Positive Youth Development and Life Satisfaction: School-related Variables and Psychological Distress Mediating Effect Across Gender and School Level

Desarrollo positivo juvenil y satisfacción con la vida: variables relacionadas con la escuela y efecto mediador del malestar psicológico en función del género y el nivel escolar

Celeste Simões,[b*], Cátia Branquinho[b,c], Catarina Noronha[b], Gina Tomé[d]
Tânia Gaspare, Nuno Neto Rodrigues[f], Margarida Gaspar de Matos[b,c]

[a] Departamento de Educação, Ciências Sociais e Humanidades, Faculdade de Motricidade Humana, Universidade de Lisboa, Lisboa, Portugal;
[b] Instituto de Saúde Ambiental (ISAMB), Faculdade de Medicina, Universidade de Lisboa, Lisboa, Portugal;
[c] Faculdade de Ciências Humanas, Universidade Católica Portuguesa, Lisboa, Portugal
[d] Univeridade Europeia, Lisboa, Portugal
[e] Universidade Lusófona, Lisboa, Portugal;
[f] Direção-Geral de Estatísticas da Educação e Ciência, Lisboa, Portugal.

Análisis y Modificación de Conducta

VOL. 51. Número 188 (2025)

ISSN 0211-7339
http://dx.doi.org/10.33776/EUHU/amc.v51i188.9240

Editorial Universidad de Huelva EUHU

Abstract:

In recent years, the focus of youth health research has shifted from identifying problems to emphasizing positive youth development (PYD). This approach explores the strengths and resources young people possess. The present study examines how PYD attributes relate to life satisfaction in adolescents, considering the mediating effects of school-related factors (school belonging, bullying, test anxiety, and relationship with teachers) and psychological distress and the moderating effect of gender and school level. Based on the literature, a path model was created and tested with a large group of adolescents. The results revealed that PYD attributes like confidence, connection, and competence are linked to school-related variables, which in turn are associated with psychological distress. Psychological distress, confidence, and connection are directly related to life satisfaction. While most associations showed no significant differences between gender and school level, there were some significant differences between these groups, namely the negative confidence-psychological distress association, which was higher for girls (lower and upper secondary), the positive confidence-life satisfaction and the negative connection-psychological distress associations that were higher for upper-secondary boys, and the negative confidence-bullying association, which was higher for lower secondary boys. These findings underscore the importance of promoting Positive Youth Development (PYD) in schools to enhance young people's mental health and well-being, fostering a supportive and inclusive environment that benefits the entire school community.

Keywords:

Positive youth development (PYD), life satisfaction, psychological distress, school-related variables, gender and school level differences

Resumen:

En los últimos años, el enfoque de investigación sobre la salud de los jóvenes ha pasado de identificar problemas a hacer hincapié en el desarrollo positivo juvenil (PYD, por sus siglas en inglés). Este enfoque explora las fortalezas y los recursos que poseen los jóvenes. El presente estudio examina cómo los atributos de PYD se relacionan con la satisfacción con la vida en los adolescentes, teniendo en cuenta los efectos mediadores de los factores relacionados con la escuela (pertenencia a la escuela, acoso escolar, ansiedad ante los exámenes y relación con los profesores) y el malestar psicológico, así como el efecto moderador del género y el nivel escolar. Basándose en la bibliografía, se creó un modelo de trayectoria que se probó con un amplio grupo de adolescentes. Los resultados revelaron que los atributos del PYD, como la confianza, la conexión y la competencia, están vinculados a variables relacionadas con la escuela, que a su vez están asociadas con el malestar psicológico. El malestar psicológico, la confianza y la conexión están directamente relacionados con la satisfacción con la vida. Si bien la mayoría de las asociaciones no mostraron diferencias significativas entre el género y el nivel escolar, hubo algunas diferencias significativas entre estos grupos, a saber, la asociación negativa entre la confianza y el malestar psicológico, que fue mayor en las niñas (secundaria inferior y superior), las asociaciones positivas entre la confianza y la satisfacción con la vida y las asociaciones negativas entre la conexión y el malestar psicológico, que fueron mayores en los niños de secundaria superior, y la asociación negativa entre la confianza y el acoso escolar, que fue mayor en los niños de secundaria inferior. Estos hallazgos subrayan la importancia de promover el desarrollo positivo juvenil (PYD) en las escuelas para mejorar la salud mental y el bienestar de los jóvenes, fomentando un entorno inclusivo y de apoyo que beneficie a toda la comunidad escolar.

Palabras claves:

Desarrollo positivo juvenil, satisfacción con la vida, malestar psicológico, variables relacionadas con la escuela, diferencias de género y nivel escolar (edad).

Fecha de recepción: 30 de septiembre de 2025
Fecha de aceptación: 6 de octubre de 2025

Correspondencia: Celeste Simões. Faculdade de Motricidade Humana. Estrada da Costa. 1499-002 Cruz Quebrada. Portugal. E-mail: mcrsimoes@edu.ulisboa.pt

http://dx.doi.org/10.33776/EUHU/amc.v51i188.9240

Practioner points:

- PYD attributes, namely confidence, connection, and competence, are important protective factors for youth life satisfaction and well-being
- Addressing these factors and relationships through whole-school interventions can significantly improve students' mental health.
- Considering gender and school level differences in the relationships between PYD attributes, school-related variables, psychological distress, and life satisfaction, it is important to tailor interventions bearing in mind these differences to enhance their effectiveness

Introduction

During the last few decades, research has witnessed a paradigm shift concerning youth health towards a positive youth development (PYD) perspective, focusing on resources and strengths instead of problems or difficulties (Damon, 2004; Shek et al., 2019). Researchers have taken a preventive perspective in studying the positive development of young people, focusing on examining protective factors such as the positive relationships of young people with family and peers and the role of school in promoting positive youth development and health (Catalano et al., 2002; Seligman, 2011).

Catalano et al. (2002) identified 15 PYD indicators, including belief in the future, resilience, self-efficacy, and various competences. In 2005, Lerner introduced the "Five Cs" of PYD: competence, confidence, connection, character, and caring. According to the author, these skills are critical for engaging young people as agents in their development and fostering their well-being. The "Five Cs" are significantly correlated, especially competence, connection, and confidence (Tomé et al., 2020; Holsen et al., 2017). According to Phelps et al. (2009), competence involves a favorable perception of one's abilities; confidence represents an individual's overall sense of self-esteem; and connection refers to constructive relationships with individuals and institutions.

Although several studies have been conducted in the PYD field illustrating the relationships between PYD and individual and contextual variables and their impact on youth health and well-being, there is still a need for studies with a joint view of these relations, particularly looking at the role of school-related variables, and to the combined gender and school level differences effect. The framework proposed in this paper examines how the PYD attributes (confidence, connection, competence) are linked to school-related variables (school belonging, teacher-student relationships, bullying, test anxiety), psychological distress, and life satisfaction. This study focuses on competence, confidence, and connection as key attributes of Positive Youth Development (PYD) because they have been found to be critical to youth development in various studies (Catalano et al., 2019; Holsen et al., 2017; Tomé et al., 2020;). Although the 5Cs model of PYD is well established and has been widely discussed in the literature, programs do not often use the entire model to guide setting goals or measuring outcomes. Instead, most PYD programs focus on specific aspects, such as promoting competence in various domains, fostering confidence, and facilitating connections (Shek et al., 2019). As school is one of the primary contexts of youth life, it becomes crucial to explore the relationships between PYD key attributes and school-related variables and their relation to youth well-being, as highlighted in the OECD (2021) report. This current study focuses on four school-related variables included

http://dx.doi.org/10.33776/EUHU/amc.v51i188.9240

in the OCDE 2021 report, *Beyond Academic Learning*: school belonging, which reflects how much students feel that they are a part of the school community and the school's surroundings; relationships with teachers that reflect the quality of interpersonal interactions that foster fairness, emotional support, and mutual respect; bullying, that represents a significant adverse factor, influencing both emotional health and social dynamics; and test anxiety that addresses the emotional and psychological challenges linked to academic pressures (OECD, 2021). The framework also incorporates psychological distress and life satisfaction as outcome variables that offer a holistic view of students' mental health and well-being. Psychological distress is one of the most frequently employed measures of mental health, and it is defined as a state of emotional suffering that is usually associated with anxiety and depressive and somatic symptoms (Drapeau et al., 2012). Life satisfaction is an overall assessment of people's lives (Gilman & Huebner, 2003). The conceptual framework includes all these individual and school-related constructs found in theoretical and empirical literature to reflect on various aspects of youth development and well-being.

Positive youth development and life satisfaction: the role of school-related variables and psychological distress

Positive youth development attributes are associated with better physical and mental health in young people (Tomé et al., 2021; Shek & Chai, 2020) and correlate positively with life satisfaction (Fernandes et al., 2021; Mohamad et al., 2014). In the study by Tomé et al. (2020), the "Five Cs" accounted for 27% of the variance in life satisfaction among young people, with confidence and connection being the strongest predictors. On the other side, psychological distress and life satisfaction are also related, with higher levels of psychological distress associated with lower life satisfaction (Moksnes et al., 2016; Proctor & Linley, 2014).

Young people's life contexts, namely the school context, are important determinants of their psychosocial development and life satisfaction (Wigfield et al., 2006). The school environment is essential in considering school satisfaction, and young people's school satisfaction is critical to overall life satisfaction (Huebner et al., 2004). In particular, the authors found that competence, confidence, and connection are predictors of school satisfaction. Still, in this field, studies report that the qualities of the PYD can predict better academic adjustment (Gomez-Baya et al., 2019), more academic satisfaction, and less academic stress over time (Shek & Chai, 2020).

Test anxiety is a particular kind of academic stress and a significant problem in adolescence, with more than one-third of students experiencing test anxiety (Raymo et al., 2019). Test anxiety is positively associated with generalized anxiety disorder (Cuijpers et al., 2021) and with trait anxiety and depression (Akinsola & Nwajei, 2013). Lawal and colleagues' (2017) research suggests that confidence in one's abilities, especially in academic performance, can help students handle test anxiety. Similarly, Raufelder and Ringeisen (2016) point out how crucial it is to nurture students' confidence and sense of competence, as these can serve as valuable shields against test anxiety.

Another source of stress in the school context is involvement in bullying behaviors. Several studies (Arseneault, 2018; Moore et al., 2017; Thomas et al., 2016) point to an association between bullying victimization and adverse psychological outcomes, including decreased emotional well-being, sleep disturbances, and heightened risk of self-harm and suicidal ideation. According to the Health Behaviour in School-aged Children (HBSC) study, around 11% of ado-

http://dx.doi.org/10.33776/EUHU/amc.v51i188.9240

lescents refer to being bullied at school, with approximately 6% admitting to bullying others at least 2–3 times monthly in the last two months (Cosma et al., 2024). Researchers have highlighted the protective role of positive youth development (PYD) against problematic behaviors like violence, stressing the importance of connection and social competence as protective factors for being bullied in early adolescence (D'Urso et al., 2021; Martins & Castro, 2010; Zych et al., 2018).

PYD attributes are also related to positive factors/experiences in school, like school belonging. Lacking a sense of belonging in school is a significant problem faced by one-third of students, according to OECD (2019). Students who do not feel accepted, respected, included, and supported are more likely to engage in problematic behavior, suffer from mental illness, and perform poorly academically (Allen et al., 2021). Hoffman et al. (2021) noted that youth with higher social and emotional competence tend to integrate more easily and find their sense of belonging within a specific context, particularly in formal school environments. Additionally, confidence, especially in academic skills, helps students navigate school challenges and reduce anxiety, and connection, through meaningful relationships with peers and teachers, provides emotional support, fostering a sense of inclusion and value within the school community (Allen et al., 2016; Tillery et al., 2013).

Another critical school-related variable is the relationship with teachers. In the study by Tomé et al. (2020), connection emerged as the variable with the strongest association with the relationship with teachers. However, in their regression model, only competence and character were significant predictors of the relationship with teachers. Research indicates that fostering positive teacher-student relationships can contribute to better peer relationships, decrease aggressive behaviors and more positive attitudes toward school, as well as lessen psychological distress among early adolescents (Keane et al., 2023; McGrath & Van Bergen, 2015; Roorda et al., 2011).

Existing literature also underlines the importance of fostering PYD to prevent adolescent mental problems (Taylor et al., 2017; Zhou et al., 2020), namely depression (Gomez-Baya et al., 2022) and anxiety (Matos et al., 2018). Kozina et al. (2020) found that higher levels of competence, confidence, and connection were negatively and significantly associated with anxiety. However, higher levels of caring were associated with higher levels of anxiety, which, according to the authors, can be related to empathic overarousal. On the other side, the study by Tomé et al. (2021) found that confidence emerged as the most influential factor in predicting mental health and well-being for both boys and girls.

The report on mental health and well-being in European schools by NESET (Network of Experts working on the Social dimension of Education and Training), an advisory network established by the European Commission's Directorate-General for Education and Culture, addresses the need for schools to actively engage in promoting mental health and well-being among young individuals (Cefai et al., 2021). This report states that whole-school interventions foster social, emotional, and educational outcomes, promote resilience and mental health, and reduce socio-economic inequalities. Since education aims to provide people with the competences they need to live meaningful lives, contribute to society, and adjust to a constantly changing world, it is crucial to implement positive youth development and mental health promotion programs in schools.

http://dx.doi.org/10.33776/EUHU/amc.v51i188.9240

Gender and School level differences

There are relevant gender and school level differences in the literature regarding life satisfaction, PYD, and its associated variables. The HBSC study shows differences in life satisfaction between boys and girls, especially at 13 and 15 years old, with boys presenting higher levels of life satisfaction in more than half of the countries (HBSC, 2023). Regarding psychological distress, girls report more anxiety and depressive symptoms (Essau et al., 2010; Gomez-Baya et al., 2019; HBSC, 2023; McLean et al., 2011). On the other hand, girls seem to have better academic performance and higher motivation (Brouse et al., 2010; Buchmann & DiPrete, 2006). Regarding school satisfaction, girls also have higher satisfaction levels than boys (Danielsen et al., 2009; Huebner et al., 2004). Nevertheless, as Rudolf and Bethmann (2023) point out, girls' mental well-being is notably influenced by greater academic pressure and challenges associated with schooling. This aligns with other studies indicating that girls' health and well-being indicators are worse than boys' (Cosma et al., 2023; Viner et al., 2012). About PYD factors, it is also possible to find gender differences. In some studies that examined gender differences in PYD dimensions, boys reported higher scores in confidence and competence, while girls presented higher levels of connection, caring, and character (Conway et al., 2015; Gomez-Baya et al., 2021, 2022). PYD attributes are also differently associated with other variables in boys and girls (Tomé et al., 2021): competence is associated with more anxiety symptoms for boys, while for girls, competence is associated with less instability and higher levels of well-being; connection is associated with less somatic anxiety, fewer physical and psychological symptoms, and higher levels well-being in girls, whereas in boys is only associated with higher levels of well-being. Other studies also indicate that PYD is more strongly linked to school satisfaction (Årdal et al., 2018) as well as to lower levels of depression (Milot Travers & Mahalik, 2021) in females.

Concerning school level differences, the HBSC study shows that life satisfaction decreases during adolescence, especially in girls (HBSC, 2023), and, as Orben et al. (2022) point out, this could be due to the cognitive and social significant changes that occur in this life stage. Conversely, externalizing and internalizing problems grow throughout adolescence (HBSC, 2023). This study shows that loneliness perception and health complaints increase from 11 to 15 years old, particularly among girls, and health perception (as excellent) diminishes (Cosma et al., 2023). Regarding violence, age-related trends in bullying victimization in the HBSC (2023) study varied between boys and girls: among boys, decreases in bullying victimization were observed in older age groups across more than half of the countries, with the highest levels typically reported at age 11; among girls, the patterns were less apparent, and typically, the lowest prevalence was reported among 15-year-olds (Cosma et al., 2024). Some studies have also shown different results regarding PYD attributes and age. For instance, Conway et al. (2015) found that older adolescents reported less PYD than younger ones, while in the Gomez-Baya et al. (2021) study, no age effects were found. In a qualitative study, Hershberg et al. (2014) verified that connection is frequently mentioned across grades (6th, 9th, and 12th) when reflecting on the most significant facets of their lives. Competence (academic and athletic) was also frequently mentioned in youth answers, but academic competence was an aspect more salient in high school adolescents. Observing the association between PYD and health behaviors, the analysis by Arbeit et al. (2014) shows that confidence and competence were associated with different profiles, namely low-risk profiles and problem behaviors profiles (substance use and aggression).

http://dx.doi.org/10.33776/EUHU/amc.v51i188.9240

The Current Study

This study analyzes the relationship between PYD attributes and life satisfaction and the mediating role of school-related variables and psychological distress. Based on the literature, a path model was developed where PYD variables (confidence, connection, and competence) are associated with life satisfaction through school-related variables (school belonging, bullying, relationship with teachers, and test anxiety) and psychological distress.

Specifically, the model encompasses the following relationships:

(1) confidence, connection, and competence are positively related to each other;

(2) confidence, connection, and competence have a positive association with school belonging and relationship with teachers and a negative association with bullying and test anxiety;

(3) school belonging and relationships with teachers have a negative association with psychological distress;

(4) bullying and test anxiety have a positive association with psychological distress;

(5) psychological distress has a negative association with life satisfaction.

The study also wanted to explore how these constructs vary by gender and school level. Mean differences across the four groups organized by gender and school level (boys in lower secondary, girls in lower secondary, boys in upper secondary, and girls in upper secondary) for all variables under study, including PYD attributes, school-related variables, psychological distress, and life satisfaction were analyzed. In this study, the use of school level (lower secondary vs. upper secondary) instead of age aims to account for the broader educational and social contexts adolescents experience at these stages, often more relevant to their developmental and psychosocial outcomes than specific ages. This approach also enhances practical applications of the findings, as interventions and policies are typically implemented at the school level rather than tailored to individual ages.

Additionally, the study aimed to examine the combined moderating effects of gender and school level on the proposed relationships among these variables through a multigroup path analysis.

Method

This research derives from the Psychological Health and School Well-Being study, developed within a collaboration between the Directorate-General for Education and Science Statistics, the Directorate-General for Education, the National Program for Promoting School Success, the Aventura Social Team/ISAMB/University of Lisbon, the Order of Portuguese Psychologists, and the Calouste Gulbenkian Foundation. This study, which began in December 2021, was approved by the Ministry of Education. The research followed the principles of the Declaration of Helsinki.

Participants were students at public schools randomly selected by geographical region on the Portuguese mainland. After stratified and randomly selecting classes from each school group in February and March of 2022, liaison teachers and psychologists from participating schools

http://dx.doi.org/10.33776/EUHU/amc.v51i188.9240

administered the data collection instruments in their respective computer rooms. The online questionnaires were only completed by students with parental permission and acceptance of informed consent. The application protocol lasted between 20 and 30 minutes on average. The study's report describes the methods and outcomes in detail (Matos et al., 2022), available online.

Participants

Of the 3235 participants, 244 (7.5%) were excluded from the analysis because they had missing values in the variables under study (Cheema, 2014). The final sample included 2991 students from national public schools: 45.4% (n= 1359) were male, 51.0% (n= 1526) were female, 1.2% (n= 37) referred to others, and 2.3% (n= 69) preferred not to answer. The participants were between 11 and 18 years old (M= 14.52, SD=1.86), 47.6% (n= 1424) were in lower secondary (7 to 9 grade), and 52.4% (n= 1567) were in upper secondary (10 to 12 grade). Four groups were organized based on gender and school level: boys in lower secondary (n= 664; mean age=13.15, *SD*=1.18), girls in lower secondary (n= 711; mean age=13.14, *SD*=1.09), boys in upper secondary (n= 695; mean age=15.69, *SD*=1.55) and girls in upper secondary (n= 815; mean age=15.80, *SD*=1.42). Students who, in the gender question, referred to others or preferred not to answer were included in the global path analysis model but excluded from the multigroup analysis based on gender/school level (n=106).

Measures

As mentioned at the beginning of the methods section, this research derives from a large national study focused on the psychological health and well-being of school-aged children, adolescents, and their educators. The measures used in this study were drawn from the broader national study, and the relevant ones were selected to address the specific objectives of the current study.

Confidence

Sub-scale from the Positive Youth Development (PYD) instrument (Geldhof et al., 2014; Tomé et al., 2019), confidence was measured through its six items (e.g., "Overall, you feel happy to be the way you are"; "You are sure that you will have a good life when you are an adult" - 5-point Likert-type scale, where 0 = Strongly disagree and 4 = Strongly agree). The subscale showed good reliability (α=.90).

Competence

Sub-scale from the PYD instrument (Geldhof et al., 2014; Tomé et al., 2019), the competence subscale included its six items (e.g., "I am as smart as other young people my age"; "I feel that I am able to do any new outdoor physical activity very well" - 5-point Likert-type scale, where 0 = Strongly disagree and 4 = Strongly agree). The subscale showed good reliability (α=.82).

http://dx.doi.org/10.33776/EUHU/amc.v51i188.9240

Connection

Sub-scale from the PYD instrument (Geldhof et al., 2014; Tomé et al., 2019), connectedness was measured through the eight items (e.g., "You have many positive conversations with your parents"; "In your family, you feel useful and important" - 5-point Likert-type scale, 0 = Strongly disagree and 4 = Strongly agree, except for two items where 0 = Never true to 4 = Always true). The subscale showed good reliability (α=.85).

School Belonging

Measured using the six items of school belonging subscale [e.g., "I feel like an outsider (or left out) at school"; "I easily make friends at school" - 5-point Likert response scale, where 0 = Strongly disagree and 4 = Strongly agree], integrated into the Social and Emotional Skills Questionnaire (SSES) (OECD, 2021). The subscale showed good reliability (α=.80).

Bullying – Peer victimization

Measured using the four items of the bullying subscale (e.g., "Other students made fun of me"; "I've been bullied by other students" - 4-point response, where 0 = Never or hardly ever and 3 = Once a week or more), integrated into the Social and Emotional Skills Questionnaire (SSES) (OECD, 2021). The reliability of the subscale was acceptable (α=.79).

Relationship with Teachers

Measured using the four items of the relationship with teacher's subscale (e.g., "Most of my teachers treated me fairly"; "I got along with most of my teachers" - 4-point Likert-type response scale, where 0 = Never or almost never and 3 = Once a week or more), integrated into the Social and Emotional Skills Questionnaire (SSES) (OECD, 2021). The subscale showed good reliability (α=.80).

Test Anxiety

Measured using the three items of the test anxiety subscale (e.g., "I often worry thinking I will have difficulty on tests"; "Even if I am well prepared for a test, I get very nervous" - 5-point Likert type scale, where 0 = Strongly disagree and 4 = Strongly agree), integrated into the Social and Emotional Skills Questionnaire (SSES) (OECD, 2021). The subscale showed good reliability (α=.85).

Psychological Distress

The total DASS-21 (Lovibond & Lovibond, 1995; Pais-Ribeiro et al., 2004) score was used as a psychological distress measure (21 items, e.g., "I found it difficult to relax"; "I felt scared without any good reason"; "I felt I wasn't worth much as a person" – 4 point Likert type scale, where 0 = Did not apply to me at all and 3 = Applied to me very much or most of the time). As mentioned

http://dx.doi.org/10.33776/EUHU/amc.v51i188.9240

in other studies, DASS-21 can measure general psychological distress in adolescents (Evans et al., 2020; Zhou et al., 2020). This study used the sum of the stress, depression, and anxiety sub-scales as a single measure of psychological distress. The unidimensional DASS-21 scale showed good reliability (α=.95) and good fit indexes [CFI=.967; RMSEA=.044, CI (.041-.046)].

Life Satisfaction

Measured using the single item scale, Cantril Ladder: "The top of the ladder is 10 and represents the best possible life for you, the bottom is 0 and represents the worst possible life for you. Right now, where do you think you stand on the ladder?" (Cantril, 1965).

Data Analysis

Previously to the path analysis, the items of each subscale were summed after the reliability analysis (presented in the measures subsection) to obtain the variables under study (except for the life satisfaction variable measured with a single item). Analysis of variance (one-way analysis of variance - ANOVA) was chosen to analyze differences in the mean scores of the variables in the study across the four groups. To run these analyses, it was ensured that the main assumptions of the analysis of variance were met (dependent variable measured at continuous level; random sampling as mentioned in the previous section; independence of observations, i.e., large national sample, stratified by regions, of the Portuguese students). The homogeneity of variances was also tested. When Levene's test for homogeneity of variances was significant, the robust test (Brown-Forsythe test) was used in one-way ANOVA, and a more stringent significance level (i.e. .01) was set in the ANOVA analysis. The assumption of normal distribution of dependent variables for each combination of the groups of the independent variables wasn't verified for all the groups. Nevertheless, it is also known that ANOVA is quite "robust or tolerant" to violations of normality (Pallant, 2011). Post-hoc tests were conducted to analyze the differences between the four groups (for equal variances, the Scheffe, and for non- for non-equal variances.

The proposed path analysis model was analyzed using structural equation modeling software EQS Structural Equation Modelling Software, version 6.4 (Bentler, 1995). The Robust method was used to estimate the fit indexes since the multivariate kurtosis values indicated that the variables did not have a normal distribution (normalized estimate = 63.8). The Lagrange Multiplier (LM) Test was used to verify additional significant parameters to include in the model, and the Wald test was used to indicate non-significant parameters that should be removed from the model.

To test the moderation effect of gender and school level, four multigroup analyses were conducted: a) boys in lower secondary with girls in lower secondary; b) boys in upper secondary with girls in upper secondary; c) boys in lower secondary with boys in upper secondary; and d) girls in lower secondary with girls in upper secondary. Two multigroup models were tested for each comparison: in the first multigroup model, all the model paths were free to vary across groups; in the second multigroup model, equality constraints were imposed on each path to have equal regression paths and correlation coefficients across groups model. These multigroup models (unconstrained and constrained) are generally compared considering the difference between fit indexes, namely $\Delta\chi 2$, ΔCFI, ΔRMSEA, and ΔSRMR to verify whether the

http://dx.doi.org/10.33776/EUHU/amc.v51i188.9240

model could be considered invariant across groups (Chen, 2007; Fischer & Karl, 2019). Since $\chi 2$ is sensitive to sample dimension, only ΔCFI, ΔRMSEA, and ΔSRMR were considered in the invariance analysis. According to Chen (2007), in samples with more than 300 subjects, invariance is verified if ΔCFI<-.010, complemented by ΔRMSEA <.015, or ΔSRMR <.030.

Results

Table 1 shows the descriptive statistics for the total sample, as well as for gender and school level groups, and the ANOVA results for the variables under study. Significant differences were found between groups for all variables (see Table 1). Regarding life satisfaction, boys reported higher mean scores in life satisfaction (M = 7.68, SD = 1.67 for lower secondary; M = 7.04, SD = 1.87 for upper secondary) compared to girls (M = 6.93, SD = 1.84 for lower secondary; M = 6.57, SD = 1.80 for upper secondary). Post hoc analysis indicated significant differences between boys and girls at both school levels. Lower-secondary boys scored significantly higher than upper-secondary boys, and lower-secondary girls scored higher than upper-secondary girls. On school belonging, boys also had higher mean scores (M = 2.58, SD = 0.53 for lower secondary; M = 2.55, SD = 0.51 for upper secondary) compared to girls (M = 2.39, SD = 0.55 for lower secondary; M = 2.35, SD = 0.54 for upper secondary). Post hoc analysis showed significant differences between boys and girls at both school levels. No significant differences were observed between lower- and upper-secondary boys or between lower- and upper-secondary girls. Similarly, boys displayed higher levels of confidence (M = 16.39, SD = 4.95 for lower secondary; M = 15.75, SD = 4.95 for upper secondary) than girls (M = 13.06, SD = 5.88 for lower secondary; M = 12.96, SD = 5.45 for upper secondary). Post hoc analysis showed significant differences between boys and girls at both school levels, but no significant differences were observed between boys or girls across the two school levels. Regarding connection, boys reported higher mean scores in connection (M = 21.60, SD = 5.86 for lower secondary; M = 20.34, SD = 5.31 for upper secondary) than girls (M = 20.00, SD = 5.81 for lower secondary; M = 19.08, SD = 5.56 for upper secondary). Significant differences were found between all groups except lower-secondary and upper-secondary boys and lower-secondary and upper-secondary girls, whose mean scores in connection did not differ significantly. Competence scores were also statistically significantly higher for boys (M = 15.39, SD = 4.51 for lower secondary; M = 14.78, SD = 4.07 for upper secondary) compared to girls (M = 12.61, SD = 4.56 for lower secondary; M = 11.83, SD = 4.44 for upper secondary). Post hoc analysis indicated significant differences between boys and girls at both school levels. Additionally, lower-secondary girls scored higher than upper-secondary girls. In contrast, girls reported significantly higher mean scores in test anxiety (M = 2.89, SD = 0.94 for lower secondary; M = 3.04, SD = 0.91 for upper secondary) compared to boys (M = 2.26, SD = 0.99 for lower secondary; M = 2.27, SD = 1.03 for upper secondary). Post hoc tests revealed significant differences between girls and boys at both school levels. However, no significant differences were found between girls across the two school levels and between boys across the two school levels. Psychological distress was also more pronounced among girls (M = 17.92, SD = 13.56 for lower secondary; M = 19.38, SD = 13.34 for upper secondary) than boys (M = 10.26, SD = 10.47 for lower secondary; M = 11.48, SD = 10.75 for upper secondary). Post hoc analysis confirmed significant differences between girls and boys at both school levels, but no significant differences were observed within the same gender across school levels. Differences by school level emerged for bullying-peer victimization, with lower secondary students reporting higher (M = 0.39, SD = 0.61 for boys; M = 0.35, SD = 0.60 for girls) compared to upper-secondary students (M = 0.26,

http://dx.doi.org/10.33776/EUHU/amc.v51i188.9240

SD = 0.49 for boys; M = 0.16, SD = 0.34 for girls). Post hoc analysis indicated that lower-secondary boys scored significantly higher than upper-secondary boys and girls, and lower-secondary girls also scored higher than upper-secondary boys and girls. Upper-secondary boys scored higher than upper-secondary girls. No significant differences were observed between boys and girls in lower secondary. Finally, for relationships with teachers, upper-secondary students presented higher means (M = 2.34, SD = 0.77 for boys; M = 2.42, SD = 0.70 for girls) compared to lower-secondary students (M = 2.28, SD = 0.82 for boys; M = 2.34, SD = 0.80 for girls). However, the only significant difference found was between lower-secondary boys and upper-secondary girls.

Table 1

Mean, standard deviation, minimum, and maximum values of the variables under study for the total sample and gender and age groups, ANOVA and Post hoc Tests

		Mean	SD	Minimum	Maximum	F test / Effect size	Post hoc tests
Life Satisfaction	Total sample	7.03	1.84	.00	10.00	$F(3, 2847)= 47.47$, $p<.001$ $\eta2 = .05$	BLS > GLS, BUS, GUS GLS >GUS BUS > GUS
	Boys Lower Secondary	7.68	1.67	.00	10.00		
	Girls Lower Secondary	6.93	1.84	.00	10.00		
	Boys Upper Secondary	7.04	1.87	.00	10.00		
	Girls Upper Secondary	6.57	1.8	.00	10.00		
School Belonging	Total sample	2.46	0.54	.50	4.00	$F(3, 2854)= 36.60$, $p<.001$ $\eta2 = .03$	BLS > GLS, GUS BUS > GLS, GUS
	Boys Lower Secondary	2.58	0.53	.83	3.60		
	Girls Lower Secondary	2.39	0.55	.50	3.50		
	Boys Upper Secondary	2.55	0.51	.50	3.60		
	Girls Upper Secondary	2.35	0.54	.50	4.00		
Bullying	Total sample	0.28	0.52	.00	3.00	$F(3, 2384)= 27.71$, $p<.001$ $\eta2 = .03$	BLS > BUS, GUS GLS > BUS, GUS BUS > GUS
	Boys Lower Secondary	0.39	0.61	.00	3.00		
	Girls Lower Secondary	0.35	0.60	.00	3.00		
	Boys Upper Secondary	0.26	0.49	.00	3.00		
	Girls Upper Secondary	0.16	0.34	.00	2.75		
Relationship with Teachers	Total sample	2.35	0.77	.00	3.00	$F(3, 2761)= 4.23$, $p<.01$ $\eta2 = .00$	GUS > BLS
	Boys Lower Secondary	2.28	0.82	.00	3.00		
	Girls Lower Secondary	2.34	0.80	.00	3.00		
	Boys Upper Secondary	2.34	0.77	.00	3.00		
	Girls Upper Secondary	2.42	0.7	.00	3.00		
Test Anxiety	Total sample	2.64	1.03	.00	4.00		
	Boys Lower Secondary	2.26	0.99	.00	4.00	$F(3, 2795)= 129.57$, $p<.001$ $\eta2 = .12$	GLS > BLS, BUS GUS > BLS, BUS
	Girls Lower Secondary	2.89	0.94	.00	4.00		
	Boys Upper Secondary	2.27	1.03	.00	4.00		
	Girls Upper Secondary	3.04	0.91	.00	4.00		
Psychological Distress	Total sample	15.02	12.81	.00	63.00	$F(3, 2789)= 103.10$, $p<.001$ $\eta2 = .10$	GLS > BLS, BUS GUS > BLS, BUS
	Boys Lower Secondary	10.26	10.47	.00	55.00		
	Girls Lower Secondary	17.92	13.56	.00	61.00		
	Boys Upper Secondary	11.48	10.75	.00	63.00		
	Girls Upper Secondary	19.38	13.34	.00	62.00		
Confidence	Total sample	14.45	5.55	.00	24.00	$F(3, 2823)= 81.00$, $p<.001$ $\eta2 = .08$	BLS > GLS, GUS BUS > GLS, GUS
	Boys Lower Secondary	16.39	4.95	.00	24.00		
	Girls Lower Secondary	13.06	5.88	.00	24.00		
	Boys Upper Secondary	15.75	4.95	.00	24.00		
	Girls Upper Secondary	12.96	5.45	.00	24.00		

http://dx.doi.org/10.33776/EUHU/amc.v51i188.9240

		Mean	SD	Minimum	Maximum	F test / Effect size	Post hoc tests
Connection	Total sample	20.19	5.71	.00	32.00		
	Boys Lower Secondary	21.60	5.86	.00	32.00	$F(3, 2821)= 24.64$, $p<.001$ $\eta2 = .03$	BLS > GLS, BUS, GUS BUS > GUS
	Girls Lower Secondary	20.00	5.81	2.00	32.00		
	Boys Upper Secondary	20.34	5.31	.00	32.00		
	Girls Upper Secondary	19.08	5.56	.00	32.00		
Competence	Total sample	13.55	4.64	.00	24.00		
	Boys Lower Secondary	15.39	4.51	.00	24.00	$F(3, 2833)= 109.54$, $p<.001$ $\eta2 = .10$	BLS > GLS, GUS GLS > GUS BUS > GLS, GUS
	Girls Lower Secondary	12.61	4.56	.00	24.00		
	Boys Upper Secondary	14.78	4.07	.00	24.00		
	Girls Upper Secondary	11.83	4.44	.00	24.00		

Note: Boys Lower Secondary (BLS); Girls Lower Secondary (GLS); Boys Upper Secondary (BUS); Girls Upper Secondary (GUS)

Path Model

A path analysis model was run on the total sample to analyze the relationship between PYD attributes and life satisfaction and the mediating role of school-related variables and psychological distress. The fit indexes obtained for the proposed model showed a poor fit. However, the LM test pointed to substantial improvements by introducing some significant parameters not included in the initial model, namely direct relationships between connection and confidence with psychological distress and life satisfaction. Since these new paths were aligned with the literature, they were introduced in the next step. After the introduction of these parameters and the elimination of parameters included in the initial model that proved to be non-significant, through Wald test analysis (association between the relationship with teachers and psychological distress, the association between competence and bullying, and the association between competence and the relationship with teachers), the final model showed a good fit. Table 2 shows the fit indexes obtained in the different steps.

Table 2

Fit indexes global sample.

	χ^2 (g.l.)[1]	CFI[2]	NNFI[2]	RMSEA (90% I.C.)[2]	SRMR
Step 1	1017.53*** (16)	.866	.699	.145 (IC:.137-.152)	.112
Step 2	179.07*** (12)	.978	.933	.068 (IC:.060-.077)	.034
Step 3	186.93*** (15)	.977	.945	.062 (IC:.054-.070)	.034

1 - *Scaled Chi-Square (Satorra-Bentler)*; 2 – *Robust*; * $p<.05$; ** $p<01$; *** $p<.001$.

Step 1 – Initial model; Step 2 – Parameters introduction; Step 3 – Parameters elimination / Final model

Results showed that confidence, competence, and connection were positively and strongly related (confidence-connection, $r=.63$; confidence-competence, $r=.71$; connection-competence, $r=.60$; $p<.001$ for all). As predicted, regarding the relationships between positive youth development variables and school-related variables, the results showed that confidence had a positive association with school belonging (β=.10) and a negative association with bullying (β=-.07) and test anxiety (β=-.25); competence showed a positive association with school belonging (β=.36) and a negative association with test anxiety (β=-.16); connection showed a

http://dx.doi.org/10.33776/EUHU/amc.v51i188.9240

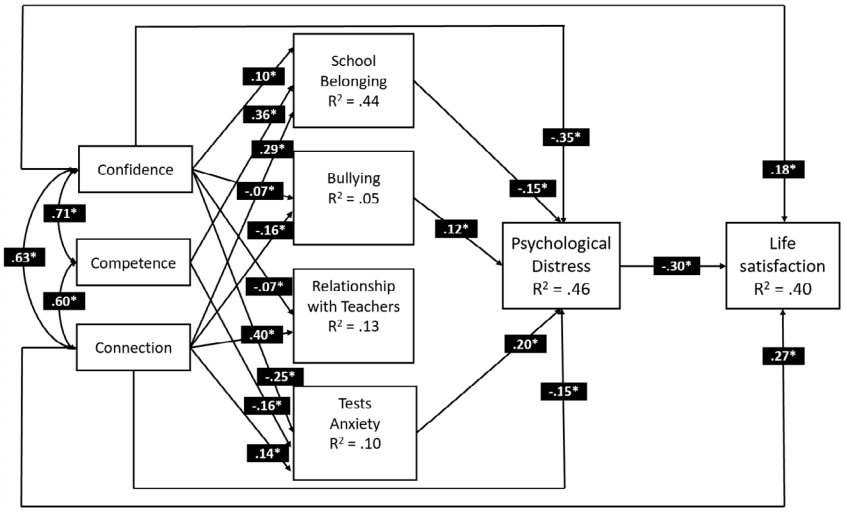
positive association with school belonging (β=.29), and with relationship with teachers (β=.40), and a negative association with bullying (β=-.16). However, some associations showed a different direction from the predicted one. This is the case of the negative association between confidence and relationship with teachers (β=-.07) and the positive association between connection and test anxiety (β=.14). Moreover, the associations between competence and bullying, and competence and relationship with teachers did not reach statistical significance, as previously mentioned.

Regarding the associations between school-related variables and psychological distress, most of these relationships showed the predicted direction (school belonging, β=-15; bullying, β=.12; test anxiety, β=.20). Confidence (β=-.35) and connection (β=-.15), not included in the initial model, also showed a direct negative association with psychological distress. As previously mentioned, the association between the relationship with teachers and psychological distress did not reach statistical significance.

Finally, psychological distress showed a negative association with life satisfaction (β=-.30). Confidence (β=.18) and connection (β=.27) showed a direct positive association with life satisfaction (these two last paths were introduced considering LM test results). The variables in the model explain 40% of the variance of life satisfaction, 46% of psychological distress, 44% of school belonging, 5% of bullying, 13% of relationships with teachers, and 10% of test anxiety.

Figure 1

Final model with standardized solution for the global sample.



Moderator Effect of Gender and School Level

To test whether gender and school level moderate the relationships among variables comprised in this model, multigroup analyses were conducted, as previously mentioned in the data analysis section, with four groups: boys in lower secondary (n= 664), girls in lower secondary (n= 711), boys in upper secondary (n= 695) and girls in upper secondary (n= 815). The fit indexes obtained in these analyses are presented in Table 3 and in Figures 2 to 5.

http://dx.doi.org/10.33776/EUHU/amc.v51i188.9240

Table 3

Multigroup analysis fit indexes.

Group		χ^2 (g.l.)[1]	CFI[2]	NNFI[2]	RMSEA (90% CI.)[2]	SRMR	$\Delta\chi^2$	ΔCFI	ΔRMSEA	ΔSRMR
Boys-Girls Lower Secondary	Unconstrained	106.37*** (30)	.977	.946	.061 (CI:.048-.073)	.039	44.07** (21)	-.006	-.008	.029
	Constrained	150.44*** (51)	.971	.958	.053 (CI:.043-.063)	.068				
Boys-Girls Upper Secondary	Unconstrained	122.96*** (30)	.969	.925	.064 (CI:.052-.076)	.039	30.77 (21)	-.004	-.012	.014
	Constrained	153.73*** (51)	.965	.951	.052 (CI:.042-.061)	.053				
Lower Secondary – Upper Secondary Boys	Unconstrained	114.93*** (30)	.969	.926	.065 (CI:.052-.077)	.040	26.87 (21)	-.002	-.014	.020
	Constrained	141.80*** (51)	.967	.953	.051 (CI:.041-.061)	.060				
Lower Secondary – Upper Secondary Girls	Unconstrained	113.77*** (30)	.977	.945	.061 (CI:.049-.072)	.038	45.48**(21)	-.007	-.008	.034
	Constrained	159.25*** (51)	.970	.958	.053 (CI:.044-.062)	.072				

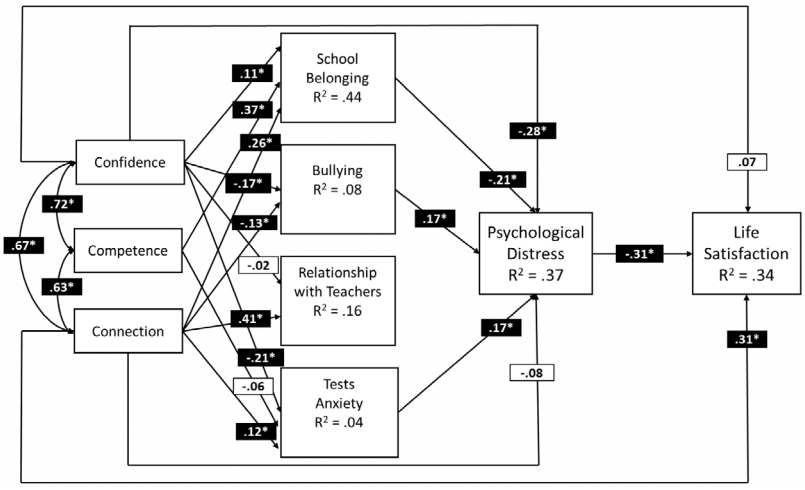
1 - *Scaled Chi-Square (Satorra-Bentler)*; 2 – *Robus** $p<.05$; ** $p<01$; *** $p<.001$.

http://dx.doi.org/10.33776/EUHU/amc.v51i188.9240

For the first multigroup comparison (boys in lower secondary with girls in lower secondary), as it is possible to verify, the fit indexes difference between the two models (unconstrained and constrained) is below the threshold for CFI and SRMR (ΔCFI=-.006; ΔSRMR=.029), indicating that the model is invariant for these groups. Although invariance was verified, one non-invariant path was found: confidence-psychological distress (β=-.28 for lower secondary boys; β=-.41 for lower secondary girls). For the second comparison (boys in upper secondary with girls in upper secondary), again, the fit indexes difference between the two models is below the threshold for CFI and SRMR (ΔCFI=-.004; ΔSRMR=.014), indicating invariance. As for the previous comparison, the path confidence-psychological distress was revealed again to be non-invariant (β=-.24 for upper-secondary boys; β=-.33 for upper-secondary girls). In the third comparison (boys in lower secondary with boys in upper secondary), the criterion for invariance was again met (ΔCFI=-.002; ΔSRMR=.020). Nevertheless, three paths were revealed as non-invariant: confidence-life satisfaction (β=.07 for lower secondary boys; β=.20 for upper-secondary boys), confidence-bullying (β=-.17 for lower secondary boys; β=-.04 for upper-secondary boys), and connection-psychological distress (β=-.08 for lower secondary boys; β=-.21 for upper-secondary boys). In the last comparison (girls in lower secondary with girls in upper secondary), only the CFI difference between the constrained and unconstrained models was below the threshold (ΔCFI =-.007). In sequence, the first constraint was released (connection-bullying), according to the LM test (for releasing constraints). The release of this parameter allowed reaching an invariant model for the school level [$\chi 2$ (50)=143.28, p<.001; CFI=.975; NNFI=.963; RMSEA=.049 (.040-.059); SRMR=.060; ΔCFI =-.002; ΔSRMR =.022; β=-.26 for lower-secondary girls; β=-.14 for upper-secondary girls). In this comparison, no other paths were non-invariant. The explained variance is also similar for the four groups: Life Satisfaction, between 34% (lower-secondary boys) and 42% (upper-secondary girls); Psychological Distress, between 35% (upper-secondary boys) and 54% (lower-secondary girls); School Belonging, between 39% (upper-secondary girls) and 44% (lower-secondary boys); Bullying, between 4% (upper-secondary boys and girls) and 10% (lower-secondary girls); Relationship with Teachers, between 11% (upper-secondary girls) and 16% (lower-secondary boys and girls); Test Anxiety, between 4% (lower-secondary boys) and 7% (lower-secondary girls).

Figure 2

Final model with standardized solution for Boys – Lower Secondary.



http://dx.doi.org/10.33776/EUHU/amc.v51i188.9240

Figure 3

Final model with standarized solution for Girls – Lower Secondary.

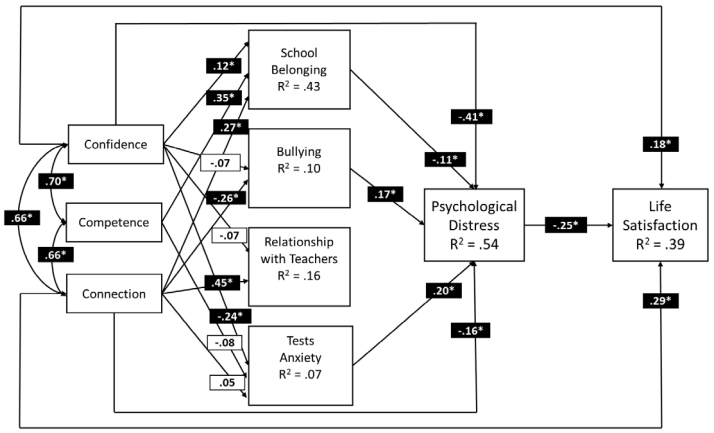


Figure 4

Final model with standardized solution for Boys – Upper Secondary.

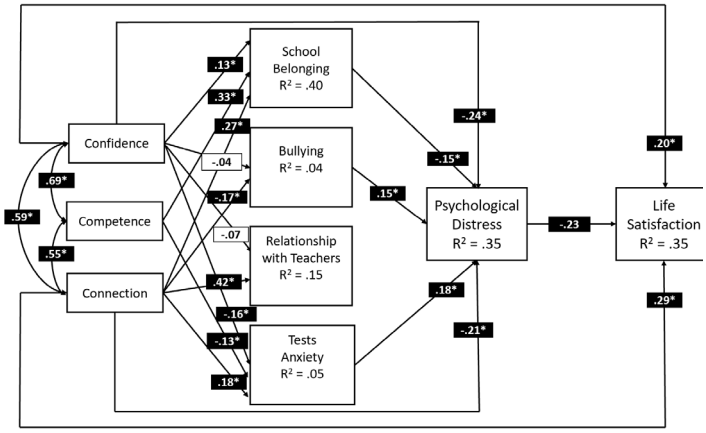
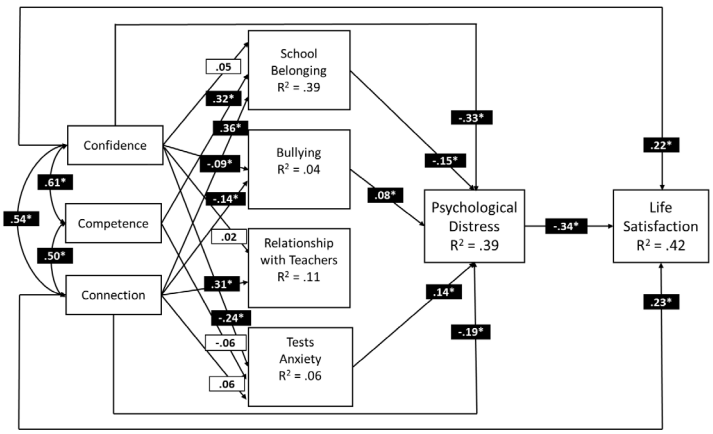


Figure 5

Final model with standardized solution for Girls – Upper Secondary.



http://dx.doi.org/10.33776/EUHU/amc.v51i188.9240

Discussion

The present study assessed the relationship between PYD attributes and life satisfaction and the mediating role of school-related variables and psychological distress across gender and school levels in adolescence. Descriptive statistics and ANOVA revealed notable differences in the different variables in the study across gender and school level groups. Boys, comparatively to girls, consistently demonstrated higher levels of life satisfaction, confidence, competence, connection, and school belonging across lower- and upper-secondary school levels. In contrast, girls, compared to boys, reported significantly higher levels of psychological distress and test anxiety. School level differences were also evident, with bullying-peer victimization decreasing at the upper-secondary level for both genders, while relationships with teachers showed slight improvements, particularly among upper-secondary girls. These findings align closely with the broader literature on gender and school level/age differences during adolescence. For instance, the HBSC (2023) study similarly highlights that boys report higher life satisfaction than girls during adolescence, particularly around ages 13 to 15. This trend corresponds with our findings, as boys consistently reported higher life satisfaction than girls across both school levels. The higher levels of psychological distress and test anxiety among girls observed in the current study are also supported by previous research, which identifies greater anxiety and depressive symptoms in females during adolescence (Essau et al., 2010; Gomez-Baya et al., 2019; McLean et al., 2011). It is possible that behind these signs of malaise can be academic challenges and pressures associated with schooling, which are more burdensome for girls, as Rudolf and Bethmann (2023) note, aligning with our findings of higher test anxiety and distress among female students. Regarding PYD, our results showing higher levels of confidence and competence in boys align with prior studies that highlight gender-based differences in these attributes (Conway et al., 2015; Gomez-Baya et al., 2021, 2022). School level differences observed in our study also echo existing research, such as the HBSC (2023) findings that life satisfaction declines with age, likely due to significant cognitive and social changes during adolescence (Orben et al., 2022). The increase in health complaints and loneliness perception with age, especially for girls (Cosma et al., 2023), may further contextualize our findings on reduced life satisfaction, especially among upper-secondary girls. Trends in bullying victimization, as observed in our study, similarly align with HBSC (2023) data, which report age-related decreases in bullying prevalence.

The path model revealed a positive and robust association between confidence, connection, and competence, as found in other studies (Tomé et al., 2020; Holsen et al., 2017). In turn, confidence, connection, and competence had a positive association with school belonging. Several studies indicate a positive association between PYD variables and a positive feeling in the school environment (Årdal et al., 2018; Shek & Chai, 2020). Additionally, further research suggests that PYD attributes are associated with improved academic adjustment, as evidenced by studies such as Gomez-Baya et al. (2019). Competence was the variable with the strongest association with school belonging, as indicated in other studies (Hoffman et al., 2021 & Vaz et al., 2015). Connection also showed a strong association with school belonging. As Allen et al. (2016) and Tillery et al. (2013) point out, meaningful relationships with adults in school increase motivation and fulfill students' need for connection, influencing students' sense of belonging.

Confidence and connection presented a negative association with bullying, as predicted. Adolescents with higher confidence levels and who feel connected to others are likely to experience lower rates of peer victimization due to their ability to navigate social interactions effectively and to seek supportive relationships when needed (D'Urso et al., 2021). Contrary

http://dx.doi.org/10.33776/EUHU/amc.v51i188.9240

to other studies (Martins & Castro, 2010; Zych et al., 2018), competence was not significantly associated with bullying. The measure of competence used in this study was related, besides social competence, to intellectual, academic, and sports competence, which could impact the results obtained.

Connection appeared as the variable most strongly linked to the relationship with teachers, which aligns with the results of Tomé et al. (2020). Feeling included in school and encouraged and stimulated by their leading actors, teachers, is essential to developing positive relationships with them. Positive relationships with teachers are crucial for creating a positive classroom atmosphere and improving students' academic and emotional outcomes. Nevertheless, contrary to our prediction, confidence negatively affected relationships with teachers. Despite the magnitude of this association not being very expressive, it warrants further exploration. In this case, it is possible that students' expressions of confidence could be perceived by teachers as either inadequate or excessive in specific situations, potentially affecting the teacher-student dynamic.

As found by other authors (Lawal et al., 2017; Raufelder & Ringeisen, 2016), confidence and competence showed a negative association with test anxiety. Confidence presented the most substantial association with test anxiety. Confidence in their abilities, namely academic self-confidence, is advantageous for effectively managing test anxiety (Lawal et al., 2017). Regarding connection, opposite to what was predicted, its association with test anxiety was positive. The pressure to meet parents, teachers, or other significant individuals' expectations could potentially heighten anxiety levels regarding tests. Again, although it is a weak association, it needs further exploration.

School-related variables were significantly associated with psychological distress. On one side, school belonging had a negative association with distress, as shown by Allen et al. (2016); on the other, bullying and test anxiety showed a positive association. Studies focusing on bullying (Arseneault, 2018; Thomas et al., 2016) and test anxiety (Akinsola & Nwajei, 2013; Cuijpers et al., 2021) clearly show its impact on psychological distress and other negative related consequences. Contrary to the prediction, relationships with teachers did not significantly associate with psychological distress, as found in other studies (Keane et al., 2023; McGrath & Van Bergen, 2015; Roorda et al., 2011). This relation may be mediated by other variables not contemplated in the model.

Psychological distress was negatively associated with life satisfaction, and confidence and connection were positively associated with life satisfaction. Studies by Matos et al. (2018) and Tomé et al. (2021) identified a positive association between PYD and well-being and life satisfaction in young people. Other studies have identified positive youth development as a critical factor in promoting mental health and preventing mental health issues and problematic behaviors in young people (Zhou et al., 2020).

Regarding gender and school level moderation effect, the analysis showed that the model tested with the four groups is invariant. Nevertheless, for gender comparisons, the negative association of confidence-psychological distress is higher for girls (lower and upper secondary) than boys. As previously found in other studies (e.g., Martins et al., 2002; Moksnes & Espnes, 2012), a strong negative association between self-esteem and psychological distress, particularly among females, has been identified. Being self-esteem and confidence attributes encompassing a sense of worth (Arbeit et al., 2014; Collins et al., 2022), the results of the present

http://dx.doi.org/10.33776/EUHU/amc.v51i188.9240

study align with previous ones and highlight the protective effect of confidence on psychological distress, especially in girls.

For school level comparisons, within boys, confidence-life satisfaction (positive association) and connection-psychological distress (negative association) were higher for upper-secondary boys, and confidence-bullying (negative association) was higher for lower-secondary boys. Regarding the confidence-life satisfaction association, it is possible that, although life satisfaction decreases with age (HBSC, 2023), confidence represents a critical attribute for older adolescents to maintain their levels of life satisfaction, as other authors (Moksnes et al., 2022; Soares et al., 2019) mention self-esteem as the strongest predictor of life satisfaction. Concerning connection-psychological distress association, on one side, as Hershberg et al. (2014) report, connection is one of the most significant aspects of adolescents' lives throughout this period; on the other, although psychological distress is more prevalent in girls, it also increases in boys across adolescence (HBSC, 2023). In this scenario, the literature also stresses the significant relationship between connection and positive relationships as a buffer for psychological distress (McMahon et al., 2020; Simões et al., 2014). It is possible that as boys grow up, this relationship could be significant for older boys as a protective factor for increasing psychological distress. Finally, regarding the confidence-bullying relationship, as peer victimization is more frequent in younger boys and correlates negatively with self-esteem (Tsaousis, 2016), confidence may represent a critical factor in protecting against bullying in younger adolescent boys.

Interestingly, regarding the level of explained variance, in half of the dependent variables, the more expressive differences (5% or more in the explained variance) were between lower-secondary boys and upper-secondary girls and between lower-secondary girls and upper-secondary boys, probably due to the combination of gender and school level influences. In this line, more research on the association between PYD attributes, psychological distress, and life satisfaction, considering gender and school level differences across adolescence, is needed since previous research often focuses on comparisons between different life stages (adolescents versus children or young adults) or focuses only on gender or age differences across adolescence.

The current research has certain limitations that warrant consideration when interpreting the findings: it is a self-report study employing a cross-sectional design, thereby precluding the establishment of causal inferences. One of the variables, life satisfaction, was assessed with one single item that can raise concerns about validity, sensitivity, and reliability. Nevertheless, some studies show that the performance of single-item life satisfaction measures is comparable to that of the multiple-item life satisfaction scales (Cheung & Lucas, 2014). Despite these limitations, the study encompassed a large number of participants; the participants' selection was randomized and stratified by NUTS III (territorial divisions used for statistical purposes in the European Union) and by educational level.

Conclusion

The present study analyzed the relationships between positive youth development (PYD) attributes, school-related variables, psychological distress, and life satisfaction. The results show that PYD is associated with life satisfaction through school-related variables and psychological distress. As predicted, confidence, competence, and connection were positively associated with positive school factors and negatively associated with negative school experiences. Confi-

http://dx.doi.org/10.33776/EUHU/amc.v51i188.9240

dence showed the strongest association with test anxiety, competence with school belonging, and connection strongly associated with relationships with teachers and school belonging. Nevertheless, it was also possible to verify direct associations between PYD and psychological distress, namely confidence, with a stronger association with psychological distress, and connection, with a stronger association with life satisfaction. Although the model was non-invariant for gender and school level, it was possible to find some significant differences, namely the association between confidence and psychological distress, which was higher for girls, the associations between confidence and life satisfaction and connection and psychological distress higher for upper-secondary boys, and finally the association between confidence-bullying, which was higher for lower-secondary boys. By testing a path model with a large sample, the study highlights the multifaceted nature of these associations and their variations across gender and school levels, stressing the importance of considering these factors when developing interventions to foster PYD.

Overall, schools should develop comprehensive programs across the educational trajectory to enhance the students' PYD attributes that are negatively related to psychological distress and positively related to good school experiences and life satisfaction. Targeted strategies are necessary due to the differential impact of PYD variables across gender and age groups. Future research should prioritize longitudinal designs to test the causal relationships between these variables and investigate the effectiveness of targeted interventions to provide evidence-based recommendations for optimizing adolescents' developmental trajectories in educational contexts.

References

Akinsola, E. F., & Nwajei, A. D. (2013). Test Anxiety, Depression and Academic Performance: Assessment and Management Using Relaxation and Cognitive Restructuring Techniques. *Psychology, 04*(06), 18–24. https://doi.org/10.4236/psych.2013.46a1003

Allen, K., Kern, M. L., Vella-Brodrick, D., Hattie, J., & Waters, L. (2016). What Schools Need to Know About Fostering School Belonging: a Meta-analysis. *Educational Psychology Review, 30*(1), 1–34. doi:10.1007/s10648-016-9389-8

Allen, K. A., Slaten, C. D., Arslan, G., Roffey, S., Craig, H., Vella-Brodrick, D. A. (2021). School Belonging: The Importance of Student and Teacher Relationships. In M. L. Kern, M. L. Wehmeyer (eds), *The Palgrave Handbook of Positive Education* (pp. 525-550). Palgrave Macmillan, Cham. https://doi.org/10.1007/978-3-030-64537-3_21

Arbeit, M. R., Johnson, S. K., Champine, R. B., Greenman, K. N., Lerner, J. V. & Lerner, R. M. (2014). Profiles of Problematic Behaviors Across Adolescence: Covariations with Indicators of Positive Youth Development. *Journal of Youth and Adolescence, 43*, 971–990. https://doi.org/10.1007/s10964-014-0092-0

Årdal, E., Holsen, I., Diseth, Å., & Larsen, T. (2018). The Five Cs of Positive Youth Development in a school context: gender and mediator effects. *School Psychology International, 39*(1), 3-21. https://doi.org/10.1177/0143034317734416

Arseneault, L. (2018). Annual Research Review: The persistent and pervasive impact of being bullied in childhood and adolescence: implications for policy and practice. *Journal of Child Psychology and Psychiatry, 59*: 405-421. https://doi.org/10.1111/jcpp.12841

http://dx.doi.org/10.33776/EUHU/amc.v51i188.9240

Bentler, P, M. (1995). *EQS Structural Equations Program Manual. Multivariate Software*. Inc. Encino, CA.

Brouse, C. H., Basch, C. E., LeBlanc, M., McKnight, K. R. & Lei, T. (2010). College students' academic motivation: Differences by gender, class, and source of payment. College Quarterly, 13, 1–10.

Buchmann, C. & DiPrete, T. A. (2006). The growing female advantage in college completion: The role of family background and academic achievement. American Sociological Review, 71, 515–541.

Cantril, H. (1965). *The pattern of human concerns*. New Brunswick, NJ: Rutgers University Press.

Catalano, R. F., Berglund, M. L., Ryan, J. A., Lonczak, H. S., & Hawkins, J. D. (2002). Positive youth development in the United States: Research findings on evaluations of positive youth development programs. *Prevention & Treatment, 5*(1), 15. https://doi.org/10.1037/1522-3736.5.1.515a

Catalano, R. F., Skinner, M. L., Alvarado, G., Kapungu, C., Reavley, N., Patton, G. C., Jessee, C., Plaut, D., Moss, C., Bennett, K., Sawyer, S. M., Sebany, M., Sexton, M., Olenik, C., & Petroni, S. (2019). Positive Youth Development Programs in Low- and Middle-Income Countries: A Conceptual Framework and Systematic Review of Efficacy. *Journal of Adolescent Health, 65*(1), 15–31. https://doi.org/10.1016/j.jadohealth.2019.01.024

Cefai, C., Simões, C., & Caravita, S. (2021). *A systemic, whole-school approach to mental health and well-being in schools in the EU'. NESET Analytical report*. Luxembourg: Publications Office of the European Union. https://data.europa.eu/doi/10.2766/50546

Cheema, J. R. (2014). Some general guidelines for choosing missing data handling methods in educational research. *Journal of Modern Applied Statistical Methods, 13*(2), 53-75. DOI: 10.22237/jmasm/1414814520

Chen, F. F. (2007). Sensitivity of Goodness of Fit Indexes to Lack of Measurement Invariance. *Structural Equation Modeling: A Multidisciplinary Journal, 14*(3), 464–504. https://doi.org/10.1080/10705510701301834

Cheung, F., & Lucas, R. E. (2014). Assessing the Validity of Single-item Life Satisfaction Measures: Results from Three Large Samples. *Quality of life research: An international journal of quality of life aspects of treatment, care and rehabilitation, 23*(10), 2809. https://doi.org/10.1007/s11136-014-0726-4

Conway, R. J., Heary, C., & Hogan, M. J. (2015). An evaluation of the measurement properties of the five Cs model of positive youth development. *Frontiers in Psychology, 6*, 1941. https://doi.org/10.3389/fpsyg.2015.01941

Cosma, A., Abdrakhmanova, S., Taut, D., Schrijvers, K., Catunda, C., & Schnohr, C. (2023). *A focus on adolescent mental health and well-being in Europe, Central Asia and Canada. Health Behaviour in School-aged Children International Report from the 2021/2022 survey* (Vol. 1). Copenhagen: WHO Regional Office for Europe.

Cosma A, Molcho M, Pickett W. (2024). *A focus on adolescent peer violence and bullying in Europe, Central Asia and Canada. Health Behaviour in School-aged Children International Report from the 2021/2022 survey* (Vol. 2). Copenhagen: WHO Regional Office for Europe.

Cuijpers, P., Smit, F., Aalten, P., Batelaan, N., Klein, A., Salemink, E., Spinhoven, P., Struijs, S., Vonk, P., Wiers, R. W., de Wit, L., Gentili, C., Ebert, D. D., Bruffaerts, R., Kessler, R. C., & Karyotaki, E. (2021). The Associations of Common Psychological Problems With Mental Disorders Among College Students. *Frontiers in Psychiatry, 12*. https://doi.org/10.3389/fpsyt.2021.573637

http://dx.doi.org/10.33776/EUHU/amc.v51i188.9240

Damon, W. (2004). What is positive youth development? *Annals of the American Academy of Political and Social, 591*, 13–24. https://doi.org/10.1177/0002716203260092

Danielsen, A. G., Samdal, O., Hetland, J., & Wold, B. (2009). School-related social support and students' perceived life satisfaction. *The Journal of Educational Research, 102*(4), 303-320.

Drapeau, A., Marchand, A., & Beaulieu-Prévost, D. (2012). Epidemiology of Psychological Distress. In P. L. LAbate (Ed.), *Mental Illnesses-Understanding, Prediction and Control* (pp. 106-134). London: IntechOpen.

https://doi.org/10.5772/30872D'Urso, G., Symonds, J., & Pace, U. (2021). Positive Youth Development and Being Bullied in Early Adolescence: A Sociocultural Analysis of National Cohort Data. *The Journal of Early Adolescence, 41*(4), 577-606. https://doi.org/10.1177/0272431620931199

Evans, L., Haeberlein, K., Chang, A., & Handal, P. (2020). An evaluation of the convergent validity of and preliminary cutoff scores for the DASS-21 Total score as a measure of distress in adolescents. *Current Psychology, 41*(7), 4283–4290. https://doi.org/10.1007/s12144-020-00937-4

Fernandes, D., Fetvadjev, V., Wiium, N., & Dimitrova, R. (2021). The 5Cs of Positive Youth Development in New Zealand: Relations with Hopeful Expectations for the Future and Life Satisfaction Among Emerging Adults. In R. Dimitrova & N.Wiium, *Advancing Research, Policy and Practice in Global Contexts* (pp.233–246). Springer. https://doi.org/10.1007/978-3-030-70262-5_16

Fischer, R., & Karl, J. A. (2019). A Primer to (Cross-Cultural) Multigroup Invariance Testing Possibilities in R. *Frontiers in Psychology, 10*, 1507. https://doi.org/10.3389/fpsyg.2019.01507

Geldhof, G. J., Bowers, E. P., Boyd, M. J., Mueller, M. K., Napolitano, C. M., Schmid, K. L., Lerner, J. V., & Lerner, R. M. (2014). Creation of short and very short measures of the five Cs of positive youth development. *Journal of Research on Adolescence, 24*(1), 163-176. doi:10.1111/jora.12039.

Gilman, R., & Huebner, S. (2003). A review of life satisfaction research with children and adolescents. *School Psychology Quarterly, 18*, 192–205. https://doi.org/10.1521/scpq.18.2.192.21858

Gomez-Baya, D., Babić Čikeš, A., Hirnstein, M., Kurtović, A., Vrdoljak, G., & Wiium, N. (2022). Positive Youth Development and Depression: An Examination of Gender Differences in Croatia and Spain. *Frontiers in Psychology, 12*. https://doi.org/10.3389/fpsyg.2021.689354

Gomez-Baya, D., Reis, M., & Gaspar de Matos, M. (2019). Positive youth development, thriving and social engagement: An analysis of gender differences in Spanish youth. *Scandinavian Journal of Psychology, 60*(6), 559-568. https://doi.org/10.1111/sjop.12577

Gomez-Baya, D., Santos, T., & Gaspar de Matos, M. (2021). Developmental assets and positive youth development: an examination of gender differences in Spain. *Applied Developmental Science, 26*(3), 516–531. https://doi.org/10.1080/10888691.2021.1906676

Health Behaviour in School-aged Children study (2023). *Data browser (findings from the 2021/22 international HBSC survey)*. https://data-browser.hbsc.org.

Hershberg, R. M., DeSouza, L. M., Warren, A. E. A., Lerner, J. V., & Lerner, R. M. (2014). Illuminating Trajectories of Adolescent Thriving and Contribution Through the Words of Youth: Qualitative Findings from the 4-H Study of Positive Youth Development. *Journal of Youth and Adolescence, 43*, 950–970. https://doi.org/10.1007/s10964-014-0102-2

http://dx.doi.org/10.33776/EUHU/amc.v51i188.9240

Hoffman, A. J., McGuire, L., Rutland, A., Hartstone-Rose, A., Irvin, M. J., Winterbottom, M., Balkwill, F., Fields, G. E., & Mulvey, K. L. (2021). The Relations and Role of Social Competencies and Belonging with Math and Science Interest and Efficacy for Adolescents in Informal STEM Programs. *Journal of Youth and Adolescence, 50*, 314–323. https://doi.org/10.1007/s10964-020-01302-1

Holsen, I., Geldhof, J., Larsen, T., & Aardal, E. (2017). The five Cs of positive youth development in Norway: Assessment and associations with positive and negative outcomes. *International Journal of Behavioral Development, 41*(5), 559-569. https://doi.org/10.1177/0165025416645668

Huebner, E. S., Suldo, S. M., Smith, L. C., & McKnight, C. G. (2004). Life satisfaction in children and youth: empirical foundations and implications for school psychologists. *Psychology in the Schools, 41*, 81–93. https://doi.org/10.1002/pits.10140

Keane, K., Evans, R. R., Orihuela, C. A., & Mrug, S. (2023). Teacher–student relationships, stress, and psychosocial functioning during early adolescence. *Psychology in the Schools, 60*(12), 5124–5144. https://doi.org/10.1002/pits.23020

Kozina, A., Wiium, N., & Pivec, T. (2020). Positive youth development perspective: the interplay between the 5Cs and anxiety. In C. Pracana & M. Wang, *Psychology Applications & Developments VI* (pp.173–182). inScience Press. https://doi.org/10.36315/2021pad16

Lawal, A. M., Idemudia, E. S., & Adewale, O. P. (2017). Academic self-confidence effects on test anxiety among Nigerian university students. *Journal of Psychology in Africa, 27*(6), 507–510. https://doi.org/10.1080/14330237.2017.1375203

Lerner, R. M. (2005). *Promoting positive youth development: theoretical and empirical bases. White Paper Prepared for Workshop on the Science of Adolescent Health and Development*. National Research Council/Institute of Medicine. National Academies of Science.

Lovibond, S. H., & Lovibond, P. F. (1995). *Manual for the Depression, Anxiety, Stresse Scales Australia*. http://www2.psy.unsw.edu.au/dass/

Marcotte, D., Fortin, L., Potvin, P., & Papillon, M. (2002). Gender Differences in Depressive Symptoms During Adolescence: Role of Gender-Typed Characteristics, Self-Esteem, Body Image, Stressful Life Events, and Pubertal Status. *Journal of Emotional and Behavioral Disorders, 10*(1), 29–42. https://doi.org/10.1177/106342660201000104

Martins, M. J. D.; Castro, F. V. (2010). How is social competence related to aggression and/or victimization in school? *International Journal of Developmental and Educational Psychology, 3*, 1, 305-315

Matos, M. G. (2015). *Adolescentes Navegação Segura por Águas Desconhecidas*. Lisboa: Coisas de Ler.

Matos, M. G., Branquinho, C., Noronha, C., Moraes, B., Santos, O., Carvalho, M., Simões, C., Marques, A., Tomé, G., Guedes, F., Cerqueira, A., Francisco, R. & Gaspar, T. (2022). *Relatório técnico "Saúde psicológica e bemestar – Observatório de Saúde Psicológica e Bem-Estar: Monitorização e Ação"*. Disponível em https://www.dgeec.mec.pt/np4/%7B$clientServletPath%7D/?newsId=1357&fileName=SaudePsi_final.pdf

Matos, M., Santos, T., Reis, M., Gomez-Baya, D., & Marques, A. (2018). Positive Youth Development in Portugal: A Tool towards Gender Equity? *ARC Journal of Pediatrics, 4*(1), 25-35.

McGrath, K. F., & Van Bergen, P. (2015). Who, when, why and to what end? Students at risk of negative student–teacher relationships and their outcomes. *Educational Research Review, 14,* 1-17. doi: http://dx.doi.org/10.1016/j.edurev.2014.12.001

http://dx.doi.org/10.33776/EUHU/amc.v51i188.9240

McLean, C. P., Asnaani, A., Litz, B. T. & Hofmann, S. G. (2011). Gender differences in anxiety disorders: Prevalence, course of illness, comorbidity and burden of illness. *Journal of Psychiatric Research, 45*, 1027–1035.

McMahon, G., Creaven, A., & Gallagher, S. (2020). Stressful life events and adolescent well-being: The role of parent and peer relationships. *Stress and Health, 36*, 299–310. doi:10.1002/smi.2923

Milot Travers, A. S., & Mahalik, J. R. (2021). Positive youth development as a protective factor for adolescents at risk for depression and alcohol use. *Applied Developmental Science, 25*(4), 322–331. https://doi.org/10.1080/10888691.2019.1634569

Mohamad, M., Mohammad, M., Mamat, I., & Mamat, M. (2014). Modelling positive development, life satisfaction, and problem behavior among youths in Malaysia. *World Applied Sciences Journal, 32*, 231–238.

Moksnes, U.K. & Espnes, G.A. (2012). Self-esteem and emotional health in adolescents – gender and age as potential moderators. *Scandinavian Journal of Psychology, 53*, 483-489. https://doi.org/10.1111/sjop.12021

Moksnes, U. K., Bjørnsen, H. N., Ringdal, R., Eilertsen, M.-EB., & Espnes, G. A. (2022). Association between loneliness, self-esteem and outcome of life satisfaction in Norwegian adolescents aged 15–21. *Scandinavian Journal of Public Health, 50*(8), 1089-1096. doi:10.1177/14034948221081287

Moksnes, U. K., Løhre, A., Lillefjell, M., Byrne, D. G., & Haugan, G. (2016). The association between school stress, life satisfaction and depressive symptoms in adolescents: Life satisfaction as a potential mediator. *Social Indicators Research, 125*(1), 339–357. https://doi.org/10.1007/s11205-014-0842-0

Muris, P. (2002). Relationships between self-efficacy and symptoms of anxiety disorders and depression in a normal adolescent sample. *Personality and Individual Differences, 32*(2), 337-348.

Moore, S. E., Norman, R. E., Suetani, S., Thomas, H. J., Sly, P. D., & Scott, J. G. (2017). Consequences of bullying victimization in childhood and adolescence: A systematic review and meta-analysis. *World Journal of Psychiatry, 7*(1), 60. https://doi.org/10.5498/wjp.v7.i1.60

OECD. (2019). *PISA 2018 Results (Vol. III): What School Life Means for Students'*

Lives. Author.

OECD (2021). *Beyond Academic Learning: First Results from the Survey of Social and Emotional Skills*. OECD Publishing, Paris. https://doi.org/10.1787/92a11084-en.

Orben, A., Lucas, R. E., Fuhrmann, D., & Kievit, R. A. (2022). Trajectories of adolescent life satisfaction. *Royal Society Open Science, 9*(8), 211808. https://doi.org/10.1098/rsos.211808

Pais-Ribeiro, J. L., Honrado, A., & Leal, I. (2004). Contribuição para o estudo da adaptação portuguesa das escalas de Ansiedade, Depressão e Stresse (EADS) de 21 itens de Lovibond e Lovibond. *Psicologia, Saúde & Doenças, 5*(1), 229-39.

Pallant, J. (2007). *SPSS Survival Manual* (4 ed.). Allen&Unwin

University Press. Phelps, E., Zimmerman, S., Warren, A. E. A., Jeličić, H., von Eye, A., & Lerner, R. M. (2009). The structure and developmental course of Positive Youth Development (PYD) in early adolescence: Implications for theory and practice. Journal of *Applied Developmental Psychology, 30*(5), 571–584. https://doi.org/10.1016/j.appdev.2009.06.003

Proctor, C., & Linley, P.A. (2014). Life Satisfaction in Youth. In Fava, G., & Ruini, C. (eds) *Increasing Psychological Well-being in Clinical and Educational Settings. Cross-Cultural Ad-*

http://dx.doi.org/10.33776/EUHU/amc.v51i188.9240

vancements in Positive Psychology (Vol. 8, pp. 199–215). Springer, Dordrecht. https://doi.org/10.1007/978-94-017-8669-0_13

Raufelder, D. & Ringeisen, T. (2016). Self-Perceived Competence and Test Anxiety. *Journal of Individual Differences, 37(*3), 159-167. doi: 10.1027/1614-0001/A000202

Raymo, L. A., Somers, C. L. & Partridge, R. T. (2019). Adolescent Test Anxiety: An Examination of Intraindividual and Contextual Predictors. *School Mental Health 11*, 562–577. https://doi.org/10.1007/s12310-018-09302-0

Roorda, D. L., Koomen, H. M. Y., Spilt, J. L., & Oort, F. J. (2011). The Influence of Affective Teacher–Student Relationships on Students' School Engagement and Achievement. *Review of Educational Research, 81*(4), 493-529. doi: 10.3102/0034654311421793

Rudolf, R., & Bethmann, D. (2023). The Paradox of Wealthy Nations' Low Adolescent Life Satisfaction. *Journal of Happiness Studies, 24*, 79–105. https://doi.org/10.1007/s10902-022-00595-2

Seligman, M. (2011). *Florescer: Uma nova compreensão sobre a natureza da felicidade e do bem-estar*. Objetiva.

Shek, D., Dou, D., Zhu, X., & Chai, W. (2019). Positive youth development: current perspectives. *Adolescent Health, Medicine and Therapeutics, 10*, 131–141. https://doi.org/10.2147/AHMT.S179946

Shek, D., & Chai, W. (2020). The impact of positive youth development attributes and life satisfaction on academic well-being: A longitudinal mediation study. *Frontiers in Psychology, 11*, 2126. https://doi.org/10.3389/fpsyg.2020.02126

Simões, C., Matos, M. G., Batista-Foguet, J. M., & Simons-Morton, B. (2014). Substance use across adolescence: do gender and age matter?. *Psicologia: Reflexão e Crítica, 27*, 179-188. https://doi.org/10.1590/S0102-79722014000100020

Soares, A. S., Pais-Ribeiro, J. L., & Silva, I. (2019). Developmental Assets Predictors of Life Satisfaction in Adolescents. *Frontiers in Psychology, 10*. https://doi.org/10.3389/fpsyg.2019.00236

Tsaousis, I. (2016). The relationship of self-esteem to bullying perpetration and peer victimization among schoolchildren and adolescents: A meta-analytic review. *Aggression and Violent Behavior, 31*, 186–199. https://doi.org/10.1016/j.avb.2016.09.005

Taylor, R. D., Oberle, E., Durlak, J. A., & Weissberg, R. P. (2017). Promoting positive youth development through school-based social and emotional learning interventions: A meta-analysis of follow-up effects. *Child Development, 88*(4), 1156-1171.

Thomas, H. J., Chan, G. C., Scott, J. G., Connor, J. P., Kelly, A. B., & Williams, J. (2016). Association of different forms of bullying victimization with adolescents' psychological distress and reduced emotional well-being. *Australian & New Zealand Journal of Psychiatry, 50*(4), 371-379. doi:10.1177/0004867415600076

Tillery, A. D., Varjas, K., Roach, A. T., Kuperminc, G. P., & Meyers, J. (2013). The Importance of Adult Connections in Adolescents' Sense of School Belonging: Implications for Schools and Practitioners. *Journal of School Violence, 12*(2), 134–155. doi:10.1080/15388220.2012.762518

Tomé, G., Gaspar de Matos, M., Reis, M., Ramiro, L., Coelhoso, F., Gómez-Baya, D., & Wiium, N. (2020). Positive Youth Development: The 5 C's effect in a School environment. *Erebea. Revista de Humanidades y Ciencias Sociales, 10*, 111-128. https://doi.org/10.33776/erebea.v10i0.4958

http://dx.doi.org/10.33776/EUHU/amc.v51i188.9240

Tomé, G., Matos, M. G., Camacho, I., Gomes, P., Reis, M., Branquinho, C., Gomez-Baya, D., & Wiium, N. (2019). Positive youth development (pyd-sf): validação para os adolescentes portugueses. *Psicologia, Saúde & Doenças, 20* (3), 556-568. https://doi.org/10.15309/19psd200301.

Tomé, G., Matos, M. G., Reis, M., Gomez-Baya, D. Coelhoso, F., & Wiium, N. (2021). Positive Youth Development and Well being: Gender differences. *Frontiers in Psychology , 12*, 641647. doi: 10.3389/fpsyg.2021.641647

Vaz, S., Falkmer, M., Ciccarelli, M., Passmore, A., Parsons, R., Black M., Cuomo, B., Tan, T., & Falkmer, T. (2015). Belongingness in Early Secondary School: Key Factors that Primary and Secondary Schools Need to Consider. *PLoS ONE 10*(9), e0136053. https://doi.org/10.1371/journal.pone.0136053

Viner, R. M., Ozer, E. M., Denny, S., Marmot, M., Resnick, M., Fatusi, A., & Currie, C. (2012). Adolescence and the social determinants of health. The Lancet, 379(9826), 1641-1652.Wigfield, A., Byrnes, J. P., & Eccles, J. S. (2006). *Development During Early and Middle Adolescence*. Lawrence Erlbaum Associates, Publishers.

Zanon, C., Brenner, R. E., Baptista, M. N., Vogel, D. L., Rubin, M., Al-Darmaki, F. R., Gonçalves, M., Heath, P. J., Liao, H.-Y., Mackenzie, C. S., Topkaya, N., Wade, N. G., & Zlati, A. (2020). Examining the Dimensionality, Reliability, and Invariance of the Depression, Anxiety, and Stress Scale–21 (DASS-21) Across Eight Countries. *Assessment, 28*(6), 1531–1544. https://doi.org/10.1177/1073191119887449

Zhou, Z., Shek, D. T., Zhu, X., & Dou, D. (2020). Positive youth development and adolescent depression: A longitudinal study based on mainland Chinese high school students. *International Journal of Environmental Research and Public Health, 17*(12), 4457. https://doi.org/10.3390/ijerph17124457

Zych, I., Beltrán-Catalán, M., Ortega-Ruiz, R., & Llorent, V. J. (2018). Social and Emotional Competencies in Adolescents Involved in Different Bullying and Cyberbullying Roles. *Revista de Psicodidáctica, 23*(2), 86–93. doi:10.1016/j.psicoe.2017.12.001

Acknowledgements

To the Directorate-General for Education and Science Statistics, Portugal, who funded the study, and all students, teachers, and professionals involved in the project.

Declaration of interest statement

The author(s) declared no potential conflicts of interest concerning this article's research, authorship, and publication and have agreed to the final submitted version.

Consent to participate

Informed consent was obtained from parents/

http://dx.doi.org/10.33776/EUHU/amc.v51i188.9240

Data availability statement

The data supporting the results of this study are not publicly available due to restrictions established by the study's funding institution.

Author contributions

Conceptualization: Celeste Simões, Margarida Gaspar de Matos; **Methodology:** Cátia Branquinho, Catarina Noronha, Gina Tomé, Tânia Gaspar, Nuno Neto Rodrigues, Margarida Gaspar de Matos; **Formal analysis and investigation:** Celeste Simões; **Writing - original draft preparation:** Celeste Simões, Cátia Branquinho, Catarina Noronha, Gina Tomé, Tânia Gaspar, Nuno Neto Rodrigues; **Writing - review and editing:** Margarida Gaspar de Matos, Nuno Neto Rodrigues; **Funding acquisition:** Margarida Gaspar de Matos; **Supervision:** Margarida Gaspar de Matos, Nuno Neto Rodrigues.

http://dx.doi.org/10.33776/EUHU/amc.v51i188.9240