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Personality styles and behavioral repertoires in girls with high abilities

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Título: Estilos de personalidad y repertorios conductuales en niñas con altas capacidades.

Resumen: Se han dado varias explicaciones para la subrepresentación de mujeres dentro de la población superdotada, incluyendo diferencias en rasgos de personalidad, competencias y/o motivaciones, creencias y expectativas basadas en estereotipos de género, y comportamientos diferenciados por género; lo que resalta la importancia de incluir estos factores en los protocolos de observación, evaluación y selección para niños y adolescentes. Por ello, este estudio tiene como objetivo definir si existen diferencias significativas en los estilos de personalidad y patrones de comportamiento relacionados con el género en adolescentes altamente talentosos. Los participantes fueron 159 adolescentes de entre 11 y 16 años, divididos en dos grupos. (1) Grupo de altas capacidades: un grupo de 85 adolescentes (40 niños, 45 niñas); (2) Grupo típico: un grupo de 74 adolescentes (49 niños, 25 niñas). Todos los participantes fueron evaluados mediante pruebas de personalidad, resiliencia, perfeccionismo, seguimiento de reglas, pensamiento perseverativo y evitación experiencial. Los resultados revelaron que las niñas superdotadas obtuvieron puntuaciones más altas que los niños en algunos estilos de personalidad y patrones de comportamiento considerados "negativos". Específicamente, las niñas puntuaron significativamente más alto en ansiedad, dominancia, agresividad y más bajo que los niños en estabilidad emocional, autoconcepto, autoestima y control cognitivo. Finalmente, se discuten las implicaciones para la evaluación y apoyo de la población superdotada.

Palabras clave: Personalidad. Comportamiento. Superdotado. Género. Adolescentes.

Abstract: Several explanations have been given for underrepresentation of women within gifted population, including differences in personality traits, competencies and/or motivations, beliefs and gender stereotypes expectations, and gender-differentiated behaviors; which highlights the importance of including these factors in observation, evaluation and screening protocols for children and adolescents. Therefore, this study aims to define if there are significant differences in gender-related personality styles and behavior patterns in highly talented adolescents. Participants were 159 adolescents between 11-16 years of age, divided into two groups. (1) High abilities group: a group of 85 adolescents (40 boys, 45 girls); (2) Typical group: a group of 74 adolescents (49 boys, 25 girls). All participants were assessed using personality, resilience, perfectionism, rule-following, perseverative thinking and experiential avoidance tests. Results revealed that gifted girls had higher scores than boys in some personality styles and behavior patterns considered as "negative". Specifically, girls scored significantly higher in anxiety, dominance, aggressiveness, among others and lower than boys on emotional stability, self-concept, self-confidence and cognitive control. Finally, implications for assessing and supporting gifted population are discussed.

Keywords*:* Personality. Behavior. Gifted. Gender. Adolescents.

Introduction

Traditional theories of intelligence (e.g., Galton, Jensen, Spearman...) have maintained the importance of heredity in determining it. However, the contributions of different authors (e.g., Sternberg, Ackerman, Subotnik, Gadner, Feuerstein...) in the 70s and 80s have given more importance to the social and cultural environment and to other personal, contextual, and behavioral variables. This has determined that since the beginning of the 21st century, the evolutionary nature of giftedness has been emphasized, considering it as a process that begins with a potential capacity and continues until the manifestation of a skill (Gagné, 2004; Simonton, 2005). In this regard, Subotnik et al. (2019) point out that the interaction of genetic inheritance and contextual factors intervenes in the development of a higher level of intelligence, considering the opportunity to learn as key in talent development.

Despite these theories, psychometric approach premises to the identification of high abilities seem to be currently maintained, ignoring that social position and learning opportunities depend on gender, socio-economic level, ethnicity, and place of residence (Silverman & Miller, 2009), among others. Thus, it can be observed that in gifted programs certain population groups remain historically underrepresented, such as female students (Anderson, 2020; Collins et al., 2020; List & Dykeman, 2019), people from disadvantaged backgrounds (Hamilton et al., 2018; Olszewski-Kubilius & Thomson, 2010; Plucker & Peters, 2018), students who do not know the lingua franca (Allen, 2017; Andreadis & Quinn, 2017), those of different races (Allen, 2017; Ford et al., 2020; List & Dykeman, 2019; Olszewski-Kubilius et al., 2017; Peters et al., 2019; Siegle et al., 2016; Worrell et al., 2019), or those who live in rural areas (Hemmler et al., 2022). It is interesting to look at the work of Crawford et al. (2020), which explains how a wide variety of factors (i.e., identification methods, family involvement in dedicated programs, stereotypes, definition of giftedness, teacher training, school curricula, race, preconceived ideas, socioeconomic status, etc.) and the interactions among them intervene in the underrepresentation of multiculturalism and the ethnic, linguistic, and socioeconomic diversity of the gifted population.

Focusing on gender, recent data show a lower percentage of girls than boys enrolled in gifted programs in some school districts of the United States (Courtney, 2020; Ford, 2013;

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List & Dykeman, 2019; National Center for Education Statistics, 2024); this is an affirmative action for boys as intellectually gifted that also appears in the work of Petersen (2013). In addition, different studies point to significant male-favoring differences in specific educational areas such as mathematics (Robinson & Lubienski, 2019).

In Spain, the work of Pérez-Sánchez and Domínguez (2000)—studying the gender-based percentage of highly talented students in the Community of Madrid (central area of Spain)—points out that there were no frequency differences between 3 and 5 years of age, while from 6 to 12 they found 48% of highly talented girls compared to 52% of boys, and there is an even wider gap between 13 and 17. Subsequent studies confirm these results, and in Spain, the *2020 Spanish National Report on the Education of the Gifted* indicates that 65.2% of males were identified as gifted compared to 34.8% of females, and while from 6 to 12 years of age 48% of girls are detected as gifted, the percentage in the group from 13 to 17 years old is only 27% (Sanz, 2020). Andalusia (southern Spain) is the community with the highest number of detected children with high abilities, representing 39.6% of the national total in the 2022-2023 academic year (González-Sainz, 2024), of which in secondary education 0.400 are men and 0.217 are women.

Then a question arises: What could be the reason for women's underrepresentation? And there is no easy answer, as there are several possible explanations (Petersen, 2013). On the one hand, it seems that the gender-related percentage of identification may change depending on the measures used, because tasks and scales favor men in many cases. In addition, it seems to depend on the school stage at which identification is performed.

Some studies revealed possible differences in personality styles, competencies, and/or motivations may influence behavioral repertoires developed throughout childhood and favor such underrepresentation as age increases. Thus, differences found between gifted and typical adolescents resulting in higher scores of the former in openness to experience, extraversion, perfectionism, and imaginative, emotional, psychomotor, and sensory overexcitability, as well as social disadvantage (Ackerman & Heggestad, 1997; DeYoung, 2011; Fries et al., 2022; Harper, 2022; Pfeiffer, 2017; Stanek, 2014) are pointed out. Other studies reveal fear, anxiety, dependence, and sentimentality, and social boldness, sociability, and liveliness score significantly lower in gifted groups compared to those of average intelligence (Fries et al., 2022). Something similar applies to neuroticism, which seems to be negatively associated with intelligence (Ackerman & Heggestad, 1997; Ogurlu & Adnan, 2021; Stanek, 2014). Some authors point to a lower physical and social self-concept in the gifted children group vs. the typical group (Infantes-Paniagua et al., 2022) and fewer perfectionism concerns than perfectionism striving (Orgulu, 2020) in gifted children. And there are studies revealing non-significant differences between groups or heterogeneity in the results (Lee et al., 2005; Merizalde-Medranda, 2021; Pérez-Sánchez & Domínguez, 2000). Finally, the effect of non-significant associations is also noted in personality styles—such as agreeableness and social self-esteem—and in conscientiousness (Ackerman & Heggestad 1997; Fries et al., 2022; Stanek 2014), while others state the latter to be the most solid predictor of academic and professional success (Ceci & Williams 1997; Furnham & Cheng 2013).

Focusing on intelligence and gender interaction, there are studies (Gómez-Pérez & Calero, 2023; López-Rivas & Calero-García, 2018) that point out that gender-related intelligence differences in favor of males are shown in some executive functions—working memory, self-regulation, and inhibition—but not in social adjustment, social competence, or emotion recognition, as other authors pointed out (Abdulla et al., 2020; Kret & De Gelder, 2012; Voyer et al., 2017; Widen & Russell, 2010; Wong & Yeung, 2019). Other studies conducted in Spain indicate that gifted women exhibit a greater sense of insecurity, conformity, and fear of success (Pérez-Sánchez & Domínguez, 2000), lower levels of self-esteem (García-Infantes, 2019), and a lower social self-concept (Infantes-Paniagua et al., 2022). However, women are proved to be more flexible than men (Betancourt et al., 2022) and to have better interpersonal skills when assessed by others (Eren et al., 2018; Perham, 2012) but not in direct performance tests. These data indicate males to be higher skilled in those processes involved in problem solving, planning, and control, helping them to succeed in school tasks and tests.

In recent years the differences between gifted boys and girls in behavioral repertoires such as thinking styles—including coping with frustration and negative emotions, fixed or growth mindset, and repetitive thinking—perfectionism, rule-governed behavior, and interpersonal skills have been analyzed (Abdulla et al., 2021; Ogurlu, 2020). Tsai (2023) has found that gifted girls score significantly higher than gifted boys on self-oriented perfectionism (i.e., perfectionism toward oneself), contingent self-esteem, preoccupation with mistakes, self-criticism, and high performance-oriented behavior. Gifted boys, on the other hand, score higher on other-oriented perfectionism and narcissism. Chen and Cheng (2023) hold that, although gifted girls have better interpersonal skills and emotional intelligence, boys develop more self-confidence with age, leading them to stand out over girls at later ages in creative self-efficacy.

Analyzing the differences observed in personality and other behavioral repertoires, authors such as Makel et al. (2015) stated the underrepresentation phenomenon is due to the fact that implied beliefs about giftedness could influence the students' perceptions, behaviors, or aspirations. Such influence can be mostly observed in the motivation and behaviors highly talented girls embrace in their academic development (Snyder et al., 2014). Gender stereotypes also intervene in intelligence perception, gifted identification, students' assessment of themselves (Anderson & Martin, 2018)—how they value and encourage their abilities—and/or the way they face and develop their own learning (Yoon et al., 2020).

There is plenty of literature on the emotional skills of gifted children compared to those of average intelligence, and the fact that gifted children's emotional abilities do not differ from those of normative peers seems to be out of doubt. However, the learning experiences they accumulate are indeed different. These learning experiences mainly lead to the development of functional behavioral repertoires, to a greater or lesser extent, which will definitely have a future impact on these children's performance. Resilience is one of the skills most closely related to learning experience. Tengku-Muda (2024) states children with high intellectual abilities have significantly higher scores in resilience than their peers of average intelligence, but no difference is found between boys and girls.

This is why several authors place challenges generated by expectations and traditional gender roles at the center of underrepresentation. Thus, Dai (2002) points out greater anxiety facing success to be related to motivational problems in gifted girls, since they would inhibit their aspirations, fearing to stand out intellectually, thus avoiding social rejection for not meeting their role. Anderson and Martin (2018) note the combination of gender stereotyping and perfectionism—a psychological feature associated with giftedness—impacts the performance, emotional well-being, and motivation of gifted Black girls, undermining their self-efficacy, self-concept, or self-esteem, etc. Similarly, research conducted in Spain also stated a lower self-efficacy in women (García-Perales et al., 2019).

Recently, Yu and Jen (2019) disclosed gifted girls who study math and science in college present lower self-efficacy and career readiness than those in high school, and they develop their careers with greater trouble than those who study language or social sciences. All of these results seem to affirm the aforementioned idea of traditional gender roles and expectations conditioning their learning experiences.

For all these reasons, some authors point out the need and importance of including observation of personality styles, behaviors, and attitudes in assessment protocols for the identification of minority groups such as women (Anderson, 2020; Dori et al., 2018). And it is in this sense that we proposed this work, trying to find methods that may reduce female underrepresentation. The general objective of this study is to resolve whether there are significant gender-related differences in personality and behavioral traits of adolescents with high abilities compared to those of typical development. Therefore, the following hypotheses and dedicated objectives were proposed:

- To establish if there are meaningful divergences in gifted men's and women's personality profiles and between women with and without high abilities.
    - As a hypothesis, we expect to find significant differences: higher scores on traits related to anxiety, loss of control, or maladjustment, and lower scores on those linked to self-concept and self-esteem in females versus males.
- To determine resilience, perfectionism, rule-following, rumination, and experiential avoidance levels in adolescent males and females with high abilities and without them.
    - As a hypothesis, we predict higher scores in females than in males, and in females with high abilities than in those with typical development.

Method

Participants

159 Spanish adolescents between 11 and 16 years old [M = 13.63 (SD = 1.15)] enrolled in the study. They were split into two main groups: (1) The gifted group consisted of 85 adolescents with high intellectual abilities (M_{age} = 13.66; SD = 1.05). [40 boys (M_{age} = 13.60; SD = .98) and 45 girls (M_{age} = 13.71; SD = 1.12)]. (2) The typical group consisted of 74 adolescents with average intellectual abilities (M_{age} = 13.59; SD = 1.25) [49 boys (M_{age} = 13.35; SD = 1.30) and 25 girls (M_{age} = 14.08; SD = 1.00)].

Regarding age differences, there were no meaningful divergences between the main groups [$t(157) = .352$, $p = .725$], boys and girls in the gifted group [$t(83) = -.483$, $p = .63$], boys in the gifted and typical groups [$t(87) = 1.017$, $p = .312$], and girls in the gifted and typical groups [$t(68) = -1.371$, $p = .175$]. So, age was not included in the analyses as a covariate. However, significant differences between boys and girls were found within the typical group [$t(72) = -2.470$, $p = .016$].

General inclusion criteria were age 11-16 years and being in years 1st to 4th at secondary school. For the gifted group, the specific inclusion criteria were being identified as gifted by the school counseling services in accordance with the guidelines issued on May 12, 2020 [Instrucciones de 12 de mayo de 2020] or earlier by the Department of Education of the Regional Government of Andalusia [Consejería de Educación, Junta de Andalucía]. These guidelines establish an identification procedure that begins with a screening assessment using the BADyG (Yuste-Hernanz et al., 2019). If the screening is positive for suspicion of high abilities, that is, if it is a high percentile in three or more tests or BADyG, a full assessment follows. This consists of (1) a quantitative evaluation using tests of intelligence (e.g., WISC, Raven, G Factor), creativity, socio-affective variables (e.g., socialization, personality), educational abilities, learning potential, and familiar and school context; and (2) a qualitative assessment based on student behavior observation, interviews, level of curricular competence, and analysis of schoolwork (Barrera-Dabrio, 2008; Instrucciones de 12 de mayo de 2020).

Regarding exclusion criteria for all participants, these were: (1) having a clinical illness or disorder resulting in curricular delay of at least one academic year; (2) having a diagnosed mental disorder listed in DSM-5-TR (American Psychiatric Association [APA], 2022) such as neurodevelopmental disorders (e. g. Intellectual Disabilities, Communication

Disorders, Autism Spectrum Disorder, Attention-Deficit/Hyperactivity Disorder or Specific Learning Disorder), Depressive or Anxiety Disorders, Feeding or Eating Disorders, or Disruptive, Impulse-control, and Conduct disorders; and (3) exhibiting school-related problems that could affect the results, such as significative poor academic performance (that is, low performance in two or more main curricular areas -such as language, mathematics, natural and social sciences- maintained throughout the course), a curricular delay of at least one academic year, special educational needs, absenteeism, or situations of bullying. These conditions were identified based on information and school or medical reports provided by the family or the school counselor.

Instruments

Personality measurement

Situational Personality Questionnaire (*CPS: Cuestionario de Personalidad Situacional*; Fernández-Seara et al., 2016). This questionnaire consists of 233 true-false items, and it takes between 35 and 40 minutes to complete. The CPS assesses personality considering an individual's features and interacting behavior, styles, or tendencies facing specific situations. It provides scores on 15 personality scales—emotional stability, anxiety, self-concept, efficacy, self-confidence, independence, dominance, cognitive control, sociability, social adjustment, aggressiveness, tolerance, social intelligence, integrity, and leadership—3 response validity scales—sincerity, social desirability, and response control—used to detect purposeful distortion, and 5 second-order factors—adjustment, leadership, independency, consensus, and extraversion. Test reliability coefficients informed by Fernández-Seara et al. (2016) were not lower than $\alpha = .88$, except on the response control validity scale, and they are equal to or greater than $\alpha = .90$ in more than half of the scales. In addition, emotional stability and self-confidence are $\alpha = .94$. Authors report satisfactory results regarding construct, factorial, convergent, and predictive validity (Fernández-Seara et al., 2016).

Behavioral measures

14-item Resilience Scale (RS-14; Wagnild, 2009; Spanish adaptation by Sánchez-Teruel & Robles-Bello, 2015). It is a 7-point Likert-type questionnaire from 1 (strongly disagree) to 7 (strongly agree) that takes 10 minutes to complete. The scale assesses individual resilience level, considered as a positive personality feature that allows people to adapt to adverse situations. The assessment provides two factors: Factor I: Personal Competence (PC); and Factor II: Self and Life Acceptance (OLA). A total score is also provided, and Wagnild (2009) proposes levels of resilience as follows: very high resilience (between 98 and 82), high resilience (81-64), normal resilience (63-49), low resilience (48-31), and very low resilience (30-14). The Cronbach's Alpha coefficient obtained in the Spanish adaptation for the total score was $\alpha = .79$, and content, criterion, and internal structure validity analyses have revealed satisfactory results (Sánchez-Teruel & Robles-Bello, 2015).

Multidimensional Perfectionism Scale (MPS; Frost et al., 1990; Spanish adaptation by Carrasco et al., 2010). It assesses the basic constituents of perfectionism through a 35-item questionnaire with a 5-point Likert-type scale from 1 (never) to 5 (always). Fulfillment takes about 15-20 minutes, and higher scores indicate more perfectionism. The Spanish adaptation provides an overall score and four dimensions: (1) fear of mistakes (FM), which assesses excessive concern about mistakes and failure and doubt about the quality of one's own performance; (2) parental influences (PI), referring to the perception of high parental expectations and criticism of oneself; (3) achievement expectations (AE), which assesses success or failure that person expects; and (4) organization (O), referring to an emphasis on the importance of order and organization. Cronbach's coefficient obtained by Carrasco et al. (2010) was $\alpha = .93$ for the whole test, with indexes of $\alpha = .88$ for FM, $\alpha = .90$ for PI, $\alpha = .87$ for AE, and $\alpha = .89$ for O. In addition, convergent validity analysis revealed satisfactory results (Carrasco et al., 2010; Frost et al., 1990).

Generalized Tracking Questionnaire-Child version (GTQ-C; Espitia-Pereira et al., 2020). This questionnaire takes 5 minutes to complete, and it assesses generalized patterns of rule-following using 12 items with a 5-point Likert-type scale from 5 (always true) to 1 (never true). It provides an overall score, with higher scores indicating greater generalized adherence to the rules. Espitia-Pereira et al. (2020) reported an acceptable internal consistency, as GTQ-C showed a .76 alpha and omega coefficient.

Perseverative Thinking Questionnaire-Child version (PTQ-C; Bijttebier et al., 2015, Spanish version by Ruiz et al., 2020). This questionnaire consists of 15 items with a 5-point Likert-type scale from 4 (almost always) to 0 (never), and it takes 5 minutes to complete. Items are consistent with the original version and assess repetitive negative thinking about problems or negative experiences. It provides an overall score, and the higher the score, the more repetitive the thinking. Psychometric properties showed in the original (Bijttebier et al., 2015) and Spanish version (Ruiz et al., 2020) were good, with alpha values of .95 and $\alpha = .93$, respectively, and the one-factor structure displayed a good model fit. Moreover, the results related to convergent construct validity were satisfactory (Ruiz et al., 2020).

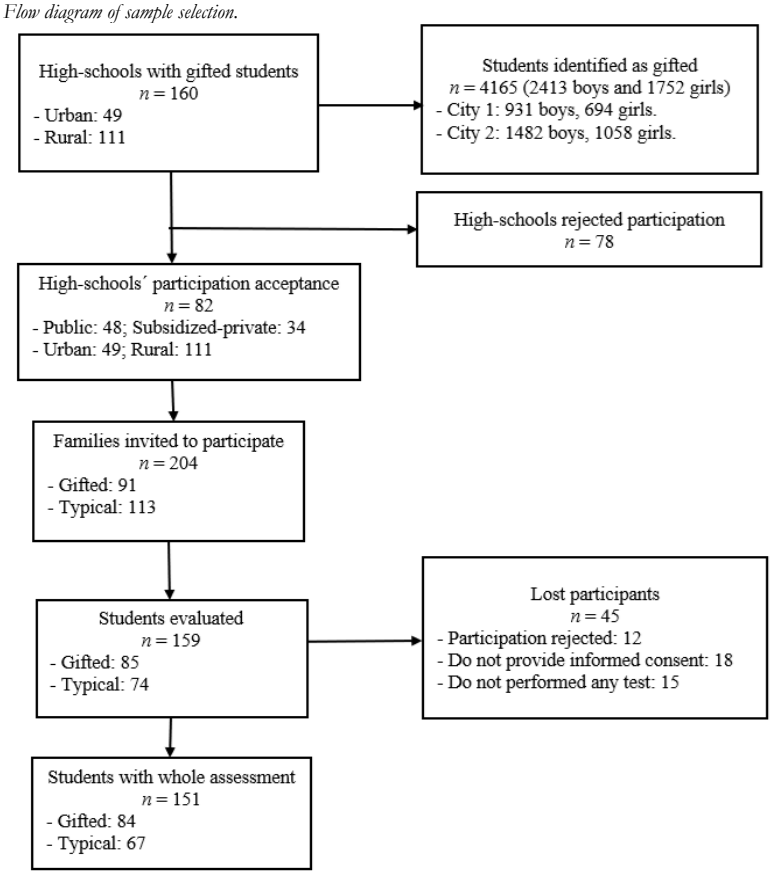
Acceptance and Action Questionnaire-II (AAQ-II; Ruiz et al., 2013). A one-factor measure of psychological inflexibility and experiential avoidance consisting of 7 items on a 7-point Likert-type scale from 1 (never true) to 7 (always true). It takes 5 minutes to answer. The questionnaire provides a sum score, and higher scores indicate greater avoidance and inflexibility. Ruiz et al. (2013) reportedgood internal consistency—with an overall Cronbach's alpha for

the scale of .88 (from .75 for sample 1 to .93 for sample 6)—and good construct validity.

Procedure

Human Research Ethics Committee permission with number 1112/CEIH/2020 was obtained at the University of Granada prior to initiating the study. Subsequently, meetings with the Delegation of Education were held to (1) request permission for the study to be done; (2) find out adolescents identified as gifted in secondary education in two Andalusian cities; and (3) select the different public, subsidized-private, and private high schools in rural and urban areas with the largest number of adolescents identified as gifted. As we present in Figure 1, a total of 4165 (2413 boys and 1752 girls) gifted adolescents were identified from 160 high schools (49 urban and 111 rural). These 160 high schools received information about the study and were invited to participate; 82 of them agreed (see Figure 1).

Figure 1
Flow diagram of sample selection.



In order to select a gifted group, we asked counselors for those adolescents identified with high abilities by the procedure specified in the guidelines issued on May 12, 2020 [Instrucciones de 12 de mayo de 2020] or earlier, of the Department of Education of the Regional Government of Andalusia described in the participants' section. Afterwards, to those who met the inclusion/exclusion criteria, information about the study and a request for voluntary participation of these students was made by counselors to parents on our behalf. As for the typical group, again, students who met the inclusion/exclusion criteria were informed and invited to participate by counselors. Finally, after agreeing to participate, parents' informed consent was obtained before including their children in the study. Moreover, students gave oral consent before doing any task.

As Figure 1 shows, 204 families (91 from the gifted group and 113 from the typical group) were invited to participate. Of these, 174 agreed (87 from the gifted group and 87 from the typical group), and informed consent was obtained. However, 85 students from the gifted group and 74 from the typical group were evaluated eventually, because 2 and 13, respectively, did not perform any test at all. No students were excluded from the data analyses because all of them met the inclusion/exclusion criteria, but not all students completed the whole assessment (only 84 students from the gifted group and 67 from the typical group did so), so there are different n's on each measure.

Evaluation was carried out over 2 weeks, in 2 virtual sessions of approximately one hour long via a link sent to the students' e-mail. In each session the researcher provided the online questionnaires; CPS were provided in one session, as MPS, RS-14, CPS, PTQ-C, and AAQ-II were provided in the other one. Participants completed the questionnaires independently on their computers during sessions organized by the researcher, who was present to address any questions or concerns that might arise. The test application was counterbalanced between and within sessions.

Participants completed the questionnaires independently on their computers during sessions organized by the researcher, who was present to address any questions or concerns that might arise.

Design and data analysis

An ex post facto design was used. First, we analyzed outliers using z-scores and verified that the groups generally fulfilled the assumptions of sample normality and homogeneity with the Kolmogorov-Smirnov and Levene statistical tests, respectively. After, in order to analyze separately and individually in different personality and behavioral factors if there are significant differences between sexes in gifted adolescents, we performed two-way independent analysis of variance (ANOVA) for each scale of *m*easures used (personality—15 personality scales and 5 second-order factors of CPS—; resilience—RS14-PC, RS14-OLA, and RS14-Total—; perfectionism—MPS-ME, MPS-IP, MPS-EL, MPS-O, and MPS-Global—; rule-following—GTQ-C—; repetitive negative thinking—PTQ-C—; and experiential avoidance—AAQ-II—), with two factors—sex and intelligence group. In addition, in case of significant interaction between sex and intelligence, we performed pairwise comparison (post-hoc tests), instead of *a t-test,* to control for type I error, with Sidak correction because this is less conservative and the probability of a type II error will be lower. Analyses were performed with the SPSS statistical package version 21.0.

Results

This study aims to determine whether divergences in personality and behavioral factors related to sex are present in gifted adolescents compared to those of typical development.

For the first specific objective (focused on differences in personality factors measured with CPS between gifted boys and girls and between gifted and typical girls), the ANOVA results for personality scales, presented in Table 1, show no significant differences for the intelligence factor (Table 1-Intelligence group column) between the gifted and typical groups in any personality scale or second-order factors.

Table 1
Means, Standard Deviations, and two-way independent (ANOVA) with two factors –sex and intelligence group- in personality scales.

Variable	Descriptive data per group								Between-Subjects Effects								
	Boys		Girls		Gifted		Typical		Intelligence group			Sex			Sex*Intelligence Interaction		
	N	*M(SD)*	*N*	*M(SD)*	*N*	*M(SD)*	*N*	*M(SD)*	*F*	η^2_p	s.p.	*F*	η^2_p	s.p.	*F*	η^2_p	s.p.
CPS-Emot. Stability	87	58.84 (17.62)	68	47.66 (18.79)	84	54.65 (19.31)	71	53.08 (18.54)	1.132	.01	.19	14.366**	.09	.97	1.377	.01	.22
CPS-Anxiety	87	47.68 (26.31)	68	61.93 (23.86)	84	54.05 (27.97)	71	53.79 (24.05)	.197	.00	.07	11.361**	.07	.92	.766	.01	.14
CPS-Self-concept	87	63.92 (20.47)	68	54.44 (16.60)	84	59.57 (18.53)	71	59.99 (20.50)	.129	.00	.07	9.103**	.06	.85	.260	.00	.08
CPS-Efficacy	87	69.97 (19.77)	68	68.07 (22.64)	84	69.01 (20.56)	71	69.28 (21.71)	.005	.00	.05	.337	.00	.09	.084	.00	.06
CPS-Self-confidence	87	67.45 (20.74)	68	54.06 (21.47)	84	61.67 (22.53)	71	61.46 (21.59)	.304	.00	.09	14.254**	.09	.96	2.257	.02	.32
CPS-Independence	87	51.90 (20.74)	68	60.68 (21.46)	84	55.27 (22.11)	71	56.31 (20.75)	.873	.01	.15	7.689**	.05	.79	.804	.01	.15
CPS-Dominance	87	48.45 (23.30)	68	59.63 (21.34)	84	54.46 (22.38)	71	52.04 (23.95)	.180	.00	.07	7.396**	.05	.77	4.030*	.03	.51
CPS-Cognit. Control	87	72.68 (17.97)	68	63.71 (21.26)	84	67.89 (20.22)	71	69.75 (19.65)	.003	.00	.05	7.534**	.05	.78	.001	.00	.05
CPS-Sociability	87	58.39 (25.99)	68	39.75 (26.07)	84	51.01 (26.96)	71	49.27 (28.40)	19.28	.01	.28	21.745**	.13	.99	.740	.01	.14
CPS-Social adjustment	87	61.17 (19.20)	68	55.18 (18.13)	84	59.29 (18.33)	71	57.66 (19.67)	1.171	.01	.19	5.010*	.03	.60	1.104	.01	.18
CPS-Aggressive	87	39.91 (24.11)	68	45.19 (23.19)	84	43.52 (24.78)	71	40.69 (22.63)	.736	.00	.14	.910	.01	.15	5.004*	.03	.60
CPS-Tolerance	87	66.43 (17.92)	68	56.91 (18.90)	84	61.32 (18.94)	71	63.35 (18.92)	.160	.00	.07	8.154**	.05	.81	3.583	.01	.47
CPS-Social intelligence	87	72.09 (18.10)	68	63.24 (19.96)	84	66.82 (19.17)	71	69.85 (19.65)	.164	.00	.07	7.560**	.05	.78	.076	.00	.06
CPS-Integrity	87	68.47 (15.27)	68	61.00 (13.36)	84	64.99 (14.59)	71	65.44 (15.34)	.193	.00	.07	10.195**	.06	.89	.051	.00	.06
CPS-Leadership1	87	57.95 (24.50)	68	66.09 (17.84)	84	62.14 (21.16)	71	60.79 (23.38)	.042	.00	.06	4.166*	.03	.53	2.309	.02	.33
CPS-Adjustment	87	65.74 (24.89)	68	51.00 (25.03)	84	59.67 (27.17)	71	58.80 (24.56)	.540	.00	.11	12.816**	.08	.94	.998	.01	.17
CPS-Leadership2	87	45.98 (25.12)	68	57.53 (22.36)	84	52.62 (24.24)	71	49.18 (24.96)	.523	.00	.11	6.492*	.04	.72	5.505*	.04	.65
CPS-Independency	87	43.82 (22.83)	68	55.71 (22.42)	84	49.06 (24.19)	71	49.00 (22.46)	.361	.00	.09	10.628**	.07	.90	.006	.00	.05
CPS-Consensus	87	83.70 (19.86)	68	72.82 (23.57)	84	78.31 (22.21)	71	79.66 (22.25)	.033	.00	.05	9.246**	.06	.86	.004	.00	.05
CPS-Extraversion	87	75.31 (24.14)	68	60.10 (24.26)	84	68.52 (25.19)	71	68.77 (25.56)	.562	.00	.12	15.701**	.09	.98	.301	.00	.09

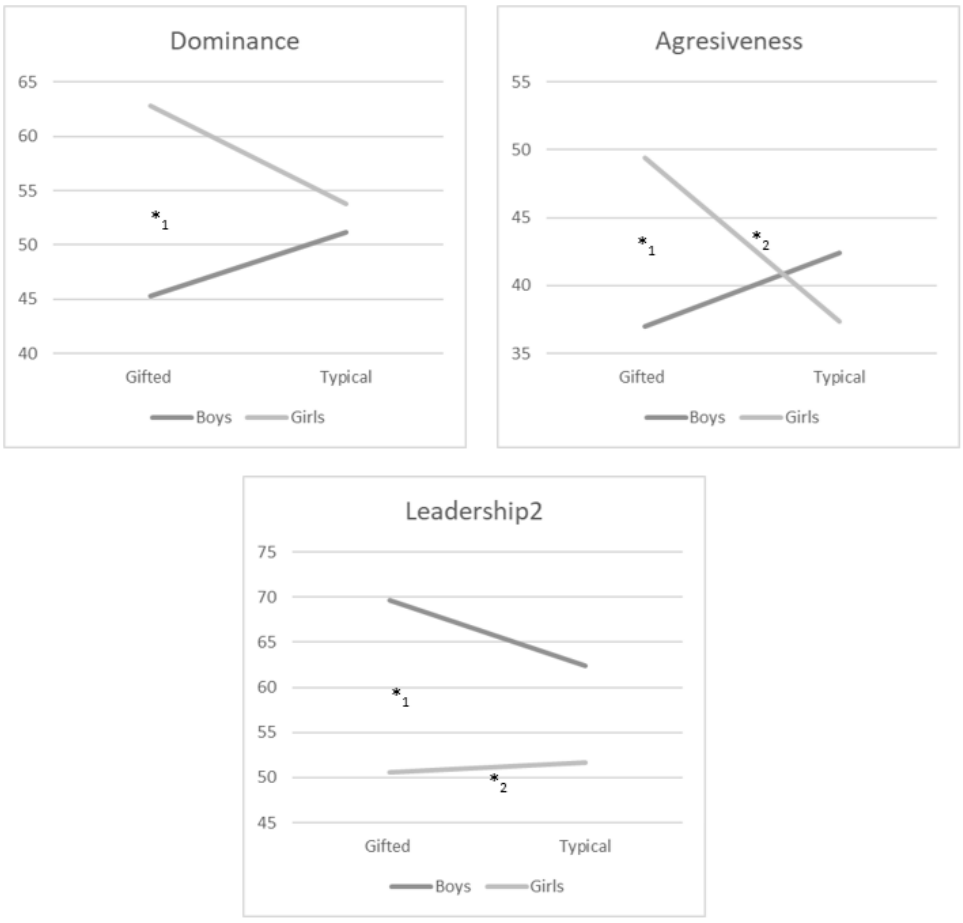
Note: CPS = Situational Personality Questionnaire [Cuestionario Situacional de Personalidad]. η^2_p = partial eta squared. s.p. = statistical power.
*p < .05. **p < .01.

For the sex factor (Table 1- Sex column), results show significant differences with small effect size and higher scores for boys in emotional stability (p = .0001), self-concept (p = .003), self-confidence (p = .0001), cognitive control (p = .007), sociability (p = .0001), social adjustment (p = .027), tolerance (p = .005), social intelligence (p = .007), and integrity (p = .002) on personality scales; and adjustment (p = .0001), consensus (p = .003), and extraversion (p = .0001) on second-order factors. Girls score higher in anxiety (p = .001), independence (p = .006), dominance (p = .007), and leadership (p = .043) on personality scales and leadership (p = .012) and independency (p = .001) on second-order factors. However, there are no significant differences in efficacy (p = .562) and aggressiveness (p = .342) in personality scales.

In sex-intelligence interaction (Table 1—Sex-Intelligence interaction column), results show significant interaction with small effect size in dominance (p = .046) and aggressiveness (p = .027) on personality scales and leadership (p = .020) on second-order factors (see Figure 2). Therefore, pairwise comparisons using Sidak correction on these variables were made. Results of one-way ANOVA presented in Table 2 for sex comparison in each intelligence group report significant differences, with small effect sizes between boys and girls from the gifted group in all measures (dominance p = .0001; aggressiveness p = .016; and leadership p = .0001). Girls score higher in dominance and aggressiveness, and boys in leadership as the second factor. No significant differences emerge between boys and girls in the typical group. On the other hand, results for intelligence group comparison in each sex show significant differences with small effect size in aggressiveness (p = .044) and leadership (p = .046) between gifted and typical girls. The gifted have higher scores in aggressiveness, and the typical in leadership as the second factor. No significant differences emerge between the gifted and typical boys' groups (see Figure 2).

Figure 2

Significative sex-intelligence interaction in personality scales dominance, aggressiveness and leadership.



*$_1$ Significant differences between gifted boys and girls

*$_2$ Significant differences between typical and gifted girls

Table 2
*Means, Standard Deviations, and Pairwise Comparisons in personality scales with significant Sex*Intelligence interaction.*

	Descriptive data per group								Univariate analysis									
	Gifted (*n*=85)				Typical (*n*=74)				Sex comparison in Intelligence group						Intelligence group comparison in Sex			
	Boys (*n*=40)		Girls (*n*=45)		Boys (*n*=49)		Girls (*n*=25)		Gifted Boys vs. Gifted Girls			Typical Boys vs. Typical Girls			Gifted Boys vs. Typical Boys			Gifted Girls vs. Typical Girls		
Variable	N	*M(SD)*	N	*M(SD)*	N	*M(SD)*	N	*M(SD)*	*F*	η^2_p	s.p.	*F*	η^2_p	s.p.	*F*	η^2_p	s.p.	*F*	η^2_p	s.p.
CPS-Dominance	40	45.28 (19.77)	44	62.82 (21.51)	47	51.15 (25.83)	24	53.79 (20.17)	12.954**	0.8	.95	0.223	.00	.08	1.498	.01	.23	2.542	.02	.35
CPS-Agressive	40	37.00 (22.59)	44	49.45 (25.43)	47	42.38 (25.31)	24	37.38 (16.12)	5.903*	.04	.68	0.724	.01	.14	1.137	.01	.19	4.115*	.03	.52
CPS-Leadership2	40	69.63 (25.16)	44	50.61 (25.96)	47	62.43 (24.43)	24	51.71 (23.74)	13.886**	.08	.96	0.018	.00	.05	1.575	.01	.24	4.049*	.03	.52
† CPS- Em. Stability	40	62.48 (17.56)	44	47.55 (18.21)	47	55.74 (17.25)	24	47.88 (20.22)	14.284**	.09	.96	3.009	.02	.41	2.994	.02	.41	0.005	.00	.05
† CPS-Anxiety	40	44.68 (27.85)	44	62.57 (25.50)	47	50.23 (24.93)	24	60.75 (20.99)	10.451**	.07	.90	2.737	.02	.38	1.040	.01	.17	0.080	.00	.06
† CPS-Self-concept	40	65.40 (17.84)	44	54.27 (17.72)	47	62.66 (22.58)	24	54.75 (14.68)	7.211**	.05	.76	2.763	.02	.38	0.451	.00	.10	0.10	.00	.05
† CPS-Self-confidence	40	71.33 (20.64)	44	52.89 (20.67)	47	64.15 (20.47)	24	56.21 (23.17)	16.149**	.10	.98	2.271	.02	.32	2.523	.02	.35	0.388	.00	.10
† CPS-Independ.	40	51.83 (21.39)	44	58.41 (22.53)	47	51.96 (20.40)	24	64.83 (19.09)	2.041	.01	.30	5.919*	.04	.68	0.001	.00	.05	1.440	.01	.22
† CPS-Cog. Control	40	72.53 (18.31)	44	63.68 (21.15)	47	72.81 (17.86)	24	63.75 (21.92)	4.263*	.03	.54	3.392	.02	.45	0.005	.00	.05	0.001	.00	.05
† CPS-Sociabilty	40	59.63 (26.07)	44	43.18 (25.58)	47	57.34 (26.15)	24	33.46 (26.31)	8.384**	.05	.82	13.410**	.08	.95	0.167	.00	.07	2.173	.01	.31
† CPS-Soc. adjustment	40	61.23 (18.26)	44	57.52 (18.43)	47	61.13 (20.16)	24	50.88 (17.10)	0.818	.01	.15	4.755*	.03	.58	0.001	.00	.05	1.954	.01	.28
† CPS-Tolerance	40	68.88 (15.68)	44	54.45 (19.19)	47	64.34 (19.55)	24	61.42 (17.86)	13.070**	.08	.95	0.407	.00	.10	1.333	.01	.21	2.258	.02	.32
† CPS-Soc. intelligence	40	70.93 (17.66)	44	63.09 (19.91)	47	73.09 (18.61)	24	63.50 (20.46)	3.546	.02	.47	4.025*	.03	.51	0.278	.00	.08	0.007	.00	.05
† CPS-Integrity	40	68.75 (15.32)	44	61.57 (13.15)	47	68.23 (15.39)	24	59.96 (13.97)	5.103*	.03	.61	5.138*	.03	.62	0.027	.00	.05	0.190	.00	.07
† CPS-Leadership1	40	55.38 (22.17)	44	68.30 (18.36)	47	60.15 (26.37)	24	62.04 (16.45)	7.349**	.05	.77	0.120	.00	.06	1.035	.01	.17	1.276	.01	.20
† CPS-Adjustment	40	69.63 (25.16)	44	50.61 (25.96)	47	62.43 (24.43)	24	51.71 (23.74)	12.153**	.07	.93	2.929	.02	.40	1.798	.01	.27	0.030	.00	.05
† CPS-Independen	40	42.75 (23.33)	44	54.80 (23.77)	47	44.72 (22.61)	24	57.38 (20.08)	5.863*	.04	.67	4.904*	.03	.60	0.162	.00	.07	0.199	.00	.07
† CPS-Consensus	40	84.18 (19.92)	44	72.98 (23.05)	47	83.30 (20.01)	24	72.54 (25.01)	5.578*	.04	.65	3.902*	.03	.50	0.035	.00	.05	0.006	.00	.05
† CPS-Extraversion	40	75.75 (23.90)	44	61.95 (24.77)	47	74.94 (24.60)	24	56.71 (23.42)	6.757**	.04	.73	8.944**	.06	.84	0.024	.00	.05	0.724	.01	.14

Note: CPS = Situational Personality Questionnaire [Cuestionario Situacional de Personalidad]. η^2_p = partial eta squared. s.p. = statistical power
† Although sex*intelligence interaction does not show significant differences, differences appear in pairwise comparisons.
*p < .05. **p < .01

In addition to this, although sex-intelligence interaction does not show significant differences on some scales and second-order factors, these differences appear in pairwise comparisons. Thus, for sex comparison in each intelligence group, results report significant differences with small effect size between boys and girls from the gifted group, with higher scores for boys in emotional stability (p = .0001), self-concept (p = .008), self-confidence (p = .0001), cognitive control (p = .041), sociability (p = .004), tolerance (p = .0001), and integrity (p = .025) on personality scales; and adjustment (p = .001), consensus (p = .019), and extraversion (p = .010) on second-order factors. And with higher scores for girls in anxiety (p = .002) and leadership (p = .007) on personality scales and independency (p = .017) on second-order factors. Girls score higher in anxiety (p = .002) and leadership (p = .007) on personality scales and independency (p = .017) on second-order factors. And between boys and girls from the typical group, boys score higher in sociability (p = .0001), social adjustment (p = .031), social intelligence (p = .047), and integrity (p = .025) on personality scales and consensus (p = .050) and extraversion (p = .003) on second-order factors. Girls have higher scores in independence (p = .016) on personality scales and independency (p = .028) on second-order factors. However, no significant differences are

revealed between gifted and typical boys or girls when comparing intelligence groups in each sex.

As for the second specific objective, it aimed to determine whether there are differences in levels of resilience, perfectionism, rule-following, rumination, and experiential avoidance between gifted adolescents—males and females—and between females with and without high abilities. Regarding resilience, assessed by the RS-14 test, the ANOVA results for Factor I—Personal Competence (RS-14-PC), Factor II—Oneself and Life Acceptance (RS-14-OLA), and the total score (RS-14-Total) deliver no significant differences between groups for intelligence and sex factor or sex-intelligence interaction (see Table 3).

Table 3

Means, Standard Deviations, and two-way independent (ANOVA) with two factors –sex and intelligence group- in behavioral measures.

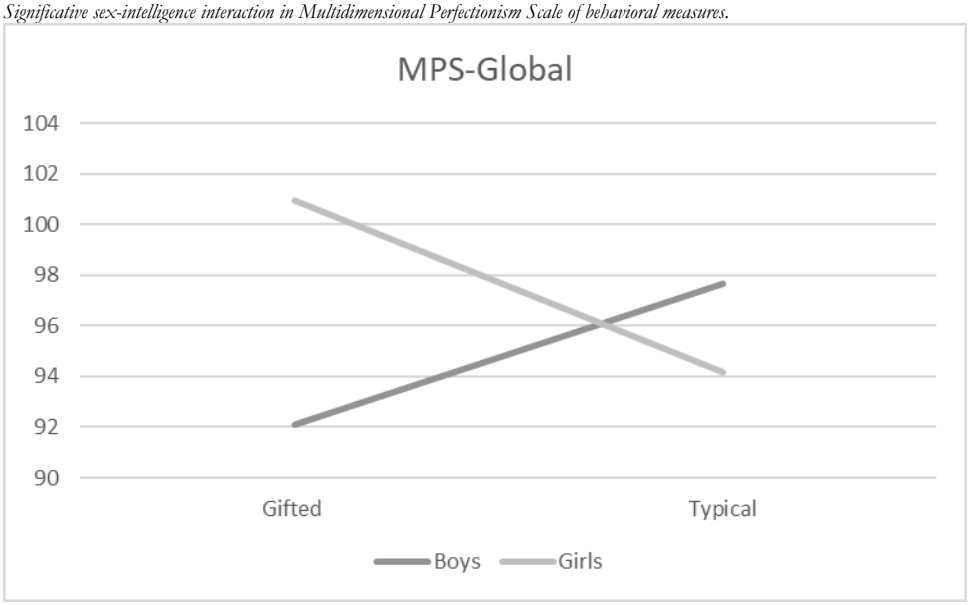
	Descriptive data per group								Between-Subjects Effects								
	Boys		Girls		Gifted		Typical		Intelligence group			Sex			Sex*Intelligence Interaction		
Variable	N	*M(SD)*	N	*M(SD)*	N	*M(SD)*	N	*M(SD)*	*F*	η^2_p	s.p.	*F*	η^2_p	s.p.	*F*	η^2_p	s.p.
RS-14-PC	88	60.45 (9.72)	70	60.84 (8.82)	85	61.32 (9.32)	73	59.82 (8.80)	.805	.01	.15	0.021	.00	.05	.371	.00	.09
RS-14-OLA	88	15.03 (3.39)	70	14.19 (3.47)	85	14.62 (3.41)	73	14.70 (3.50)	.007	.00	.05	2.162	.01	.31	.205	.00	.07
RS-14-Total	88	75.49 (12.25)	70	75.03 (10.55)	85	75.94 (11.68)	73	74.52 (11.29)	.539	.00	.11	.105	.00	.06	.336	.00	.09
MPS- FM	88	24.41 (7.66)	70	27.69 (9.84)	85	26.19 (9.41)	73	25.48 (8.12)	.106	.00	.06	4.300*	.03	.54	2.852	.02	.39
MPS- PI	88	20.89 (7.55)	70	20.37 (7.40)	85	20.48 (7.47)	73	20.86 (7.49)	.000	.00	.05	.310	.00	.09	2.108	.01	.30
MPS- AE	88	27.65 (6.41)	70	28.34 (7.96)	85	28.41 (7.40)	73	27.42 (6.80)	.942	.01	.16	.075	.00	.06	1.953	.01	.28
MPS-O	88	22.19 (5.23)	70	22.13 (5.65)	85	21.69 (5.33)	73	22.71 (5.47)	1.221	.01	.02	.009	.00	.05	.178	.00	.07
MPS-Global	88	95.14 (17.47)	70	98.53 (20.38)	85	96.78 (20.44)	73	96.48 (16.90)	.037	.00	.05	.759	.01	.14	4.080*	.03	.52
GTQ-C	88	46.66 (5.60)	70	47.23 (5.39)	85	47.15 (5.22)	73	46.63 (5.83)	.066	.00	.06	.522	.00	.11	2.095	.01	.30
PTQ-C	86	40.58 (12.39)	66	46.39 (13.78)	84	43.50 (13.19)	67	42.64 (13.49)	.035	.00	.05	7.263*	.05	.76	.098	.00	.06
AAQ-II	85	19.99 (9.43)	67	25.13 (10.07)	84	23.15 (10.27)	68	21.15 (9.66)	.560	.00	.11	8.575*	.06	.83	.255	.00	.08

Note: RS-14 = Resilience Scale 14 items; PC = Factor I: Personal competence; OLA = Factor II: Oneself and life acceptance. MPS = Multidimensional Perfectionism Scale; FM = fear of mistakes; PI = parental influences; AE = achievement expectations; O = organization. GTQ-C = Generalized Tracking Questionnaire-Children. PTQ-C = Perseverative Thinking Questionnaire-Children. AAQ-II = Acceptance and Action Questionnaire-II. η^2_p = partial eta squared. s.p. = statistical power.

*p < .05. **p < .01.

In case of perfectionism—measured with MPS—the ANOVA shows no meaningful divergences between groups for intelligence and sex factor or the interaction between them in MPS PI, AE, and O dimensions, with the exception of the FM dimension (p = .040) for sex factor, where relevant differences emerge—girls score higher. In MPS-Global, two-way independent analysis is only significant in sex-intelligence interaction (p = .027) with a small effect size (see Table 3 and Figure 3). Results of pairwise comparisons using Sidak correction in the MPS-Global report meaningful divergences (p = .030) with a small effect size only between boys and girls from the gifted group, where girls scored higher (see Table 4 and Figure 3). In addition, although sex-intelligence interaction does not deliver significant differences in MPS-FM, these differences do appear in pairwise comparisons (p = .005) with a small effect size between boys and girls from the gifted group—girls score higher (see Table 4).

Figure 3
Significative sex-intelligence interaction in Multidimensional Perfectionism Scale of behavioral measures.



*Significant differences between gifted boys and girls

Table 4
*Means, Standard Deviations, and Pairwise Comparisons in behavioral measures with significant Sex*Intelligence interaction.*

Variable	Descriptive data per group								Univariate analysis									
	Gifted (**n**=85)				Typical (*n*=74)				Sex comparison in Intelligence group						Intelligence group comparison in Sex			
	Boys (*n*=40)		Girls (*n*=45)		Boys (*n*=49)		Girls (*n*=25)		Gifted Boys vs. Gifted Girls			Typical Boys vs. Typical Girls			Gifted Boys vs. Typical Boys			Gifted Girls vs. Typical Girls		
	N	*M(SD)*	N	*M(SD)*	N	*M(SD)*	N	*M(SD)*	*F*	η^2_p	s.p.	*F*	η^2_p	s.p.	*F*	η^2_p	s.p.	*F*	η^2_p	*s.p.*
MPS-Global	40	92.08 (19.26)	45	100.96 (20.75)	48	97.69 (15.57)	25	94.16 (19.33)	4.782*	.03	.58	0.586	.00	.19	1.968	.01	.29	2.125	.01	.31
† MPS-FM	40	23.35 (7.57)	45	28.71 (10.21)	48	25.29 (7.71)	25	25.84 (9.03)	8.099**	.05	.81	0.066	.00	.06	1.095	.01	.18	1.763	.01	.26
† AAQ-II	40	20.20 (9.11)	44	25.84 (10.61)	45	19.80 (9.81)	23	23.78 (8.99)	7.002**	.05	.75	2.536	.02	.35	0.036	.00	.05	0.672	.01	.13

Note: MPS = Multidimensional Perfectionism Scale; FM = fear of mistakes. AAQ-II = Acceptance and Action Questionnaire-II. η^2_p = partial eta squared. s.p. = statistical power
† Although sex*intelligence interaction does not show significant differences, differences appear in pairwise comparisons.
*p < .05. **p < .01

Between-subjects effects reported in Table 3 regarding rule-following (assessed by GTQ-C) show no significant differences between groups for intelligence and sex factors or the interaction between them. Results for rumination and experiential avoidance (measured by PTQ-C and AAQ-II, respectively) show significant differences between groups only for the sex factor, with higher scores for girls in both measures (see Table 3). In the case of AAQ-II, even though sex-intelligence interaction does not show significant differences, these differences do appear in pairwise comparisons (p = .009), with a small effect size between boys and girls in the gifted group, with higher scores for girls (see Table 4).

Discussion

Considering the need and importance of including the assessment of personality styles and behavioral repertoires as a way to overcome difficulties in identifying minority groups—as in the case of females (Anderson, 2020; Dori et al., 2018)—and thus avoid underrepresentation, the general objective of this study was to determine whether significant differences in personality and behavioral repertoires emerge on a sex basis in gifted adolescents compared to those with typical development.

Therefore, the first objective was focused on establishing possible differences in personality styles between intellectually gifted men and women and between intellectually gifted and regular women. Firstly, it should be noted that results obtained for the population as a whole show that, even though no significant differences in personality between adolescents with and without high abilities are found, differences do arise between gifted males and females as expected (Betancourt et al., 2022; Eren et al., 2018; López-Rivas & Calero-García, 2018; Gómez-Pérez et al., 2022; Perham, 2012). Secondly, focusing on intelligence and gender interaction, results delivered significant differences when compar-

ing boys and girls from the gifted group on different personality scales. Specifically, girls score significantly higher in anxiety, dominance, aggressiveness, and leadership on personality scales—and independency as a second-order factor—while they score significantly lower than boys on emotional stability, self-concept, self-confidence, cognitive control, sociability, tolerance, and integrity on personality scales—and adjustment, consensus, and extraversion as second-order factors. Considering results, our hypothesis was partially confirmed since girls in the gifted group present more "negative" personality styles, such as being more nervous, unstable, irritable, and aggressive, and fewer "positive" personality styles, such as emotional stability, assertiveness, good self-image, or good social adjustment. Our hypotheses were based on previous research data, and our results were consistent with them (Anderson & Martin, 2018; Betancourt et al., 2022; Dai, 2002; García-Perales et al., 2019). Comparing girls with and without high abilities, results reveal gifted girls to be more aggressive than those of typical development, but the latter have better leadership skills. However, it has to be considered that differences only emerge on three measurement tools, so it could be generally stated that girls have similar personalities whether they have high abilities or not.

As for the second objective—aimed to compare gifted boys to gifted girls and gifted girls to regular girls—results again partially confirmed our hypothesis, since girls with high abilities score significantly higher than boys in fear of mistakes and perfectionism, as well as in experiential avoidance. In addition, girls also show higher scores in rumination regardless of giftedness. This is consistent with previous studies that stated gifted girls have less motivation and self-efficacy and are more inhibited, insecure, and conformist (Anderson & Martin, 2018; Dai, 2002; García-Perales et al., 2019; Pérez-Sánchez & Dominguez, 2019). However, they stand out for their flexibility, which appears to be a protective factor (Betancourt et al., 2022). Regarding resilience and rule-following, there are no differences between genders or between girls with and without high abilities.

This supports what some studies have already shown, which is that gender differences found in personality could significantly affect the specific behavioral performance of adolescents (Barbot, 2020). Society accepts and reinforces the individualism and independence of gifted boys, while girls are expected to be cooperative and to show empathy in interpersonal relationships, and this definitely shapes adolescents' behavior. Gifted girls tend to be more environmentally dependent; this means that women have a rule-governed behavior that is more focused on behaving in expectation of external reinforcement and not so much on the natural reinforcement of doing certain things and are more sensitive to emotional changes than boys, and their self-concept is easily affected by external validation, while boys tend to be decisive (Milfont & Sibley, 2016).

All of the above may lead us to think that girls with high abilities, who have the same potential as their male peers, do not develop certain features that identify them as intellectually gifted, and they even develop dysfunctional behaviors that make them invisible to screening protocols for high abilities at ages close to adolescence. These results indicate that early detection of high abilities and appropriate personality and behavioral assessment could enhance the design of intervention programs, fostering emotional skills, self-esteem, emotional stability, assertiveness, functional perfectionism, and experiential exposure, which may allow gifted girls to freely manifest their potential, thus increasing their presence in high-ability programs.

The practical implications of these findings must be emphasized: without adequate emotional support, gifted women will continue to be underrepresented. A significant number of girls may not be identified or nominated by their teachers for intelligence assessment, as their performance, attitudes, and/or emotional difficulties can obscure their high abilities. Considering updated high-ability models, it should be pointed out that reaching higher levels of intellectual performance not only depends on cognitive potential but also on personal interaction with the environment and emotional profile, so it is extremely important to pay attention to personality traits and behavioral patterns.

Nevertheless, this study has some limitations, so we should take results with caution. Firstly, the typical group has fewer participants, especially fewer typical girls. Therefore, considering the effect sizes, a larger sample size and a better leveling between groups would strengthen the results. Secondly, due to the significant poor academic performance exclusion criterion, it is possible that gifted cases may be missed, especially in the case of girls, because of their own characteristics. Thirdly, participants belong to two different but nearby cities—same area—which means that results cannot be extrapolated to areas with distinguishing characteristics. Finally, only one measure has been used for each variable of interest, and more solid data will result if extended. And they are all self-report measures, so it would be of great interest to combine them with objective or third-party reports.

Conclusions

Results provide interesting data about personality traits and behavioral patterns in high-ability girls compared to boys and girls with typical development. Therefore, the study:

(1) Confirms the existence of different personality patterns in gifted boys and girls, which requires differentiated attention and screening. These patterns include "negative" or maladaptive traits in girls.
(2) Reveals that gifted girls present a higher level of perfectionism and experiential avoidance in terms of behavioral patterns.
(3) Shows that girls—with and without high abilities—can be considered as similar, and interestingly, differences with boys only emerge in gifted groups.

Lastly, the age of participants is an important point to be considered. It is strongly evidenced in literature that the percentage of girls identified as gifted decreases with age, as well as that their learning experience shapes their development. It would be interesting to replicate the study in gifted children in elementary school with two major objectives: 1) to corroborate whether the same differences in personality styles and behavioral patterns emerge as in adolescence; 2) to promote training in emotional abilities, fear of mistakes, and self-esteem in order to enable gifted girls to develop intellectually like their male peers.

In addition, it may be worthwhile to broaden the identification process for gifted children to include those with poor academic performance in order to detect potentially relevant cases that might otherwise be overlooked.

Complementary information

Conflict of interest: The authors declare no conflict of interest.

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