

## LITERATURE REVIEW ON PERSONALITY TRAITS AND THE PSYCHOLOGICAL PROFILES OF THE GIFTED POPULATION

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### Abstract

*This review includes the characteristics identified in terms of cognitive, socio-emotional, motivational and personality development of adolescents with high intellectual abilities. Even if the results of studies that addressed the same issue were contradictory, we had as a central objective the mention of these as well as the impact they have on the development of adolescents with high intellectual abilities. Even though this analysis of adolescents with high abilities features the contradictory results obtained by several researchers, it is nevertheless useful for a more accurate identification and understanding of this category of population. Another objective of this study was to identify in the existing literature the psychological profiles of adolescents with high intellectual abilities. Although there is not a large number of such studies, we can mention three of the categories identified by the authors concerned with this topic.*

**Key words:** gifted, gifted development, literature review, personality traits, psychological profiles

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### 1. Conceptualization

The domain of talent and high aptitude is certainly one of the most controversial issues of literature currently studied from the perspective of conceptualizing terminology, definitions, theoretical models and personality characteristics that differentiate or not this category of population from the general one. The definitions of the field of talent and high aptitude range from general ones (such as extraordinary intellectual ability or high level of IQ) to the most specific (e.g. precocity in certain school disciplines such as Physics, Mathematics, etc.), but almost all existing definitions include references to extraordinary or original results obtained by a person in one or more fields simultaneously.

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McAlpine (1996) made a classification of the types of definitions using three criteria, the first of which referring to the degree of freedom of inclusion criteria for subjects considered to have high abilities. Such conservative definitions tend to be restrictive of the manner in which selected people with high abilities were, according to some criteria, categorized mostly as having about the same level of intelligence (as measured by various tests) and therefore this population is represented by a percentage of 3-5% of the total, after Terman's statements (1926), only 1% of the population whose overall intellectual ability is measured by the Stanford-Binet Intelligence scale or another comparable instrument (p. 43). Such a definition only includes those subjects who have academic abilities, thus excluding those whose abilities are some of the arts, psychomotor, creativity or leadership. This way of defining the category of persons with high abilities provides a clear threshold of the delimitation of the population and, as a result, identification methods will follow the criteria mentioned, which is why many students with abilities in other areas of development will be excluded or ignored.

More liberal definitions suggest that among the criteria used are also the inclusion of other types of abilities, and this range of the population considered to be with high abilities is between 15-20%. Thus, these definitions extend the way of conceptualizing the phenomenon, attempting to include as many fields as possible in order to encompass the possible areas of demonstrated performance by students and at the same time providing greater flexibility in the interpretation of the various test or sample results used. Such a definition is provided by Witty (1958), which emphasizes that when there are remarkable performances observed in fields such as the arts, writing or social leadership, or in any field of activity, it is recommended that that person be included in the category of those with high abilities.

Another criterion used in the classification of the definitions in the literature refers to the dimensions invoked in terms of abilities in the field of talent. Some of the definitions refer to abilities demonstrated only in a field, most often academic, while others include the results obtained in a number of areas. Some of the definitions call for performance demonstrations among the talented people, but others that include those categories of people considered to be under-performed or whose performances are not extraordinary, often invoke the potential for future talent development. Freeman (1998) mentions that the use of the term "potential" in the definitions to the detriment of the "demonstrated performance" is a diminution of the "elitist" effect that most of the definitions in this area express.

Although the field literature demonstrates the progress made in terms of conceptualization and definitions, consensus has not yet been reached on a unanimous definition among theoreticians

interested in this subject. Traditional psychometric visions still dominate the practice in this field, and support high intellectual abilities, outstanding academic achievements and the potential to demonstrate superior performance in this direction (Pfeiffer, 2015). Also, there are still practices for identifying people with high intellectual abilities using the IQ criterion (usually over 130) to consider them eligible in various programs designed to train them. Many authors in the field have argued for the importance of contextual factors such as motivation, persistence and commitment to activity as having a major role in the development of abilities (Neihart, 2008; Nicpon & Pfeiffer, 2011), which is why they suggest a multidimensional assessment of individuals with high abilities, involving measurements of intellectual abilities, academic results/performance, cognitive processing, creativity and scales for behavioral observation.

Over the past few years, there have been various views on the conceptualization of the field of talent and high abilities, so various theorists of this field have proposed multiple definitions that take into account both intellectual abilities and other elements considered important in both the identification and the necessary development of this population. Dynamic interpretation in defining talent is noted through a suite of proposals by the authors in the field, such as Sternberg (1985) who conceptualizes intelligence as an interaction between analytical, practical and creative knowledge that can be developed throughout life. Renzulli (2002) sees talent as the interaction between over-average abilities, creativity and commitment in the task. Mönks and Ypenburg (1995) added the influence of the environment as an important factor in the development of talent skills in Renzulli's (2002) model.

The Federal Government of the United States has approached the definition of the concept of high abilities and talent in a multifaceted form as well. The first conceptualizations were mentioned in the Marland Report (1972) and were adopted in all states, and the most recent were cited in the Gifted and Talented Students Education Act of Jacob K. Javits' (1988), which notes that the children and young people whose performances are remarkable or demonstrate a potential to achieve remarkable levels compared to their peers, are considered to be part of this population. These youngsters and children have the ability to perform at high levels in intellectual, creative, and / or artistic fields, possess an unusual leadership capability, or excel in specific academic areas. In addition to the definition, the need to provide services or activities tailored to their needs at the level of the school is specified (U.S. Department of Education, 1993, p. 26). Subotnik and collaborators (2011), for example, have proposed a comprehensive definition that refers to the performance manifested at a level above the media distribution in a talent field. In addition, talent can also be viewed from the perspective of its development, so that in the early stages the

potential is considered to be the key variable, in the next stages, the results or achievements are the form of talent measurement, and in the stage of total talent development we can say that it is eminence. Further, the authors remind that psychosocial variables play a key role in the manifestation of talent at each stage of development, since both cognitive and social variables are malleable and must be cultivated deliberately (Subotnik et al., 2011, p. 7).

In Romania, the status of young people with high abilities is regulated by The Law on the education of young people capable of high performance adopted by the Chamber of Deputies, aiming to establish the legal framework for the operation and organization of the National Differentiated Training Center, an institution that aims to promote and guarantee the right to a differentiated education by providing a set of formal, non-formal and informal programs designed to support a target audience characterized by particular needs. In this law, high-performance young people are presented as those individuals identified by specific methods as having potential achievements and / or aptitudes in any of the following areas, isolated or in combination: general intellectual ability, specific academic abilities, productive thinking or creative, abilities in leadership, talent for arts, psychomotor abilities" (Monitorul Oficial, 2007). In the same document, it is underlined the need for high-performance young people to benefit from adequate learning conditions to support their potential, by adapting the objectives, content and didactic strategies to the cognitive, emotional and motor potential, their rhythm and style of learning.

## **2. Characteristics of adolescents with high intellectual abilities**

People with high intellectual abilities experience everything that is happening around them from a different perspective compared to the general population through qualitative differences such as sensitivities, idealism, receptivity, asynchrony, complexity, introversion, perfectionism and moral preoccupations (Silverman, 2005). Studies conducted by Terman (1926) concluded that people with high intellectual abilities have, in most cases, superior skills in almost all areas of development. However, more recent research has strongly criticized the methodological and sampling conditions used in its classic longitudinal study (Clark, 2002). Many of the studies conducted on people with high intellectual abilities have used both operationalization of the domain-specific definitions and different methodologies. Some have used definitions and operationalization in relation to academic achievements versus cognitive abilities (Francis, Hawes, & Abbott, 2015), others included as participants adolescents from various programs for gifted (Eklund et al., 2015 Stornelli, Flett & Hewitt, 2009). Also, in some studies, subjects were selected according to various criteria such as school results (Harrison & Van Haneghan, 2011) or

scores obtained in some intelligence tests (Dwairy, 2004; Rudasill, Adelson, Callahan, Houlihan & Keizer, 2012). Another aspect that draws attention to the research conducted in this field addressing the various issues of adolescents with high intellectual abilities refers to the way in which the investigative approach was taken, namely, that some of the researchers used comparisons within the same type (Zeidner & Schleyer, 1999) and others conducted comparative studies between groups with different subjects (people with high intellectual and medium intellectual abilities) (Cross, 1999; Guignard, Jacquet & Lubart, 2012). Considering the typologies of studies conducted through the various research methods among the authors of this field, we decided to synthesize the main characteristics specific to adolescents with high intellectual abilities, trying to highlight the cognitive, behavioral and socio-emotional aspects of this population.

### **2.1. Cognition**

Obviously, people with high intellectual abilities have a very high level of intelligence, but they also excel in problem-solving skills and complex judgments (Davidson, 1986). Some researchers (e.g. Alexander, Carr & Schwanenflugel, 1995; Kurtz & Borkowski, 1987; Schneider, Borkowski, Kurtz & Kerwin, 1986) argue that metacognitive strategies are also an important component of intelligence, and as a result, studies have shown that people with high intellectual abilities show a higher level of awareness compared to the general population. In Dover and Shore's (1991) study, the scores obtained with regard to the methods of planning and the metacognitive knowledge of students with high abilities were higher than those of general students. Kanevsky (1992) has demonstrated that people with high intellectual abilities have better skills in explaining their own strategies and why they use those strategies. Schraw and Graham (1997) argue that these metacognitive skills often develop at an early stage in children with high intellectual abilities and that they evolve much faster than those of the general population. In terms of how to use metacognitive strategies, researchers' results support the idea that students with high abilities are monitoring their level of understanding more effectively (Boufard-Bouchard, Parent & Larivee, 1993), identify the problem in a better way, identify solutions easily and monitor the accuracy of these solutions (Rogers, 1986). Borkowski and Kurtz (1987), through their studies, concluded that students with high intellectual abilities use more effective strategies, are willing to learn new ones, and transfer them to newer situations easier than general students. In the manner in which they manage to "predict" the whole image of a puzzle, it can be seen that they are able to generalize facts after specific cases by visualizing the patterns needed to make connections of seemingly unrelated phenomena.

Another feature related to the cognitive abilities of people with high intellectual abilities is the easy way of understanding complex and abstract concepts, such as those in mathematics and science, and information in general. Their thinking is deep, wide and at a high level of abstraction (Renzulli, 2002; Heylighen, 2006). Instead, this ability to think complexly and abstractly can also be translated into early questioning about one's own identity and individual values (Dockery, 2005; Gross, 2002). These teenagers who do not have enough experience to support their understanding of this process are predisposed to stressful situations in an attempt to understand themselves and those around them.

Along with their ability to connect and integrate phenomena, people with high intellectual abilities also have a rich imagination, aspects noted by expressing overflowing creativity in their actions (Piechowski, Silverman & Falk, 1985). Perhaps the most notable is their constant production of original, unusual ideas, coming with things that other people would not have thought of, or seen the relevance. Their minds seem constantly busy, and in a very fast activity, and often act on several tracks at the same time. They are not only able to think very quickly, but can also assimilate information and learn new things in an easy way, having an excellent memory (Freeman, 1985; Terman & Oden, 1947).

From the point of view of how to approach work tasks, Robert Sternberg (1982) and Overtoom-Corsmit et al. (1990) highlighted the fact that adolescents with high intellectual abilities tend to spend more time on the initial stage of the task ("Problem Identification"), trying to predict the resources they will need to accomplish the given activity, and by planning how they will assess their performance, by establishing indicators that will highlight whether the task has been properly carried out. This problem with regard to the time needed to solve a given problem was also approached by Ludlow and Woodrum (1980) by a comparative study among adolescents with high intellectual and medium intellectual abilities. They noted that in achieving the first stage of the task received, subjects with high intellectual abilities needed twice as much time to complete the task as compared to subjects with medium intellect. Instead, with regard to the other three stages of work that followed in solving the task, the adolescents with high intellectual abilities performed much better and faster than others. Researchers argue that this was the evidence of a different time distribution in the problem-solving process.

In connection with the distribution of the time needed to solve a given problem, Robert Sternberg (1982) also refers to the way in which adolescents with high intellectual skills "select" the necessary solution to the task. Sternberg uses the phrase "exhaustive search" in an attempt to explain the process by which people with high abilities choose the right solution when they have

a problem to solve. He noticed that these people tend to identify all possible answers or solutions before choosing the right one (or the most appropriate one). This may explain the duration of the problem-solving initiation phase mentioned above.

Another aspect mentioned by Sternberg (1982) refers to "analogical reasoning", namely the inborn skill of people with high intellectual abilities to spontaneously connect new information with those already known. Many studies have validated this feature by correlating the level of IQ obtained by applying intelligence tests with the performance of verbal or figurative analogy tests, such as the Miller Analogies Test, Raven's Progressive Matrices or Naglieri Nonverbal Ability Test. Several researchers, such as O'Connor and Hermelin (1979), have come to the conclusion that people with high intellectual abilities tend to make significantly more connections between newly-learned information and those previously known, and also deductions between the subjects of various areas when their concepts are discovered.

Decontextualization is another aspect that distinguishes adolescents with high intellectual abilities from their average peers. Sternberg and Davidson (1982) define this concept as representing a person's ability to retrieve new information into working memory as a whole, and then to store them in their entirety. And when they are "requested", the information is "received" as a whole, along with the context in which it was assimilated, without the person remembering the reason for knowing it. In this regard, Kaye and Sternberg (1973) have conducted studies to try to measure this capacity among students with high intellectual abilities. The two researchers have tried to identify how people with high intellectual abilities recognize the meaning of a new and unusual word. Highly intellectual students have demonstrated an intuitive way of understanding the meaning of that concept, more than studying it etymologically, in order to identify possible clues. They have resorted to a different kind of strategy, namely understanding the overall message of the read fragment and making the necessary deductions in deciphering the unknown term. In fact, research has shown that most adolescents with high intellectual abilities are intuitive (70%) compared to the general population who prefer sensory deductions (Gallagher, 1990; Williams, 1992). For example, in a study conducted by Myers and McCaulley (1985b), they applied MBTI (Myers-Briggs Type Indicator) to identify personality types among 3503 male high school students, and compared them to the IQ level. They found that intuitive type subjects had higher levels of intelligence compared to those who preferred sensory deductions. Also, Delbridge-Parker and Robinson (1988) applied the same tool among 72 high school students with high intellectual abilities and obtained results confirming that they prefer to use intuition in a proportion of 75%.

Another highly developed ability of this population is also the "dual processing", which refers to the fact that they can devise, in parallel, different solutions for different problems. The fact that they have this capacity may not be easy to be observed by teachers, and on the contrary, they can interpret such an aspect as a way for pupils to be distracted from work tasks (Gross, 1998). In terms of learning, students with high intellectual abilities can express their preference in collaborating with other colleagues within a group when the learning situation is judged to be appropriate to their goals and if the nature of the interaction supports their needs as well as those of others (French, Walker & Shore, 2011). In the study conducted by French, Walker and Shore (2011), early school students expressed their preference for working individually compared to elementary class students. And with regard to the female population, the results obtained support the fact that the students prefer individual learning activities to a greater extent. The perceived support of others is significantly related to the preferences reported for group work. In the same study the results argue that the more students feel less support or acceptance, the more likely they are to declare that they prefer to achieve learning tasks individually and not in groups compared to those students who feel more support.

The preference for independent learning that includes the desire to be responsible for their own learning, to receive unstructured learning tasks (but in a structured learning environment) and to work on projects individually, as well as to engage in independent study, is a subject that has been constantly investigated since the 1960s by inventing learning styles amongst large groups of highly intellectual students and general students, thus noticing a significant difference in the preference for independent learning. In general, among the differences found there is the preference for independent study followed by a preference for learning through self-training materials, and thirdly, the preference to carry out projects chosen by them and carrying these out individually or together with another student with similar abilities.

Another aspect that differentiates students with high intellectual abilities from those with medium intellect refers to their preference for learning new information. This preference can be defined by motivation to learn, zeal, motivation to accomplish, or by the desire to be captivated by abstract ideas and experiences. This means that students with high intellectual abilities expect to learn new things rather than to practice and review the information they have previously learned at school every day (Freehill & McDonald, 1981; Ricca, 1984). Blackburn and Erickson (1986) draw attention to the issue of the differences between highly intellectual and general adolescents in coping strategies adopted by them in order to manage changes associated with the age of adolescence. In a study that looked at the relationship between coping strategies used and



intellectual abilities, the results demonstrated that the existing gap is less motivated by the complexity of the strategies adopted by subjects with high intellectual abilities and more because they are confronted with additional pressures that further complicate the changes associated with adolescence. Among these, we can list the absence of a stimulus in the school environment, the social stigmatization of a non-intellectual society, and the gap between intellectual and affective maturity (Webb, Meckstroth & Tolan, 1982). Other authors interested in this issue added that adolescents with high intellectual abilities are more vulnerable to social issues and personal stressors (Betts, 1986; Levine & Tucker, 1986). Some of these have even pointed out that this category of population is blocking the use of effective coping strategies, or that these skills are formed much later (Powell & Haden, 1984). The results of a study in Singapore showed that male subjects with high intellectual abilities presented less effective coping strategies than those at the middle level, but in female subjects the results were opposite (Kwan, 1992).

## **2.2. Motivation**

People with high intellectual abilities demonstrate a tonus and overflowing energy, observed in a way that they can maintain their focus on the subjects of interest. Once a particular theme generates interest, they can become very persistent (Feldhusen, 1986; Tuttle & Becker, 1980) and keep their attention on that aspect for a long time (Rogers, 1986; Witty, 1958). A disadvantage of this feature could be the fact that people with high intellectual abilities are able to put so much effort into doing so, which will lead them to a state of exhaustion, and the high level of activity prevents them from easily identifying ways to relax, being accustomed to such a continuous rhythm (Roepert, 1991). The intensity and persistence demonstrated during childhood gains during the adolescence a different form, manifested by a motivation to learn differently from the general population. This type of behavior includes a high level of intrinsic motivation and a sense of joy expressed through the development of abilities and knowledge in the chosen field (Deutsch, 2000; Kay, 2000; Zimmermann, 2004). Since the time of childhood, they have a desire for activities to provide them with intellectual stimulation (Stapf, 2003), and this characteristic continues in adolescence by increased interest in cognitive challenges in the academic field, increased motivation for learning, permanent quest for understanding phenomena around, availability in intellectual effort, selecting unconventional themes and subjects to study them (Schick & Phillipson, 2009).

Whatever their specific interests, they are all driven by intense curiosity, an overwhelming desire to know and understand (Renzulli, 2002; Bloom, 1982; Cox, 1977). Also, from an early age, they are avid readers, who like to absorb any kind of information (Cox, 1977; Gross, 1993).

Typically, they have a fairly wide area in terms of the type of interest, sometimes even overwhelmed by diversity, without knowing what to focus on in the beginning. Sometimes, they can feel like they are bored quickly with a subject once they have an overview of it, wanting to approach a new field. They often seek connections and associations as complex as possible between the elements discovered, and are interested in revealing existential aspects of life (Lovecky, 1994).

With regard to the goals they propose, they are often very ambitious, which may often seem unrealistic to those around them (Winner, 1996). They prefer the difficult challenges, and tend to take risks especially when the results are not very predictable (Renzulli, 2002; Neihart, Robinson & Moon, 2002). Another disadvantageous aspect of their ambition is the perfectionism that they most often demonstrate (Clark, 2006) setting such high standards for themselves and those around them that they can often be disappointed. Fear of failure can be a good reason to prevent them from completing an activity when they feel that the final product will not meet their expectations.

### ***2.3. Social and emotional development***

The social and emotional development of adolescents with high intellectual abilities is influenced by their asynchronous development, which refers to the discrepancies between mental and chronological age, which is why they can experience different challenges compared to general adolescents (Silverman, 2012). For example, studies on bullying among this population demonstrate that due to their increased sensitivity, some of them may be more affected compared to general adolescents (Peterson & Ray, 2006a). Results obtained from the longitudinal studies by Terman (1925) and Terman and Oden (1935, 1947), demonstrated that people with high intellectual abilities had a lower incidence of psychic affections and adaptation problems. When compared to the general population, they are less vulnerable to developing mental illnesses (Coleman & Fults, 1985), but there are also studies whose results have shown that they are predisposed to having difficulties in social adaptation and education (Tannenbaum, 1983; Janos & Robinson, 1985; Gross, 1993).

In a review by Francis and collaborators (2015), using 18 studies that looked at the differences between adolescents with high intellectual abilities and those with normal intellect in terms of socio-emotional adaptation and behavioral difficulties, the results revealed that subjects with high intellectual abilities have demonstrated a higher level of socio-emotional adaptability and fewer behavioral difficulties. Also, in 12 of the studies, subjects in the first category proved to be less prone to anxiety, and had better interpersonal skills (Lehman & Erdwins, 1981; Ludwig & Cullinan, 1984; Merrell & Gill, 1994 by Francis, Hawes, & Abbott, 2015).

In a study by Robu and Ciudin (2013), whose objective was to compare the level of emotional and social intelligence among adolescents with high intellectual and medium intellectual abilities, the results obtained support the hypothesis that the first of them obtained higher scores for both evaluated dimensions, but statistically significant differences were found only for emotional intelligence. The authors of the study have exploited the two concepts measured by reference to social intelligence as representing those skills, "to understand the thoughts, feelings and behavioral intentions of other people with whom the individual interrelates in different social contexts" (Robu & Ciudin, 2013). In the case of emotional intelligence, the two relate to "the ability of the individual to perceive their emotions as accurately as possible and to express them in various contexts, the ability to regulate their own emotions and the ability to manage their emotions in solving various problems" (Robu & Ciudin, 2013).

As we can see, research on the social and emotional characteristics of adolescents with high intellectual abilities reports different, even contradictory results. While some report that this category of people has the ability to adapt to the same degree as general people, there are also results that support their point of view about their vulnerabilities to some issues or situations that may hinder their cognitive and emotional development (Colangelo & Assouline, 2000). Various authors (Neihart, Reis, Robinson & Moon, 2002; Silverman, 2007) have been concerned with this issue, highlighting the social and emotional needs of adolescents with high intellectual abilities caused by asynchronous development in which cognitive abilities can overcome their affective and emotional ones. Silverman (2002), Sword (2001a) and Piechowski (1992) explain that people in this category not only think differently, but they also feel differently from the general population, and these differences lie in their intensity and experiences. These adolescents have high levels of sensitivity and awareness, intuitively understand complex emotions from early ages, but most often encounter difficulties in managing them (Robinson, 2002).

Regarding the quality of the relationship of people with high intellectual abilities, it is noted that they are usually independent and autonomous, and most often give their own appreciation of certain rules, habits, which they only accept at the moment and that they can explain through their own reasoning (Webb, 1993; Schetky, 1981). Most often, they like to analyze the "conventional" to identify gaps and inconsistencies in it. They prefer discussions based on pro and contra arguments, ask many questions, and are often classified as non-conformists preferring to address problems in their own style and identifying solutions based on their own understanding, ignoring the opinion of the majority or a superior authority (Webb, 1993). Because of their non-conformism, people with high intellectual abilities are often referred to as "different", and the

greatest risk in this regard may be that they are misunderstood and less accepted by those around them. Some authors (Coleman & Cross, 1988; Janos, Fung & Robinson, 1985) emphasize that adolescents with high intellectual abilities have this belief about themselves, that they are perceived to be "different" to their peers, and this perception interferes with social interaction, even if this "stigmatization" is real or just imagined. For these reasons, as Gross (1989) mentions, the social challenges to which adolescents with high intellectual abilities are subjected may be real dilemmas for them, so that if a young person wants to be accepted by a social group, can choose to do activities that are in contradiction with their own moral development system. Lufting and Nichols (1990) highlighted the results of the studies on high intellectual abilities students belonging to IV-VI grades, and in particular male subjects, who presented a greater level of popularity compared to general students, but female subjects showed a lower level of popularity over them. However, during the adolescence, this aspect undergoes changes, and the results obtained by Robinson and Noble (1991) show that in terms of popularity among subjects with high intellectual abilities, it decreases very much compared to childhood. Very often there may be cases where such young people can choose the company of adults or refrain from reading (Webb, 1993; Janos & Robinson, 1985). More often, to solve this conflict, high intellectual abilities adolescents prefer to "mask" their talent (Delisle, 1992; Silverman, 1993) or adapt their behavior to others (Benito, 2003) and develop different alternative identities that are perceived to be more socially accepted and valued by group culture. Gross (1989) also introduces the phrase "forced-choice dilemma" which refers to the choice that some of the adolescents feel they have to resort to, to be accepted by the group members they want to join, or pursuing the academic goal of achieving performance. In fact, researchers have found that adolescents with high intellectual abilities often adopt various social coping strategies to minimize their talent, including denial of their abilities, involvement in socially accepted activities, and rejection of the idea that they are concerned that they might be socially rejected (Cross, Coleman & Terhaar-Yonkers, 1991; Swiatek, 1995).

In close connection with the results of the various researches that focused on the socio-emotional particularities of the high intellectual abilities population, various organizational structures have been developed over time to carry out prevention and provision of services to meet the identified needs of these people. An example of this is the SENG (Supporting Emotional Needs of the Gifted) Association of the United States of America, representing the first nonprofit organization to support the emotional and social needs of people with high abilities and their families by providing programs and services to parents and professionals, while also providing a way for everyone involved to socialize and share experiences. The activities carried out within

this association include both conferences focusing on various topics of interest, training for parents, discussion groups for young people with high abilities, meetings of parents, teachers and health professionals with various experts in the field, and providing a wide range of material resources addressing current issues identified in this population (brochures, textbooks, articles, testimonials, etc.).

Another aspect studied in the literature refers to the clear moral correctness and convictions of this population (Gross, 1993; Hollingworth, 1942), who is most often revolted by the injustice around them, making special use of the honesty and integrity of the persons (Rogers, 1986; Silverman & Ellsworth, 1980). Moral judgment, interests, attitudes and knowledge develop with their mental age rather than the chronological one (Gross, 2000). Studies have been carried out using questionnaires such as the Defining Issues Test (Rest, 1986), which have had an interest in moral reasoning among young people with high intellectual abilities, and their results have shown that they have a high level of moral development (Chovan & Freeman, 1993; Narvaez, 1993).

Regarding the quality of the relationships that adolescents with high intellectual abilities have with their family, in a review by Morrow and Wilson (1961) on family factors associated with high academic achievement, it was found that the parents of the students with great academic achievements, compared to parents with average results, praise and approve to a greater extent the behavior of their children, are closer to them, and give them a stronger sense of belonging. Other studies highlight that the parents of students with high intellectual abilities are more interested and involved in the process of growing and developing their child (Colangelo & Dettman, 1983; Cornell, 1984), and that relationships between parents and their children tend to be more positive and more centered on the latter compared to those observed in control groups (Robinson & Noble, 1991).

#### **2.4. Personality**

One of the first researchers interested in exploring the psychological characteristics of young intellectuals with high intellectual abilities, Terman (1925), conducted studies on the existing vision of emotional instability or the neurotic state of these people, aspects that were not supported by the results of investigative activities carried out by the author for 35 years. In fact, the results obtained by Terman claim that the population in this category tends to have good management skills in several areas of their lives, although these claims have been challenged for methodological reasons mainly, including the socio-economic status of the majority of selected subjects (Clark, 2002) and the inexistence at that time the necessary tools proven to be useful in this issue (Cross et al., 2004).

Even though Eysenck (1971) argued that the level of intelligence is not correlated with introversion, other researchers have demonstrated that people with high intellectual abilities tend to be introverted (Silverman, 1993a, 2002, Winner, 2000; Berndt, Kaiser & van Aalst, 1982, 2006), and that the possibility of an individual being introverted increases with the IQ level (Silverman, 1986). Gallagher (1990) states that over 50% of people with high intellectual abilities are introverted compared to the general population whose preference for introversion is about 25%. Silverman (1985) also demonstrated in a study conducted among 61 graduate students that 34% were extroverted and 66% introverted. Other studies, however, reported somewhat different results regarding the preferences of adolescents with high intellectual abilities for the extroversion-introversion dimension. For example, the results obtained by Williams (1992) show that extroverts are more common than introverts, and Csikszentmihalyi (1997) asserts that this category of population has both features, to the same extent, as opposed to those with medium intellect, which tends towards one of the two.

Using the Eysenck Personality Inventory (EPI, Eysenck & Eysenck, 1964), Haier and Denheun (1976), highlighted that male subjects with high intellectual abilities whose talent is mathematics tend to be more introverted than average ones. Using Holland's Vocational Preference Inventory (Holland, 1975) the authors showed that high abilities students in mathematics of both genres are predominantly investigative, a result that supports the earlier claim to the tendency of these subjects to be introverted.

Another feature related to introversion is the preference of people with high intellectual abilities to isolate, or their desire to be alone. Several authors have identified among their population a preference for them to be alone (Albert, 1978, McCurdy, 1957), and this feature appears to be more prominent as the subject exhibits a higher intelligence level (Hollingworth, 1942). Hernández (1983 apud Benito, 2003) even introduces the phrase "hostile introvert", claiming that sometimes such subjects may manifest a hostile attitude towards others or feel victims of their hostility, which is why there may arise a desire of superiority and leadership, which ultimately will lead them to the choice of social isolation. Studies focusing on the problem of isolation and preference of these individuals to be lonely, have demonstrated that intelligence and its level are not "sufficient" causes to support such a theory, and that there is a multitude of other factors that would lead to the construction of such an assertion, such as the dynamics of school and family roles in the person's life (Sheldon, 1959). Other theorists (Greenlaw & McIntosh, 1988; Janos, Fung & Robinson, 1985) argued that this desire to isolate of high intellectual people would also be explained by their feeling of being "different" from their peers,

both through their interests and their level of knowledge, and for this reason they find it difficult to build friendly relationships by identifying people who are compatible with them. In fact, the desire for isolation intensifies when adolescents become aware that people around them do not perceive or experience the world in the same measure and manner as they do. For these reasons, Terman (1925), through his work, highlighted the fact that people with high intellectual abilities value more closely intimate relationships, to the detriment of having the status of being "popular".

Perfectionism is another feature found among people with high aptitudes (Greenspon, 2000; Grobman, 2006). Whitmore (1980) considers the desire for perfection to be a key component in achieving talent. Webb (1993) notes that people with high intellectual abilities most often build very high expectations in hopes of reaching an ideal followed by a fierce desire to fulfill it. Silverman (1993a) also offered a possible explanation of perfectionism among individuals with high intellectual abilities, by linking it to another feature specific to this population, namely the possession of very good abstract judgments. The author motivated this by the fact that the talented person is able to visualize or conceptualize perfection, due to extraordinary reasoning skills. Having a desire to meet its own requirements, it is possible that sometimes the assumption of risks in the decisions and choices made is not frequently encountered (Delisle, 1992; Webb, 1993), and especially in situations where the person anticipates a failure or the existence of circumstances that may affect the self-image. Frey (1991) points out that this is often the case in the teenage period, especially when young people become aware of the consequences their actions can have, and for this reason they prefer to choose only those activities of whose success they are fully convinced. However, LoCicero and Ashby (2000) have shown that people with high intellectual abilities have mainly adaptive perfectionism, such as maintaining their high personal standards in their activities, and less of a non-adaptive type such as the discrepancy between maintaining too high expectations and performance. While most recent studies (Shaunessy et al., 2011; Canter, 2008) have argued that among people with high intellectual abilities perfectionism is adaptive compared to the general population, their results have been challenged, especially for omitting some variables such as stress. Flett and Hewitt (2002), for example, assert that some representative behaviors of adaptive perfectionism (setting high personal standards for example) may become less effective in stress-generating conditions (such as examination situations).

A closely related aspect of perfectionism is the need for precision, but this has been less studied. Silverman (1993a) used this need for precision to explain another characteristic of the population with high intellectual abilities, namely the argumentative one. These people feel the

need to correct the mistakes of others (Delisle, 1992; Silverman, 1993), although they can do this unconsciously, without noticing that this provokes aversion on the part of others. At the same time, however, they are very self-critical, especially when they realize that they perceive their work as being inadequate with their academic or personal ideals, or when their results do not coincide with the expectations imposed by themselves. This may cause frustration or even depression in situations where they are disappointed in a certain way (Robinson, 2004; Neihart et al., 2002; Genshaft, Greenbaum, and Borovsky, 1995; Webb, 1993).

An element studied predominantly among the female population with high intellectual abilities consists in their autonomy / independence. Although Götzdanker (1968) emphasizes the desire for independence to be found early among high abilities children (Gottfried & Gottfried, 1996), both in the learning process and the daily activities, this is more evident among the girls, who especially value autonomy and non-authoritarianism. People with high intellectual abilities like word games, especially when they are made humorously, supported by their extraordinary verbal skills (Greenlaw & McIntosh, 1988). Shade (1991) conducted studies on the types of response of students with high intellectual abilities to humor and the results obtained claim that they are more receptive to verbal humor compared to those in the general population.

Other authors have also drawn attention to features such as enthusiasm (Halpin, Payne, & Ellett, 1975), mental vigor (Carter, 1958) and energy (Miles, 1958). These characteristics are also supported by the hypersensitivity theories of Dabrowski (1972), Piechowski (1991) and Lovecky (1993). Cox (1981) identified curiosity as one of the most "universal features" found among people with high intellectual abilities. Also, a number of authors such as Subotnik, Summers, Kassin and Wasser (1993) or Lovecky (1992) underline the need for these people to satisfy their curiosity through complicated games requiring complex intellectual skills or any other type of activity that can intellectually stimulate them. Dockery (2005) identified stress as a possible factor that may interfere in the learning process, especially when high abilities adolescents want to learn or do more at one time, which may trigger frustrations, especially when they find problems for which they cannot identify a solution.

Over the past few years, there have also been attempts to conduct studies on the relationship between the intelligence level and the personality traits identified by the Big Five. For example, Goff and Ackerman (1992) demonstrated in their study a moderate correlation of .40 between the general intelligence level and the "Open to Experience" factor. The results obtained by Ackerman and Heggestad (1997) identified a very weak relationship between the level of intelligence and Neuroticism factor (-.15) and its facets such as anxiety, anger, depression and hostility. However,



the direct link between the level of intelligence and the other factors of the model is still very little studied. With regard to this issue, there are few studies and their results are quite inconsistent. Thus, Ackerman and Heggestad (1997) reported that there is an insignificant relationship between intelligence and Agreeability factor, and Conscientiousness has shown an inconsistent pattern. And with regard to Extraversion, the meta-analysis of the two revealed an insignificant association between this factor and intelligence.

In a study by Zeidner and Shani-Zinovitch (2011), which aimed at making comparisons between high intellectual and general adolescents, in view of the existing differences in personality factors of the Big Five, confirmed the results of previous studies. Thus, adolescents with high intellectual abilities showed a higher level of scores obtained at the Open to Experience scale compared to those whose intellectual level was medium, and in terms of Neuroscience and Agreeability, it was significantly lower in the case of the general population.

In terms of the self-concept, studies report contradictory results with reference to adolescents with high intellectual abilities. Some authors assert that in a non-academic context they have a lower level of self-concept compared to general adolescents (Kelly & Colangelo, 1984), but in a meta-analysis by Hoge and Renzulli (1993), the results obtained did not show significant differences in the social self-concept. Many studies have focused on the female teenage population with high intellectual abilities, where discordances have been identified with regard to the social self-concept. Callahan, Cornell and Lloyd (1990) showed that those subjects with a higher level of intelligence achieved lower scores at the social dimension of the Self-Perception Profile for Children (SPPC, Harter, 1988). Also, the results of the Leroux study (1994) support these claims and the fact that female subjects with high intellectual abilities tend to minimize their talent and withdraw from the relationships they find themselves in.

Regarding the academic self-concept, studies claim that students with high intellectual abilities have a significantly higher level compared to average students about their academic abilities supported by the image of school success (Tidwell, 1980; Kelly & Colangelo, 1984). Experiencing a situation of academic underachievement will lead to the formation of a negative global self-image that may have more serious consequences in adult life (Mönks, 1993 apud Crețu, 1997). Other inconveniences that may affect the academic self-concept are perfectionism and competitiveness within the class of students at the same level of aptitude (Hoge & Renzulli, 1991). Kulik and Kulik (1992) conducted a meta-analysis of the effect of the homogeneous grouping of students according to their potential and capabilities on the self-concept, and it was found that high abilities students tend to have lower levels of academic self-concept when placed

in classrooms of students with similar abilities compared to those placed in mixed classrooms. Moreover, a series of studies (Chan, 1988; Cornell, Delcourt, Goldberg & Blant, 1992) suggest that high abilities students participating in programs designed to develop and train them have lower levels of academic self-perception compared to those who are included in classrooms with general pupils.

In this context, the "big-fish-little-pond effect" has been observed and studied, which refers to students whose self-concept is low as a result of the comparison they make with the more capable students and those whose self-concept is high because of the comparison they make with the less able ones (Marsh, Chessor, Craven, & Roche, 1995). In line with the reference model framework (Marsh & Parker, 1984), self-perceptions in educational settings are largely modeled by the social comparison process. Thus, pupils compare their own attributes and knowledge (more or less perceived objectively) to those of other pupils in the reference group (e.g. the classroom they belong to, school, etc.) and use this relative impression as a basis in forming self-perceptions and formulating conclusions about their academic and social status. The principles of the model support the fact that it is better to be "a big fish in a small pond" (a high abilities student in a mixed classroom) than "a small fish in a big pond" (a high abilities student in a homogeneous classroom). Thus, according to this theoretical model, students with high intellectual abilities will have a superior academic concept in an environment with students whose skills are mixed rather than in a selective setting, where all students are at a high level of abilities.

Studies by Marsh and collaborators (1995) have demonstrated that the effect of "big-fish-little-pond" primarily affects the academic self-concept, but not other forms of the self-concept (e.g., physical aspect, relationships with colleagues, relationships with parents). In a first study, high intellectual abilities students who participated in programs designed for them had a significant decline in three areas of the academic self-concept (reading, mathematics, school) compared to those in mixed classrooms, but no significant differences were observed in four areas of the non-academic self-concept. In a second study, students in homogeneous classrooms experienced a significant decline in three scales of the academic self-concept compared to those in mixed classrooms, while significant differences in the concept of non-academic ones were not identified.

Thus, students with high intellectual abilities who consider that the pressure and academic demands exerted on them overload cognitive resources are prone to perceive them as threatening, which is why they will react negatively (Jerusalem, 1984). Students with high intellectual abilities who are part of homogeneous groups can perceive the environment as more competitive, stressful and demanding. The classroom group of a student usually serves as a reference group for social

comparison processes (Cherkes-Julkowski, Groebel & Kuffner, 1982), and for this reason it is obvious that those students whose academic self-concept is a low one will perceive social assessment situations as threatening and will respond to them with a high level of worry.

Some studies have investigated the relationship between this phenomenon and the anxiety manifested in the evaluative context (test anxiety), and their results support that anxiety varies according to the student's reference group (Schwarzer, 1984; Schwarzer & Lange, 1983). This is especially true when social comparison processes affect the student's own academic concept in his reference group (Wigfield & Eccles, 1990). There are research results (Hembree, 1988; Skaavik & Rankin, 1995) that have shown that a high academic concept is associated with a low test-anxiety level. Thus, students who feel less confident from the point of view of their academic abilities will hope to a lesser degree to achieve success in an evaluative context, and this will lead to higher levels of fear of failing and test anxiety (Hodapp, 1989).

### **3. Personality profiles of the high intellectual abilities population identified in literature**

In the literature, there has been an interest in the past 40 years in the development of personality profiles of the high intellectual abilities population. Roeper (1982), for example, identified five types of personality, referring in particular to emotional needs and to the way people with high intellectual abilities manage their emotions. The author emphasizes that this categorization is based only on observations from psychological, psychoanalytic and educational theory. These five types of profiles identified by Roeper are "The Perfectionist", "The Child / Adult", "The Competition Winner", "The Self-critic" and "The Well-integrated child".

Regarding the "Perfectionist" profile, the main features of people in this category refer to their need for excellence. These people do not tolerate making mistakes, especially in the activities carried out in their talents. While some people accept that their abilities know certain limits and tolerate errors and experiencing failures, those with high intellectual abilities achieve their goals most often without severe limitations. For these reasons, and especially because they often enjoy admiration from their parents and those around them, when they find they cannot reach these expectations, they think it is because of their personal guilt rather than a limitation of their age or capacity at that time. The "Child-Adult" profile is represented by the tendency of the child with high intellectual abilities to behave and demand to be perceived by those around him like an adult. They think they are quite capable of caring for themselves and do not accept other people

to interfere with their decisions. Most often, underachievers are found by compromising their entire learning process because they refuse any type of authority from adults and to participate in activities with colleagues of the same age, considering unfavorable the adoption of a student position as a member of the group which they consider superior. Often, this type of children exhibits behavioral disorders because of the desire to maintain the illusion of their own person, the one who actually leads. These children cannot emotionally allow themselves to give up power, and therefore do their best to maintain a position that is unrealistic and vulnerable. They see the world as a threat; their need to be responsible is like a struggle for survival, they will defend it with all their power.

The "Competition Winner" typology is very similar to "The Child-Adult", but in this case, the child is perceived as an adult, the difference being that this time he is struggling for the "right" he believes he has, and not for his "general safety" as in the case of the typology described above. Most often, this type of child identifies the "competitor" in the person of an adult (such as his own father) with whom he constantly fights using his various abilities to prove that is better or smarter.

The psychological profile of "The Self-critic" is distinguished by the inconsistency between the emotions, actions, the thoughts of the person and their expectations, and most often this is easily observable by the fact that they are analyzing themselves very demandingly and not very often manifests dissatisfaction with their own person or activity. They often analyze and re-analyze their activities, which they recover and check multiple times to exhaustion, in compulsive form. In the case of this typology, a person may lose confidence in his own abilities, especially when he fails in an activity, and transforming this failure into a form of possible imagined incapacity.

The "Good-Integrated Child" typology is represented by those children who go beyond these stages of development in a normal manner. These are those children supported by parents in a way that allows them to develop an autonomous person who assumes, realizes and manifests his own talent. These children have a realistic vision of themselves, accept failure as part of the learning process and that both positive and negative emotions are fundamental components of the individual's life.

Betts and Neihart (1988) argue that the population with high intellectual abilities should not be considered as a unitary group, and that each individual can be influenced in a different way from his abilities, which is why they considered it necessary to develop a theoretical personality profile to describe and compare their needs, feelings and behaviors. If Roeper (1982) differentiated between five types of profiles based strictly on how they manage their emotions, Betts and

Neihart (1988) consider this to be insufficient, since the development of a child can only be analyzed through interaction between the emotional, social and cognitive domains, and treating emotions separately from intellect and physical development would be a mistake. Thus, the two authors proposed six different profiles of children and young people with high intellectual abilities to provide information about their behavior, needs and feelings.

Type I, called "The Successful", is most likely represented by most of the people identified as having high intellectual abilities. These are the ones who, during childhood, have learned the "method" they need to apply in their development to achieve performance. Representatives of this typology are those children who have internalized and accepted the recommendations of parents and teachers and have begun to behave in the way that they can achieve success. They get very good school results and high scores in intelligence tests, and as a result they are often directed to programs designed to develop their talent. In very few cases, this type of children may experience difficulties or behavioral disorders because they agree to behave according to the expectations of teachers and parents to thank and appreciate. Very often, these children are what many consider to be the typology of the child who will "succeed". However, there is the possibility that they can get bored during classes and identify the methods necessary to perform certain activities involving as little effort as possible. Even if most of them get very good academic results, they are surprisingly characterized by a lack of development of skills and attitudes of autonomy, which makes them dependent on their parents for a long time. From a social point of view, children in this category are, in most cases, accepted by colleagues, show increased self-esteem and are included in social groups. Goertzel and Goertzel (1962) stated that the smartest student in a class can become a competent one but lacking in creativity, risking that he/she does not fully develop the potential of his/her talent. When maturing, children in this category are at the risk of becoming under-exploited in their area because they lack the skills and attitudes necessary for lifelong learning, and despite being well-suited to society, they are not truly prepared for the permanent challenges of life.

The second type of the child and young person with high intellectual abilities is the "divergent" type. Included in this category are those people that the educational system did not identify during the school period to support or guide them to programs tailored to them. This student typology can be identified by those very creative students who are perceived by those around them as stubborn or sarcastic. Most often there are students who challenge the teachers through various questions and refuse authority, not complying with the system and refusing to use it for their benefit. Often, they are not appreciated and do not receive a talent recognition, and

their interactions with family or colleagues often involve conflicting situations. Their perception of school is that it does not support them in affirming their creativity or talent, and for these reasons they have low self-esteem, are not included in social groups, and show frustration whenever they have the opportunity. These students may be at increased risk during adolescence when they can resort to various actions such as school dropout, substance use, or delinquent behavior if the family or others around them do not intervene in a timely manner.

The third type, also called "The Underground", is represented by students who, during adolescence, choose to "hide" their talent. This behavior is often adopted by girls but boys can choose to mask their talents, especially because of the pressures to fit in the patterns of the male population that often opts for sports activities. As early as pre-adolescence, they have an intense need to be included in social groups and to be perceived as part of the group, trying to conceal their skills, motivation or passions, by gradually giving up their learning activities to achieve high performance. This type of student is found to be unreliable and anxious, being constantly in a continuous struggle between the manifestation and development of talent on the one hand and its acceptance by the members of a group on the other.

The fourth type, "The Dropouts", includes those pupils who show a permanent rage acquired by the fact that, over time, the educational system does not support or recognize their talent and perceive this as a form of rejection. Most often they are defensive with those around them or have symptoms of depression. This phenomenon is more often found during adolescence, during high school years when the student can feel that his talent is not found in the school environment because it is a passion that the existing curriculum cannot exploit or develop in any form. In the case of this typology, the most frequently encountered risk is that the teenager abandons the education system or is more likely to frequent it, but without actively participating in the proposed activities. The authors of this model recommend identifying individual counseling programs for students of this type, both for remedying the shortcomings associated with regular school attendance, and for raising self-esteem and diminishing anger.

The "Double-labeled" or V-type in the model proposed by Betts and Neihart (1988) is represented by students experiencing an emotional or physical difficulty or deficiency, or learning difficulties but also exhibit high abilities in a field. These people are often difficult to identify and many of the existing schools or educational systems do not have specialized programs that genuinely meet their needs. Students in this category often experience difficulties in completing a work task, and for this reason they can create a wrong image of themselves about the inability to cope with the ordinary school environment. Most often they experience the stress, frustration,

discouragement, or rejection of others and choose to isolate or react by exaggerated criticism or abuse of others to maintain their own self-esteem.

The sixth one is that of the “Autonomous Learner” who, since the early years of schooling, has been creating his own learning style that he adopts at home. This type has many features in common with the Type I profile, the difference being that the autonomous student is aware that the educational system has the role of stimulating it in identifying and developing new opportunities for their future compared to those in the first typology that are trying to accomplish the school tasks involving as little effort as possible. Autonomous pupils are few in number, but they have an increased self-esteem because they consider their needs to be understood and accepted, and the educational system paves the way for a successful career. Most often they have high leadership abilities, they are determined, express themselves freely and without uncertainty, and are highly respected by adults and colleagues, demonstrating their independence in their own actions, building their own goals and educational path on their own. They perceive their power through their own abilities, take risks, and are aware that they are the only ones who can make changes in their lives.

Another profiles typology of highly intellectual abilities adolescents that has exacerbated the literature has been conceived by using the concept introduced by Dabrowski since 1967, of overexcitabilities. People with high intellectual abilities have a high level of perceptions, demonstrating a sense of observation that is excellent and rich in detail (Sak, 2004). This increased sensitivity (Mendaglio, 1995) is not only sensory but also affective, so it can experience more intense feelings, which can be caused by situations where others react with difficulty. This aspect places those with high intellectual abilities in a vulnerable position, which many researchers concerned with this area (Piechowski & Cunningham, 1985; Gallagher, 1985) call hypersensitive. This can be defined as an extreme response to certain stimuli, and can be manifested in various fields, such as psychomotor, emotional, imaginative, sensory and intellectual. With a rich sense of observation and a capacity to accomplish more tasks at a time, they manage to simultaneously visualize the multiple facets of a situation and solve problems in many ways, enjoying a high level of tolerance to ambiguity, and complexity (Piechowski, 1991).

The results of studies aimed at identifying hypersensitivity as characteristics of the high abilities population were supported by the contributions of various authors interested in this theory (e.g., Gross et al., 2007, Treat, 2006, Mendaglio, 2003, Piechowski, 1999). For example, Treat (2006) has demonstrated that hypersensitivity affects the level of sensitivity, intensity and awareness in areas of related interest, such as the manifestation of increased creativity in art,

competitiveness in sport, and high levels of leadership in tasks for work. Also, the manifestation of hypersensitivity has been demonstrated by the increased energy level, the passion with which they engage in an activity they are attracted to, a strong reaction in response to certain stimuli and a very rich imagination. Piechowski (1999), however, draws attention to the fact that if the level of this hypersensitivity increases in intensity, then the difficulty of these people is to interrelate with their teachers and colleagues, and to integrate in the social environment. Researchers concerned with this subject (e.g. Piechowski, Tucker and Hafenstein) have reached a consensus on the operationalization of this concept, thus establishing five types of hypersensitivity found in the high abilities population: psychomotor, sensory, emotional, intellectual and of imagination. Psychomotor hypersensitivity is a psychomotor excitability manifested by either a surplus of energy (high enthusiasm or competitiveness) or nervousness (tics or impulsive behavior). Sensory hypersensitivity is noticeable in people with high levels of awareness of stimuli and sensory reactions, which can also be encountered in the form of passions for clothing and appearance, jewels and ornamented objects. Emotional hypersensitivity is most noticeable by gesture and expressivity, somatic expression, inhibition or intense expression of feelings, intense affective memory, anxiety and depression, feelings of guilt and empathy. Manifestations of intellectual hypersensitivity are associated with intense and accelerated mental activity. They can be identified by the fierce desire of people to learn new things, understand them, test and analyze. In terms of imaging hypersensitivity, it can be observed by frequent distraction of the person from work tasks or the discussed subject, or "dream with open eyes". Typically, people with a high level of this type of hypersensitivity are creative and prefer to invent stories, fantasies and metaphors.

Regarding the importance of their occurrence of hypersensitivity among high abilities individuals, Dabrowski (1972) emphasized that when all five of these types are active, the potential development of the individual is very high, although the essentials of the process are the emotional, intellectual and imaginative, with the specification that emotional hypersensitivity is a strong support in the development process. However, if sensory and psychomotor hypersensitivity are singularly present, development is somewhat limited. Among the studies conducted to explore this theory, we can remember the one by Miller, Silverman and Falk (1994), which aimed at comparing 41 adults with high intellectual abilities with a group of 42 graduates with medium intellect. All participants completed the QEQ (Overexcitability Questionnaire, Lysy & Piechowski, 1983), and the proposed hypothesis that the two populations differ significantly in hypersensitivity levels was partly supported by the fact that subjects with high intellectual abilities scores significantly higher in the level of intellectual and emotional hypersensitivity and



that within this group there were also differences in the subgroup of female subjects who achieved higher emotional hypersensitivity scores, while male subjects obtained higher scores in the case of intellectual hypersensitivity. Tucker and Hafenstein (1997) conducted a qualitative exploratory study using observation methods, interviews, investigating school documents for five of the children selected as having high intellectual abilities. The results of the study concluded that all five children exhibited intellectual, emotional and imaginative hypersensitivity.

#### **4. Conclusions**

In this literature review, we tried to capture the main definitions of the talent field, which would make it possible to clarify the way in which the characteristics necessary for identifying and bringing young people into this category of population are operationalized. Even though there is still no unanimously accepted definition by all researchers in the field of what it means and involves the category of the high abilities population, most of the definitions found in literature have some common elements that refer to the fact that these young people have a potential to achieve high performance in one or more areas simultaneously, of which we mention the intellectual, artistic, psychomotor, leadership and technical-applicative one.

Regarding the literature on the characteristics often encountered in this category of population, we can argue that there are some directions in the field of cognition, motivation, socio-emotional development and their personality. This analysis presents the most important features of high intellectual abilities people who have been selected in consultation with studies that have been found so far in this field. We have identified that people with high intellectual abilities have specific elements in cognitive development, including their intuitive abilities, abstraction skills, rapidity in working tasks, memorizing, decontextualizing, etc. Regarding the motivation theme, it is noted that people with high intellectual abilities demonstrate a tonus and overflowing energy, observed in the fact that they can keep their focus on subjects of interest. We also recall the fact that they have a high intensity and persistence in learning, showing great curiosity, and at the same time their learning process is sustained by their intrinsic motivation.

What is highlighted in terms of socio-emotional development of people with high intellectual abilities is that it is influenced by their asynchronous development, which refers to the discrepancies between mental and chronological age, which is why they can experience different challenges comparative with general teenagers. The results of many studies on this subject have reached quite contradictory conclusions. While some report that this category of people has the

ability to adapt to the same degree as general people, there are also results that support their point of view about their vulnerabilities to some issues or situations that may hinder their cognitive and emotional development.

And as far as the personality of high intellectuals is concerned, there are enough issues that are still not very clear, some of which are even contradictory too. Many researchers have highlighted through studies that this category of population tends to be introverted, but others have argued that young people in this category are actually extroverted. Also, these individuals tend to isolate themselves and prefer to be or work alone, but other authors claim they may prefer to work in a group as long as the group has the same level of aptitudes. In terms of self-concept, studies report contradictory results with reference to adolescents with high intellectual abilities. Some authors assert that in a non-academic context they have a lower level of self-concept compared to general adolescents. Other results claim that they have not found significant differences on social self-concept.

Regarding the psychological profiles of people with high intellectual abilities, we have found in the literature only the three categories identified by Roeper (1982), Betts and Neihart (1988) and the typology conceived by using the concept introduced by Dabrowski (1967) of overexcitabilities. Although publications that directly target profile shaping are not yet sufficient to synthesize the conclusions on the ideal theoretical model that would encompass all possible typologies amongst this population, we believe that these three classifications presented above are a landmark for both the identification of the person with high intellectual abilities and a useful tool in selecting the necessary strategies for effective interaction with them and the close knowledge of their personality characteristics.

Finally, we can support what Morawska and Sanders (2009a) have said about this category of population, namely that it is obvious that adolescents with high intellectual abilities have unique needs in their development, especially in the educational field and the social one. For this reason, Pfeiffer (2013b) and many others have argued that people with high abilities are a population with special needs.

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