Resilience and Academic Underachievement in Gifted Students: Causes, Consequences and Strategic Methods of Prevention and Intervention

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Abstract—Extensive research and numerous reviews have been conducted in the last years, concerning gifted students. The present review aims at investigating the special personality traits of the resilient gifted students, targeting to the development of strategic methods of prevention and intervention, to enhance the resilience of those in danger of academic underachievement. Many research questions concerning resilience, stress, adaptation, protective factors, intelligence and connections to mental health emerged through the procedure of the systematic review. The evidence found substantiates that the enhancement of resilience in gifted students, is of major importance to help them overcome difficulties in family, school and social environments, thus resulting to the establishment of good physical and mental health.

Keywords—Resilience, giftedness, intelligence, adaptation, underachievement, stress, methods of intervention, prevention, self-resulting, positive psychology.

1 Introduction

The awareness of the impact of the lack of resilience, as a characteristic of the personality of gifted or otherwise talented students, in coping with adversity within the school environment, has led to an increasing number of researches, studies and reviews on the field in recent years. The reason for choosing this subject was to systematically highlight the characteristics of the personality of resilient talented students, as well as the intervention strategies that can be applied to the wider educational framework. The characteristics of the personality of the resilient gifted students were determined and the factors that work protectively were sought. Also, the causes for which some students become more resilient while facing the same risk factors as other pupils were investigated. The systematic review of surveys and studies has shown that several talented students show academic underachievement; therefore, it was worth investigating the causes of underachievement of talented students as well.

2 Resilience, Intelligence, and Adaptation

Resilience is defined as the protective mechanism that modifies a person's reaction to danger or adaptation to the environment, despite any negative conditions that may exist [1]. Rutter emphasised the positive role of individual differences in people responding to anxiety and adversity, while Walberg talked about "educational resilience", which he defined as the increased probability of success, both in school and in other areas of life, despite environmental adversities [as cited in 2]. Additionally, Neihart's research has shown that the psychological health and adaptation of gifted individuals is not related to high IQ but to characteristics of personality, temperament, living conditions, and the education received [2]. It is also related to the idea of the "self" and it is modified according to the person's developmental stage. Recent research has shown that a person in order to be characterized as gifted, apart from being intelligent needs to have internal motivation, high self-confidence, and creativity. Interaction between three basic human characteristics: IQ above average, high levels of commitment to work and high levels of creativity is also necessary [3].

3 The Personality Traits of the Resilient Gifted Students – Protective Factors

Resilience has been found to depend on a set of protective factors related to personality traits, as well as environmental and social factors [4]. Protective factors have to do with personality factors (self-esteem and self-efficacy), family cohesion, and external support systems (school, church, community). Besides, a factor considered as high risk may in other cases be considered protective. For example, single-parent families are generally considered to be a risk factor for developing a child's mental well-being. However, the existence of a dynamic mother in a single-parent family normally comprises a protective factor for the child [5], [6], [7], [8]. In particular, research has shown that talented students who have developed resilience are individuals who, besides intelligence, have faith in themselves, show perseverance, curiosity and problem-solving ability by developing strategies to deal with negative environmental conditions. In addition, they effectively manage their time and have a sense of humour and self-efficacy. They also have parents who strengthen their autonomy and encourage associations with supportive adults from the wider environment, apart from the family. Finally, gifted people with resilience and excessively high success rate have a deep internal motivation and use effective strategies in the learning process [9]. Their ability to solve problems, advanced social skills, critical and logical thinking, and sensitivity to ethical issues, extracurricular interests and satisfaction for achievements foster their resilience. Unfortunately, this is not the case with all talented students [10].

4 Causes of Gifted Students Academic Underachievement

The academic underachievement of talented students may be due to various factors, both biological and environmental. Biological factors have to do with personality features such as low levels of internal motivation, inadequate self-regulation skills or lack of self-efficacy [11]. Low levels of self-efficacy of gifted pupils have a negative impact on the development of cognitive skills, such as understanding, synthesis, implementation and evaluation, thus leading to high levels of anxiety [12]. Conklin and Gowan had already dealt with underachievement, observing talented students who failed at school without expecting it, defining the concept of underachievement as the inadequate performance of an individual at school, which is unexpected according to his / her cognitive abilities [as cited in 13].

Environmental factors concern family and school. There may be some specific parental patterns that affect or are the cause of underachievement [13]. It seems, however, that pressure from the part of the parents can lead to a low academic performance, which does not go hand in hand with the student's giftedness. In addition, the mismatch between the school environment and the superior abilities of the particular children, as well as the problems with their classmates, lead them to feel "out of place" [14]. Also, teachers do not enhance creativity and imagination for students, which are characteristic of the gifted personality but limit their expectations to asking for a minimal effort while keeping the level of discussions in the classroom at a low level [15]. Some teachers feel even inferior to gifted students. The result is that the gifted student is not trained to solve problems and does not develop critical thinking. Research has shown that a major cause of underachievement of gifted students is the inadequacy of the school curriculum accompanied by a lack of cognitive challenge [16].

Apart from the problems above, the talented children have to cope with inaccurate and sometimes double diagnoses [17]. These children are at risk of being diagnosed with ADHD, Bipolar Disorder, OCD, Asperger Syndrome, Depression and other disorders. Cognitive and emotional outcomes are disastrous then because intervention programs are based on such diagnosis and are unsuitable for them. To prevent these misinterpretations, there are organizations' such as The Support for the Emotional Needs of Gifted People [18] or the Davidson Institute for the Development of Talents [19], which provide essential information for professionals, while web sites such as Hoagies Gifted Education page [20] provide relevant and useful information to parents and trainers. Finally, it has been found that gifted children with learning difficulties experience various problems such as inadequate academic performance, a high rate of school dropout, low self-esteem, emotional problems and a lack of social skills [21]. These problems still exist in adulthood, in addition to being underemployed, having difficulties in working environments and being over-dependent on others [22].

5 Prevention and Intervention Programs and Strategies to Enhance the Resilience of Gifted Students at Risk of Underachievement

Prevention and intervention programs, changes in the school environment, the curriculum and the behaviour of teachers are necessary for the emotional and social development of gifted students [22]. Teachers need to be educated and supported by school psychologists to provide positive feedback to the good behavioural traits of talented students, to teach them how to solve problems and settle disputes and to help them put forward arguments and make decisions [3]. Moreover, counsellors and school psychologists should apply the principles of "positive psychology" [23], [24]. Counselling in private, in groups or in the family, and at school would be beneficial, as well [25]. Bibliotherapy also seems to have excellent results (reading books about gifted persons), together with watching films about gifted individuals, which also have a therapeutic role. It is also necessary to accelerate learning and to encourage gifted pupils to participate in groups of people with similar abilities as well as in groups of peers with a variety of interests [10]. Teaching stress management techniques, career guidance, changing or enriching academic programs are strategies that can enhance gifted students emotionally and socially.

The SEM is an indicative enrichment model (Schoolwide Enrichment Model). Various studies suggest that the SEM model is effective for high-capacity students in schools with mixed-ability populations [26], [27]. The SEM caters for all, talented and non-talented students. Starting with the simplest program, it moves into more personalized program modification procedures for highly talented students. In particular, SEM uses three elements: The Total Talent Portfolio (TTP) for each student, the student's interests and the student's learning style. The following three scales play an auxiliary role for enriching the student's portfolio: Internet-A-Lyzer [28], The Learning Styles Inventory, and My Way: An Expression Styles Inventory [29]. The SEM aims at developing students' critical thinking, creativity, emotions and skills. Each student can learn how to plan, organise, deploy resources, manage time and make decisions [3].

The Coolabah Dynamic Assessment (CDA) is another model designed to interfere in such a way to deal with the negative factors that prevent the manifestation of giftedness. The (CDA) test was first used in a group of talented, low-performance students coming from a minority group [30]. CDA intervention takes place at three levels: the socio-emotional, the cognitive and the level of the academic self-efficacy awareness. Finally, research on the comparison between cognitive-behavioural therapy (CBT) and emotional freedom (EFT), although at an early stage, clearly showed superiority in the technique of emotional freedom [31], [32]. The results of the application of the emotional freedom technique proved to be positive, leading to the reduction of stress levels of children, adolescents and adults in clinical settings.

Another protective factor for young people is to help them learn about their cultural heritage, as well as to make good use of the experiences of the past to deal effectively with present situations [33]. Furthermore, positive statements about ourselves play a very important role as they help to strengthen resilience [34]. Teachers should promote

the connection of gifted students at risk with a "significant other", who will play the role of the mentor and encourage them to acquire good friends with aspirations, participate in the community, strengthen their feeling of "belonging" and engage them in group activities [35]. Moreover, teaching gifted students' strategies to tackle discrimination against them and engaging them in intercultural activities would enhance their resilience and make them more effective. Finally, the creation of programs for the parents of the gifted students would help them to develop effective strategies to tackle adversities while enhancing resilience at the same time.

It is considered useful for gifted children to have extra-curricular activities to channel their energy and spirit, otherwise, excess leisure can lead to inadequate self-regulatory strategies [13]. On the other hand, forms of art, such as music and dance, and well-structured patterns in school and homework help the gifted students to develop self-regulatory strategies. Finally, the problems that these students have with their parents, teachers, and other adults often lead to aggression, hostile and irresponsible behaviour, discipline and self-control problems. Therefore, it is necessary to develop counselling centres in the classroom for individual, group and family therapy, as well as to create new school programs, teaching methods and special classes tailored to the particular needs of the gifted students. All these will lead to the reduction of academic underachievement and school drop-out. As Freeman says, gifted students bear a heavy emotional burden, mainly because of the high expectations of parents and teachers, which leads them to anxiety, boredom, apathy and inadequate performance at school [36]. For this reason, it would be helpful to teach gifted students' techniques for anxiety and stress reduction [3], [37], [38]. Such techniques include relaxation exercises, meditation and leisure time spent with loved ones, family and friends. However, it is necessary for the teachers who are willing to train gifted students to have a multifaceted personality, which combines a set of qualifications and skills, enabling them to become mentors for the students.

Concerning gifted students with learning disabilities, early and accurate diagnosis of learning difficulties is a defining protective factor. When the diagnosis is delayed, students can develop secondary emotional or behavioural problems. Usually, boys are referred for diagnosis when they exhibit extremely aggressive behaviours, while diagnosis for girls is further delayed because girls normally have milder behaviours. It has been proved through research that students who receive services for both their giftedness and learning difficulties have a better prognosis than those who receive services for learning difficulties only [22], [39].

6 Conclusion

Undeniably, gifted students apprehend themselves and others and adapt to the environment in a better way, because of their superior cognitive functions [40], [41]. The characteristics of the personality, the idiosyncrasy, and the education an individual has received are also determining factors [10]. Consequently, the resilience of gifted students is due to a combination of particular characteristics of personality and protective factors. On the other hand, intelligence is not the only condition for resilience, however,

it plays a supportive role in problem-solving and decision making [33]. Curricula also hold a critical role and should be geared towards enhancing the resilience of these young people. After all, when students' experiences are linked to their skills and interests, they develop better learning skills. Additionally, the role of the teachers and counsellors in schools is substantial and therefore changes to teaching methodologies, and teacher training in problem-solving and conflict-resolution techniques are proposed [3]. Gifted children are much more balanced when their needs are recognised both at home and school environments and they are accepted by adults, who are keen on having sincere communication with them [36]. When these conditions do not exist, they are overwhelmed by anxiety, which in turn can cause physical and mental exhaustion and may lead to problems in thinking and decision-making, and lack of concentration [42].

It is important to promote positive attitudes and to develop metacognitive skills to deal with difficult situations. A gifted person also needs to be optimistic and accept bad experiences as part of life. Through intervention and enriched programs, it is possible for individuals of all ages to reduce stress and overcome the negative factors that prevent giftedness from emerging [43]. Counselling at all levels is also very useful, as well as bibliotherapy or watching movies. In those cases where internal protective factors such as self-awareness, acceptance of learning difficulties, realistic goal setting and persistence are enhanced, there is an improvement and gifted persons become resilient [44]. Gifted students with learning difficulties need to receive services for both their giftedness and learning problems [22], [39]. There is no doubt that there are gifted students with learning difficulties who have excellent skills and talents but have never surpassed the frustration and discouragement they felt in their school years, as these feelings prevented them from showing their potential. Moreover, they had limited or no support and help in discovering their talents, and in developing their self-confidence to face challenges in their lives [22]. The existence of positive personality traits combined with the supportive environment and appropriate interventions help all gifted students, even those with learning disabilities, to cope with difficult situations and become more resilient. We hope that this systematic analysis could serve as a motive or a basis for further research on gifted students' resilience and the development of newer strategies of prevention and intervention.

7 References

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