriminating among groups should focus on longitudinal patterns and differential manifestations of giftedness, because the literature suggests that highly gifted students may be more susceptible to social and emotional problems than those considered moderately gifted.

Finally, intervention research is needed to examine the OEs in school-age gifted children and to identify instructional strategies that may help gifted students understand and celebrate rather than disguise these intense behaviors and reactions.

Carol L. Tieso

See also Emotional Development; Emotional Intelligence; Existential Depression; Giftedness, Definition; Identification; Moral Development; Social-Emotional Issues; Supporting Emotional Needs of Gifted

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