

## RUNNING HEAD: DEVELOPMENTAL ASSETS AND PYD

### Developmental Assets and Positive Youth Development: An Examination of Gender Differences in Spain

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#### **Compliance with Ethical Standards**

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. Written informed consent was obtained from all individual participants included in the study.

### Abstract

Positive Youth Development (PYD) model is a strength-based perspective of transition to adulthood derived from developmental systems theory (Lerner, Lerner, Bowers, & Geldhof, 2015). Developmental Assets (DAs) framework describes the individual and contextual resources that may promote PYD (Benson, Scales, & Syvertsen, 2011). This work aims to analyze the associations between internal and external DAs and PYD, as well as examining gender differences, in Spanish youth. Data of students enrolled in 10 high schools and universities, collected in the PYD Cross-National Project in Spain through a self-report instrument, were used. Structural equation modeling showed that DAs were positively related to PYD. Some gender differences were observed in PYD, such that male students presented higher scores in confidence and competence, and female students showed more connection, caring, and character. Results of partial mediation modeling indicated that these gender differences in PYD may be partly explained by gender differences in DAs. (149 words)

*Keywords:* positive youth development, developmental assets, gender, youth, self-report.

## Developmental Assets and Positive Youth Development: An Examination of Gender Differences in Spain

Literature to date has argued that the youth transition to adulthood now lasts longer than ever, and it has been extended to 29 years (Arnett, Zukauskienė & Sugimura, 2014; Sawyer, Azzopardi, Wickremarathne & Patton, 2018). Although youth development may be characterized as a process of growth and increasing competence, developmental psychology has paid closer attention to emotional problems and risk behaviors (Larson, 2000). Research on the youth life stage in particular has taken a deficit perspective, which in turn has influenced the design of policies and interventions (Geldhof et al., 2014). The study of positive indicators of youth adjustment has increased in the last decade (Lippman, Moore, & McIntosh, 2011), with arguments presented that interventions have less impact if they are only focused on risks and vulnerabilities and suggesting that promoting healthy youth development requires a strength-based approach (Benson, Scales, Hamilton, & Sesma, 2006; Catalano, Hawkins, Berglund, Pollard, & Arthur, 2002; Kia-Keating, Dowdy, Morgan, & Noam, 2011). In this line, the Positive Youth Development (PYD) model is a strength-based perspective of transition to adulthood derived from developmental systems theory that posits that healthy development emerges as a consequence of the alignment between internal strengths and contextual assets (Lerner, Almerigi, Theokas, & Lerner, 2005; Lerner, Dowling, & Anderson, 2003; Lerner, Lerner, Bowers, & Geldhof, 2015).

The relational, developmental systems model of the individual-context relationships involved in PYD was described by Lerner et al. (2011). This model describes adaptive developmental regulations as the mutually beneficial relationships between the individual and the context. These adaptive regulations emerge in the interplay between the developing strengths of the youth and the structure and functions

of the context. The promotion of these adaptive regulations is proposed to increase the likelihood of PYD and thriving in transition to adulthood (Geldhof, Bowers, & Lerner, 2013; Gestsdóttir & Lerner, 2007). This meta-model describes the mutual relations between individual and the context, by analyzing the characteristics of PYD that rise from this relational process between the individual and ecological bases and by examining the expected outcomes of PYD, concerning youth contribution to self, others and the community (Lerner et al., 2015). From this relational, developmental systems meta-theory, two models have been most frequently researched to examine PYD and ecological and individual assets. Lerner et al. (2015) described a PYD model which has reached strong supportive evidence. Following this model, PYD comprises five Cs, that is, competence (a positive view of one's actions in different domains), confidence (an overall internal sense of self-worth), connection (positive relationships with others), character (respect for the rules of one's society and culture, and a sense of integrity), and caring (developing sympathy and empathy for others), which are expected to be interrelated and associated with positive outcomes in youth programs (Bowers et al., 2010). The factorial validity of this five-component model has been observed in both cross-sectional and longitudinal studies (Bowers et al., 2010; Chen, Wium, & Dimitrova, 2018; Conway, Heary, & Hogan, 2015). As a result of the development of these "five Cs", adolescents are more likely to present a life trajectory of thriving, that is, positive contributions to themselves, their families, and their community and society. Moreover, some evidence has been observed for positive developmental cascades in youth (Lewin-Bizan, Bowers, & Lerner, 2010), such that positive parenting predicts intentional self-regulation, longitudinally related to PYD, which in turn predicts youth contribution to others.

Furthermore, the Developmental Assets (DAs) approach is integrated into the relational, developmental systems meta-model, and it is one of the best supported frameworks to understand the individual and contextual resources that may promote PYD (Scales, 2011; Lerner et al., 2015). This framework integrates empirical evidence to select those developmental nutrients that a) have been associated with less risk behavior (e.g., dropping out of school, substance use, and violent behavior) and that foster thriving and provide resilience; b) can be generalized across social locations; c) contribute balance on both ecological and individual-level factors; d) are within the communities' capacity to encourage their satisfaction; and e) that youth have the capacity to actively reach (Benson et al., 2006; Benson, Scales, & Syvertsen, 2011). These DAs can be divided into internal and external resources (Benson et al., 2011). External assets comprise support, empowerment, boundaries and expectations, and constructive use of time, whereas internal assets are characterized by four other categories: Commitment to learning, positive values, social competencies, and positive identity. Theokas et al. (2005) identified internal and external assets as two major superordinate factors, which were positively associated. The bidirectional interrelation between individual strengths and ecological assets is consistent with the relational, developmental systems proposed by Lerner et al. (2011) to integrate individual-context relations into a meta-model. Benson et al. (2011) found that these assets are cumulative for fostering PYD and thriving, as well as for reducing risk behaviors, and can be enhanced with intentional interventions within the developmental ecologies.

More research is needed in order to integrate both models of the meta-theory, to explore the associations between the assets and the resulting strengths, especially from countries other than the US. Only very few studies have addressed DAs and PYD in Spain to date, and they were focused on adolescents aged from 12 to 17 years old, rather

than young adults. Antolín-Suárez, Oliva-Delgado, Pertegal-Vega, and López-Jiménez (2011) showed that Spanish adolescents reported attaching medium to great importance to the development of positive values in their lives, such as honesty, responsibility, integrity, pro-sociality, or social justice and equality. The results of a study of neighborhood assets and adolescent adjustment by Oliva-Delgado, Antolín-Suárez, Estévez-Campos, and Pascual-García (2012) showed that youth empowerment, attachment to neighborhood, safety, and social control were significantly associated with greater life satisfaction and less internalization and externalization of problems. The present research aimed to test how PYD and DAs models may be applied to young adults in Spain. Moore, Lippman and Brown (2004) argued for the use of comparable measures of positive indicators of well-being in children, adolescent and youth samples, in order to improve practice and program design. In this line, Geldhof et al. (2014) found evidence for the PYD structure in 5Cs in a sample of 7,071 adolescents in the USA. Moreover, Conway et al. (2015) performed multi-group hierarchical nested models to compare PYD across early (11-14 years old) and late (15-19 years old) adolescence and concluded the existence of measurement invariance in a sample of Irish adolescents from 11 post-primary schools. Furthermore, the work by Dvorsky et al. (2019) has provided evidence for this factorial structure in college students from six universities in the USA. Concerning age differences during transition to adulthood, Conway et al. (2015) indicated that older adolescents reported less PYD than younger ones, while Benson et al. (2006) reviewed previous research concluding that older adolescents also presented less developmental assets than the younger ones.

In Spain, public policies to increase youth social participation and labor integration are seriously needed (Comas-Arnau, 2010). According to recent data from the Spanish Institute for Youth (2018a), only 27% of youths participate in organizations

and 61% reported little or no interest in politics. However, some gender differences were observed, such that young women showed a somewhat more positive opinion of institutions and several ways of contributing to society (FAD, 2015). The unemployment rate of young people aged 16–29 is around 28% in Spain overall (Spanish Institute for Youth, 2018b), although it is even more dramatic in the autonomous community of Andalusia (Southern Spain), at around 40% (Spanish Institute for Youth, 2018). An important gender gap in the employment rate in full-time equivalent work is observed in Spain: 49.7% of men are employed compared to 35.7% of women (European Commission, 2018). There is a gender gap in employment in education, health, and social work activities, with 23.4% of all employed women working in these fields, compared to 7.4% of men. Differences are also observed in care activities (39.8% women, 27.7% men) and housework participation (84.5% women, 41.9% men), with more frequent participation by women. However, an opposite gender gap was found for participation in out-of-home leisure activities (39.3% women, 45.5% men) (European Institute for Gender Equality, 2017). Thus, two-thirds of young Spanish women reported that gender inequalities are great to very great in Spain, as opposed to only 46.2% of young men (FAD, 2017). Young women underlined a greater inequality in salaries, accessibility to management positions, equal treatment in social networks, labor opportunities, and opportunities to leave a relationship. Moreover, more than half of young women reported suffering discrimination (e.g., in the labor market or within their original family, social relationships, social networks, or leisure places), compared to 30% of young men (FAD, 2017). Furthermore, the average age at which young adults move out of their parents' houses had been delayed in Spain from 28.3 in 2009 to 29.3 years old in 2017 (three years above the European average: 26.1 years old). Some gender differences were also detected in the percentage of youth aged 16–29 who

had left their parents' house (23.1% of women versus 15.7% of men) (Rodriguez & Ballesteros, 2019).

Furthermore, the literature has consistently shown some gender differences in externalizing and internalizing problems among youth (Leadbeater, Kuperminc, Blatt, & Hertzog, 1999; Rosenfield, 2000). However, only very few studies have examined gender differences in PYD components, most of them which been conducted in North America and Northern Europe. In the US, Zimmerman, Phelps, and Lerner (2008) showed that girls presented greater overall PYD than boys. In Norway, Ardal, Holsen, Diseth, and Larsen (2018) have recently reported some gender differences in PYD components, such that girls presented more connection, character, and caring, although boys showed greater scores in confidence. No differences were observed in competence. Moreover, some studies have explored gender differences in certain related competences among youth. For example, gender differences in adolescent self-esteem and self-efficacy have been observed in previous research, with boys presenting higher overall scores than girls (Muris, 2001; Quatman & Watson, 2001). In this sense, Beyer and Bowden (1997) argued that girls' self-perceptions of performance seemed to be more inaccurate and negative than boys', because of previous negatively biased expectations of that performance in girls. Concerning personal relationships, Bruwer, Emsley, Kidd, Lochner, and Seedat (2008) found that girls reported higher perceived social support than boys from family, friends, or a significant other. When examining prosocial behaviors in youth, some studies have observed that girls presented more altruism, more empathy, more assertive behavior, and some types of prosocial behaviors (Carlo & Randall, 2002; Garaigordobil, 2009). Park and Peterson (2006) in their analysis of character strengths in youth concluded that girls had higher scores than boys for beauty appreciation, fairness, kindness, and perspective. With regard to explaining

these gender differences with PYD, so far as we know, no research to date has sought to do so on the basis of gender differences in DAs, which could be of remarkable importance since assets represent the conditions that nurture positive outcomes.

### **Aim and Hypotheses**

Most research to date on PYD and DAs from the frameworks by Lerner et al. (2005) and Benson et al. (2006) has involved samples from North America and Northern Europe, while few evidences has been collected in samples from Southern Europe, e.g. in Spanish youth. More research is also needed to integrate both individual and contextual resources in explaining PYD. Moreover, a more thorough examination of gender differences in the components of PYD and DAs is recommended, as this could encourage the design of gender-specific interventions to increase the effectiveness of the program. Importantly, a deeper analysis is needed to explore to what extent the gender differences for each separate PYD component may be a consequence of gender differences in some specific internal or external DAs. Thus, the present study aimed to:

- a) examine the relationships between internal and external assets and PYD in Spanish youth,
- b) study gender and age differences in DAs and PYD dimensions, and
- c) examine gender differences in PYD on the basis of differences in DAs.

Regarding the first aim, it was hypothesized that both internal and external assets were positively interrelated and associated with PYD, although a stronger association was expected for internal ones. Furthermore, gender differences were expected for the second aim, so that it was hypothesized that young men would report greater competence and confidence, whereas young women would present higher connection, caring, and character. Age differences were hypothesized, with older participants reporting low PYD and DAs, as concluded Conway et al (2005) and Benson et al. (2006). Concerning the third aim, our

hypothesis proposed that gender differences in PYD dimensions might be partly explained by gender differences in both internal and external assets.

## **Methods**

### **Data collection procedure**

Data from the “Positive Youth Development Cross-National Project” (Wium, 2018) were used to examine DAs, PYD, and thriving indicators (e.g., health behaviors, mental health, and developmental outcomes) in a sample of around 8,000 youth and young adults (aged 16–29) in Europe (Albania, Bulgaria, Greece, Italy, Kosovo, Macedonia, Norway, Portugal, Serbia, Slovenia, Spain, and Turkey), Africa (Ghana, Kenya, and South Africa), Asia (China), Latin America (Brazil and Mexico), and New Zealand. In the present study, the Spanish subsample was analyzed. This Spanish research followed a cross-sectional design in which data were collected during April and May of 2017 through a pencil-and-paper self-report. The students individually completed this questionnaire during normal class time, with their anonymity preserved. All the educational institutions contacted (i.e., high schools and universities) agreed to join. Furthermore, the present research received the approval of the ethics board of the University of [Anonymized]. All students in each class selected agreed to participate in the study, by providing a written informed consent. The sampling procedure is described below.

### **Participants**

The sample consisted of 768 youth (60.5% female students). They were aged between 17 and 29 ( $M_{age} = 19.50$ ,  $SD = 2.27$ ), with 42.1% aged 17–18, 51.5% aged 19–23, and 6.5% aged 24–29. Participants were enrolled in 10 educational institutions, both institutes for upper secondary education (61.9%,  $M_{age} = 18.81$ ,  $SD = 2.20$ ) and universities (38.1%,  $M_{age} = 20.63$ ,  $SD = 1.90$ ), in Andalusia (Southern Spain). These

institutions were selected by convenience from different types of school (40% were public and 60% were private) and different provinces and environments (40% rural and 60% urban) so as to compose a heterogeneous sample. Moreover, participants also differed in the type of studies and educational levels, so that 43.1% were studying in their first or second year of a baccalaureate program, 18.8% in the first or second year of vocational training, and 38.1% in the first two years of a university degree, and the participating classes were then randomly selected within each educational institution.

As for the nationality of the participants, most were Spanish (95.8%), and the rest were born in other European countries or in Latin-American countries. Furthermore, most of the participants lived with both parents, one parent, or other adults (90.4%), and the other 9.6% lived with housemates, partners, or alone. Regarding their fathers' educational level, participants reported that 35.7% had studied at university, 22.9% had completed vocational training, and 20.9% had completed secondary education and 20.5% primary education, while 35.3% of their mothers had studied at university, 25.3% had completed vocational training, and 22.9% and 16.5%, respectively, had had secondary and primary education.

### **Instrument and variables**

The questionnaire consisted of two scales to assess PYD and DAs, and some socio-demographic items were also included (i.e., gender, age, ongoing studies, nationality, with whom they lived, and parental educational attainment).

**Positive Youth Development.** The PYD Short Form by Geldhof et al. (2014) was administered. It was back translated from English to Spanish by native speakers with expertise in psychology, checking meaning equivalence. The scale presents a total of 34 items, comprising the five dimensions of competence (6 items), confidence (6

items), connection (8 items), caring (6 items), and character (8 items). Sample items for each of these dimensions are, respectively, “I do very well in my class work at school/university”, “When I am an adult, I’m sure I will have a good life”, “I feel like an important member of my local community”, “It bothers me when bad things happen to any person”, and “I hardly ever do things I know I shouldn’t do”. The wording in some items was adapted to the adolescent and youth sample in the present study according to enrollment in high school or university. Items were scored on a 5-point Likert scale ranging from *strongly disagree* (1) to *strongly agree* (5), *not at all like me* (1) to *very much like me* (5), *not important* (1) to *extremely important* (5), or *almost never true or never true* (1) to *always true* (5). Mean scores were calculated for each dimension and an overall PYD score was calculated as the sum of the five means of the PYD dimensions. Previous work by Bowers et al. (2010) and Geldhof et al. (2014) performing confirmatory analysis of a five-C model indicated good factorial validity in adolescents and youth. Regarding the reliability in the present study, the Overall PYD scale presented good internal consistency, with Cronbach’s  $\alpha = .86$ . The dimensions of confidence ( $\alpha = .74$ ), connection ( $\alpha = .73$ ), and caring ( $\alpha = .86$ ) showed acceptable internal consistency, whereas lower scores were observed for competence ( $\alpha = .69$ ) and character ( $\alpha = .65$ ).

**Developmental Assets.** The Developmental Assets Profile developed by the Search Institute was used (Scales, 2011). This questionnaire was also back translated from English to Spanish by native speakers with expertise in psychology, who checked for meaning equivalence. It comprises 58 items in eight subscales related to two major dimensions, internal assets and external assets. The external assets dimension has the four subscales of support (7 items), empowerment (6 items), boundaries and expectations (9 items), and constructive use of time (4 items), of which sample items

are, respectively, “I have a family that gives me love and support”, “I am given useful roles and responsibilities”, “I have parents who urge me to do well in school/university”, and “I am involved in creative things such as music, theater, or other arts”. As in the previous questionnaire, the wording was adapted to the age of the participant, depending on enrollment in high school or in university. Furthermore, the internal assets dimension includes the four subscales of commitment to learning (7 items), positive values (11 items), social competences (8 items), and positive identity (6 items), of which sample items are, respectively, “I am trying to learn new things,” “I am developing respect for other people,” “I am sensitive to the needs and feeling of others,” and “I feel good about myself.” Items are scored on a four-point Likert scale ranging from *not at all or rarely* (1) to *extremely or almost always* (4). Mean scores were calculated for each of the eight subscales and overall scores for internal and external assets were obtained by adding the respective means. Previous work by Scales (2011) showed good factorial and convergent validity, as well as a good degree of cross-cultural validity of this measure for examining the DAs profile in adolescents and youth. Concerning reliability in the present study, notable internal consistency was observed for external assets ( $\alpha = .86$ ) and for internal assets ( $\alpha = .87$ ). Turning to the internal consistency of the subscales of external assets, acceptable scores were found for support ( $\alpha = .79$ ) and boundaries and expectations ( $\alpha = .72$ ), whereas lower ones were observed for empowerment ( $\alpha = .69$ ) and especially for constructive use of time ( $\alpha = .34$ ). In the case of the internal assets subscales, commitment to learning ( $\alpha = .77$ ), positive identity ( $\alpha = .76$ ), and positive values ( $\alpha = .72$ ) showed acceptable internal consistency, while lower scores were found for social competence ( $\alpha = .68$ ).

### **Data analysis design**

Missing values were below 3% and the Little test (Little, 1988) indicated that they were distributed at random,  $\chi^2(643, N = 768) = 674.71, p = .187$ . A maximum likelihood imputation procedure based on the expectation-maximization algorithm was applied to deal with them. We used a significance level of  $\alpha = .05$  for all statistical tests. Although the Kolmogorov-Smirnov normality test showed that variables were non-normally distributed, a large sample is robust to violations of normality, as indicated by Altman and Bland (1995). Thus, parametric statistical tests were performed. First, descriptive statistics, that is, mean and standard deviation, were calculated for all study variables. Second, age and gender differences in each variable were separately examined by using variance analyses and *t*-tests, respectively. Third, zero-order Pearson bivariate correlations were analyzed between PYD dimensions and DAs for the total sample and by gender. These analyses were performed with SPSS version 21.0 (IBM Corp, 2012).

Fourth, a structural equation model was tested to analyze how the factors called external assets (composed of support, empowerment, boundaries and expectations, and constructive use of time as indicators) and internal assets (consisting of commitment to learning, positive values, social competences, and positive identity as indicators) were related to a PYD factor that integrated these five dimensions (competence, confidence, connection, caring, and character). The assets' factors were expected to be interrelated. In order to test the overall fit to data of the model presented,  $\chi^2$ , CFI, and RMSEA were examined. Moreover, a Lagrange multiplier test was carried out to determine modifications to improve the overall fit.  $R^2$  was calculated to analyze the explained variance, and measurement equations, standardized solutions and standardized residuals were examined. This model was developed and tested with the statistical program EQS 6.3, following the indications by Byrne (2013).

Fifth, on the basis of previous results, partial mediation models were calculated to explain the gender differences for each PYD component through gender effects on DAs. A macro for SPSS based on regression analysis called Process v3.0 (Hayes, 2017) was used to perform these multiple partial mediation analyses. Specifically, model 4 was implemented, in which 5000 bootstrap samples were estimated for bias-corrected bootstrap 95% confidence intervals (CI) for specific indirect effects. The recommendations of Preacher and Kelley (2011) were followed in the development and the interpretation of results. Standardized variables were previously calculated to perform these analyses. A total effect model (including the isolated relationship between gender and PYD component) and direct effect model (including the relationship between gender and PYD component after inclusion of DAs as partial mediators) were compared. *F*-statistics, *R*<sup>2</sup> values, effect coefficients, and measurement errors were reported.

## Results

### **Descriptive statistics and gender/age differences in the study variables**

Table 1 presents the descriptive statistics (i.e., means and standard deviations) of the study variables for the overall sample and by gender, as well as showing the analysis of gender differences. The results show that participants presented moderate to high score for the PYD components, with higher scores for caring and character and the lowest for competence. Moderate means were also observed for DAs, with higher means for empowerment and social competences and lower scores reported for constructive use of time. The mean overall PYD score reached a value of 18.46 (*SD* = 2.03) for a possible range of 5 to 25, indicating a notable positive average score. Concerning internal (*M* = 11.96, *SD* = 1.42) and external DAs (*M* = 11.13, *SD* = 1.57), the overall score could range from 4 to 16, so that notable scores were also observed for

these. No significant differences by age were observed for PYD,  $F(12, 742) = 1.39, p = .166$ , external assets,  $F(12, 742) = 1.29, p = .216$ , or internal assets,  $F(12, 742) = 1.64, p = .077$ . Nor were significant effects found for the interaction gender  $\times$  age on PYD,  $F(12, 742) = .69, p = .764$ , external assets,  $F(12, 742) = .91, p = .534$ , or internal assets,  $F(12, 742) = 1.56, p = .098$ .

Furthermore, the analysis of gender differences showed some significant results (see Table 1). Young men showed higher scores for competence and confidence, young women for connection, caring, and character. However, no significant difference was found in the overall PYD score. Regarding DAs, female students showed higher scores than male students in support, empowerment, boundaries and expectations, commitment to learning, positive values, and social competences. Male students showed higher positive identity than female students, but no significant differences were found in the constructive use of time. As for the overall scores in internal and external DAs, female students presented higher scores than male students in both dimensions.

- Table 1 about here –

### **Bivariate correlations in the overall sample and by gender**

Table 2 presents the results of zero-order bivariate correlations between study variables. Positive associations were found among PYD components, with the unique exception of the relationship between caring and competence. The strongest correlations were observed between caring and character, and between competence and confidence. Medium positive associations were observed among internal assets and among external assets. The strongest relationships were detected between support and boundaries and expectations, and between positive values and social competences. Finally, regarding the overall scores, a high positive correlation was found between internal and external DAs, as well as between these assets and PYD.

- Table 2 about here -

Table 3 presents the results of the correlations by gender. No substantial differences were observed in the associations, with high and positive correlations among internal assets, external assets and PYD. However, some small differences may be described. Competence and commitment to learning showed a small positive association in young women, but no relationship in young men. Caring presented small positive associations with competence and confidence in male students, but no significant results were found in female students.

- Table 3 about here -

### **Structural equation modeling**

First, three confirmatory factor analyses were tested in order to examine the factorial validity of PYD, external assets, and internal assets. PYD comprises five indicators, that is, the mean scores in competence, confidence, connection, caring, and character. All measurement equations were significant, although the overall data fit was not acceptable,  $\chi^2(5, N = 768) = 227.22, p < .001$ , CFI = .695, and RMSEA = .24. The Lagrange multipliers test suggested two modifications in the model to improve its overall fit: the relationship between the competence and confidence errors, and that between caring and character errors, which is consistent with previous research on the five Cs of PYD (Bowers et al., 2010; Geldhof et al., 2014). After these modifications, the model presented good overall fit,  $\chi^2(2, N = 768) = 11.75, p < .001$ , CFI = .987, RMSEA = .08. Concerning external assets, a factor was developed with its respective four indicators, the mean scores for support, empowerment, boundaries and expectations, and constructive use of time. This model showed good data fit,  $\chi^2(2, N = 768) = 4.54, p = .103$ , CFI = .997, RMSEA = .04. As for internal assets, it was tested by including the indicators of commitment to learning, positive values, social competences,

and positive identity. Good overall data fit was also observed,  $\chi^2(2, N = 768) = 5.57, p = .062, CFI = .994, RMSEA = .05$ .

A structural equation model was then developed by integrating the previous models. In this model, the internal and external developmental asset factors were expected to be bidirectionally associated and, in turn, related with PYD factor. Initially, this model did not show acceptable fit,  $\chi^2(57, N = 768) = 631.75, p < .001, CFI = .828, RMSEA = .12$ , although all measurement equations were significant and standardized residuals were between  $-.1$  and  $.1$ . Three modifications were made, following the Lagrange multipliers test, to add the associations between the errors of support and connection, positive identity and confidence, and positive values and character. These associations between measurement errors may be due to an overlap between the contents of the items used to evaluate those dimensions of PYD and DAs. After these modifications, the model attained good data fit,  $\chi^2(54, N = 768) = 5.03, p = .081, CFI = .973, RMSEA = .05$ . Figure 1 shows this final model, indicating standardized solutions. This model shows internal and external assets having a high positive association, and both having positive effects on PYD. The PYD factor explained 86% of the variance, with internal assets showing the strongest effect.

- Figure 1 about here -

### **Multiple partial mediation analyses**

The previous results showed that male students reported greater competence and confidence than female students, as well as higher positive identity. Due to overlap in the items' content between positive identity and confidence, gender differences in both variables are expected to be interrelated. Thus, a partial mediation model was tested in order to explain gender differences in competence through difference in positive

identity (Figure 2). The results showed that gender had a significant effect on positive identity,  $F(1, 766) = 12.86, p < .001, R^2 = .02$ . The total effect model indicated that gender was related to competence,  $F(1, 766) = 35.60, p < .011, R^2 = .04$ . Regarding the direct effect model, gender and positive identity were both related to this component of PYD,  $F(2, 765) = 78.37, p < .001, R^2 = .18$ . Thus, positive identity partial mediated the relationship between gender and competence, that is, gender presented an effect on competence directly and through its effect on positive identity (Indirect effect =  $-.09$ , bootSE =  $.03$ , bootLLCI =  $-.15$ , bootULCI =  $-.04$ ). The explained variance increased 16 percentage points after the inclusion of the mediator.

- Figure 2 about here -

Furthermore, female students presented higher scores in connection, caring and character, as well as in some external (i.e., support, empowerment, and boundaries and expectations) and internal assets (i.e., commitment to learning, positive values, and social competences). Three multiple partial mediation models were tested to examine the gender differences in connection, caring, and character on the basis of the differences found in those DAs. Figure 3 represents the general model tested and Table 4 shows the results of the respective multiple partial mediation models, presenting the coefficients and measurement standardized errors. The regression analyses showed that gender presented significant effects on support,  $F(1, 766) = 12.04, p < .001, R^2 = .02$ ; empowerment,  $F(1, 766) = 4.82, p = .028, R^2 = .01$ ; boundaries and expectations,  $F(1, 766) = 26.26, p < .001, R^2 = .03$ ; commitment to learning,  $F(1, 766) = 47.16, p < .001, R^2 = .06$ ; positive values,  $F(1, 766) = 35.95, p < .001, R^2 = .05$ ; and social competences,  $F(1, 766) = 32.53, p < .001, R^2 = .04$ .

- Figure 3 and Table 4 about here -

A multiple partial mediation model was tested to examine relevant gender differences in connection on the basis of DAs. The DAs included in the model were empowerment, boundaries and expectations, commitment to learning, positive values and social competences. The asset of support was not included in the model because of the items overlap with the assessment of connection. In the total effect model, gender presented a significant effect on connection,  $F(1,766) = 12.94, p < .001, R^2 = .02$ . However, gender was not related with this PYD component after the inclusion of the mediators. Empowerment (indirect effect = .05, bootSE = .02, bootLLCI = .01, bootULCI = .09), boundaries and expectations (indirect effect = .11, bootSE = .03, bootLLCI = .06, bootULCI = .17) and social competences (indirect effect = .05, bootSE = .02, bootLLCI = .02, bootULCI = .09) were related to connection and totally mediated the effect of gender on connection,  $F(6, 761) = 95.65, p < .001, R^2 = .43$ . The developmental asset with the strongest relationship with connection was boundaries and expectations. The explained variance increased by more than 40 percentage points after the inclusion of the DAs as mediators.

The model of the partial mediation of DAs in the relationship between gender and caring also showed significant results. The total effect model showed a significant effect by gender on caring,  $F(1, 766) = 50.17, p < .001, R^2 = .07$ . Furthermore, the direct effect model indicated that gender, positive values, and social competences were related to caring,  $F(7, 760) = 43.52, p < .001, R^2 = .34$ . Thus, gender differences in caring were partially explained by gender differences in positive values (indirect effect = .16, bootSE = .03, bootLLCI = .10, bootULCI = .23) and social competences (indirect effect = .08, bootSE = .02, bootLLCI = .04, bootULCI = .13). The asset of positive values showed the highest size effect. The increase in the variance explained by caring was 27%.

The model of the multiple partial mediation of gender differences in character by DAs was analyzed. The DAs included in the model were support, empowerment, boundaries and expectations, and social competences. The asset of positive values was not included in the model because of the item overlap with the assessment of character. The total effect model indicated that gender presented a significant effect on character,  $F(1, 766) = 19.13, p < .001, R^2 = .03$ . However, this effect was not significant after the inclusion of the mediators, which totally mediated this relationship,  $F(6, 761) = 58.06, p < .001, R^2 = .32$ . Specifically, empowerment (indirect effect = .02, bootSE = .01, bootLLCI = .01, bootULCI = .05), commitment to learning (indirect effect = .07, bootSE = .02, bootLLCI = .03, bootULCI = .11), and social competences (indirect effect = .15, bootSE = .03, bootLLCI = .09, bootULCI = .20) were significantly related to character and totally mediated these gender differences. The strongest mediation effect was found for social competences. The  $R^2$  score increased by .29 after adding the mediators into the model.

### **Discussion**

This research has provided some contributions concerning the relationships between internal and external DAs and PYD, and the analysis of gender differences in these variables. Regarding the first aim, our results indicate that both internal and external DAs were positively related to PYD, with higher effect sizes by the internal ones. Internal assets and PYD dimensions are described at individual level, while external assets may be more strongly related with other thriving indicators, e.g. social participation or contribution to community, described in the meta-model by Lerner, Lerner, von Eye, Bowers and Lewin-Bizan (2011). Moreover, internal and external assets were positively associated, with no remarkable differences observed by gender. These results are in line with our hypothesis and with previous literature, such as the

studies of Theokas et al. (2005) and Benson et al. (2011), which provided evidence for DAs as resources to nourish PYD. As a key contribution of the present work, evidence is added for an integrate analysis of both individual and contextual resources in explaining PYD. Following developmental systems theory, the associations observed between DAs and PYD strengths should be explained by the dynamic person-context interplay across development, as indicated by Lerner et al. (2003, p. 173): “changes across the life span are seen as propelled by the dynamic relations between the individual and the multiple levels of the ecology of human development (family, peer group, school, community, culture), all changing interdependently across time (history)”. Three core concepts, that is, temporal embeddedness, plasticity, and developmental regulation, underlie this interactive process, so that PYD appears in the combination of an active, engaged, and competent person with receptive, supportive, and nurturing developmental contexts (Lerner, Anderson, Balsano, Dowling, & Bobek, 2003). When these balanced interplays are frequent and stable, positive consequences emerge at both the individual and social levels, that is, contribution (Lerner et al., 2005).

Concerning the second aim, some gender differences were observed in the PYD dimensions, such that male students reported greater confidence and competence, whereas female students presented higher connection, caring, and character. In addition, gender differences were found in some DAs. Young men presented greater positive identity and young women showed higher scores in support, empowerment, boundaries and expectations, commitment to learning, positive values, and social competences. As we hypothesized, some gender differences in PYD components were observed. However, no differences in overall PYD were found, contrary to Zimmerman et al. (2008). These results are partly in line with the recent study of Ardal et al. (2018), who found gender differences in confidence, connection, character, and caring, although they

did not find significant differences in competence. Concerning this component, our result is consistent with the conclusions of Muris (2001) about self-efficacy and with the discussion by Beyer and Bowden (1997) of girls' underestimation of self-perception.

Most importantly, regarding the third aim, our results provide evidence to explain gender differences in PYD dimensions based on gender differences in DAs. Specifically, mediation analyses revealed that: a) higher positive identity reported by young men was partly associated with their greater perceived competence; b) young women reported greater connection, what was related with their greater empowerment, boundaries and expectations, and social competences; c) young women presented more caring partly due to their greater scores for positive values and social competences; and d) young women showed greater character, what was associated with their greater scores in empowerment, commitment to learning, and social competences. Furthermore, no remarkable effects by age were observed, which was opposed to our hypothesis and previous research by Conway et al. (2005) and Benson et al. (2006). However, these results may be in line with the work by Sawyer et al. (2018), who argued that the experience of transition to adulthood has been prolonged in present times. In Spanish context, due to low social participation and problems in labor integration, the experience of prolonged transition may be specially marked, with an increased continuity between late adolescence and youth lives, so that undergraduates and older high school students could present similar lifestyles and life conditions, at least while they are expanding their academic training.

Thus, there seems to be a different availability of DAs by gender, which in turn may be associated with differences in PYD components in female and male students, since assets and PYD are expected to be interrelated, as described in the relational developmental systems model (Lerner et al., 2011). The differences found in assets may

be explained by a gendered socialization within the main developmental contexts, such as family, peers, media, and educational centers, that reflects and sustains gender roles and inequities (Leaper & Friedman, 2007). This gendered socialization may in turn influence the person-context interactive process across development, as well as the subsequent consequences at the individual and social levels. Perry and Pauletti (2011) argued that transition to adulthood is a key period of the gender differentiation in abilities and interests, self-concept and self-perceived personality traits, competence beliefs, self-esteem, social relationships, aggression, and psychological adjustment. These authors underline the influence of gender stereotypes on the adoption of gender-typed attributes. Moreover, gender segregation also plays an important role in gender-typing in the adolescent years. As indicated by Mehta and Strough (2010), gender segregation is associated with greater gender reference-group identity, more cooperative activity orientation, and higher communicative responsiveness in girls. In this line, other work has concluded that prosocial behavior predicts subsequent empathic concern only in girls, consistent with stereotyped notions of prosocial behavior and empathy expressions as feminine-acceptable actions (Van der Graaff, Carlo, Crocetti, Koot, & Branje, 2018). Furthermore, previous studies have shown gender differences in self-perceptions. A recent cross-cultural study concluded that girls reported lower self-esteem than boys, suggesting evidence for the effect of gendered socialization on its development (Bleidorn et al., 2016). Similar results were observed by Marsh, Parada, and Ayotte (2004) regarding self-concept and subjective well-being. Gender identity, that is, felt typicality and contentedness, presents a self-regulatory role in reducing gender-atypical attributes that may interfere with subjective well-being in adolescence (Menon, Schellhorn, & Lowe, 2013). Thus, the interplay between DAs and PYD may

be biased by gender across youth development, so that the functions of the assets concerning thriving may differ for males and females.

Despite these contributions, some limitations may be acknowledged. Because a convenience sample was assessed, the generalizability of these findings to the population of Spanish youth is limited. Moreover, since gender differences are influenced by social and cultural differences, a cross-cultural study is recommended with data from different countries. Another limitation of the present study stems from the age distribution of the sample. A more thorough age analysis should be undertaken in the future, as well as a closer examination of gender  $\times$  age interactions when studying differences in DAs and PYD, by collecting a balanced sample of youth aged 17–29. Moreover, the definition of youth transition to adulthood as extending to 29 years is based largely on specific samples of western, well-resourced youth. Thus, a research line could examine these relationships in other samples. More research is also needed to continue the validation of the instruments, since most studies to date have been conducted in adolescent samples rather than young adults, and to provide further evidence for the suitability of these measures to Spanish context, in line with works by Antolín-Suárez et al. (2011) and Oliva et al. (2010). Although the measures were back translated to ensure meaning equivalence, the items and dimensions could be further contextually defined in order to improve the validity. Furthermore, the use of similar questionnaires in different countries would allow for cross-national comparison (Wiiium, 2018). Another limitation could be the exclusive use of self-reports, which provide subjective information by the individuals. Moreover, the content of some items in the questionnaires of DA and PYD may present a partial overlap in the contents - despite the first one addressing the resources and the second one, the strengths developed - what could bias the interrelations detected. In the present work, this

overlapping was specifically controlled in the cases of confidence and positive identity, connection and support, and character and positive values. An improvement in the research could come from the assessment of important informants in youth's lives, such as partners, friends, or parents. A future line of research could also involve complementary quantitative and qualitative data using mixed methods. Other future direction of research may come from exploring underlying the processes and mechanisms implicated in the associations observed in the present work. Finally, because a cross-sectional design has been followed, our conclusions are limited to the associations of variables. In order to draw associations between antecedents and consequents, a longitudinal design is recommended for future research, which would allow the examination of reciprocal effects or cross-lagged interrelations between DAs and PYD across youth development, thus reflecting the interactive transactions described by the relational, developmental systems theory (Benson & Scales, 2009).

Despite these limitations, the study contributions may suggest some practical implications. PYD promotion programs have been found to have positive effects in school, family, and community settings (Durlak et al., 2007; Lerner, Lerner, Urban, & Zaff, 2016; Tolan, 2016). These programs have shown positive results to promote healthy development as well as to reduce problem behaviors in North America and Asia by the alignment of youth strengths and ecological resources (Mueller et al., 2011; Shek & Yu, 2011; Taylor, Oberle, Durlak, & Weissberg, 2017). As argued by Catalano et al. (2002), Guerra and Bradshaw (2008), and Schwartz et al. (2010), the frameworks to prevent risk behaviors and promote PYD may be integrated in the program design. Thus, the relationships found in this Spanish sample between DAs and PYD may suggest the opportunity to implement programs to promote youth strength and resource development.

Moreover, our conclusions on gender differences underline the need to include gender-specific actions to encourage equal opportunities for female and male students to acquire internal and external DAs in order to foster competence, confidence, connection, caring, and character equally during the transition to adult life. Consequently, gender stereotypes in developmental contexts should be addressed in order to enable gender equality in accessibility to resources for young people. In this developmental transition characterized by self-construction and self-discovery, PYD interventions should provide equal opportunities for young women and men to thrive (Eichas, Kurtines, Rinaldi, & Farr, 2018). In this line, Currie, Kelly, and Pomerantz (2006) argued the importance of developing more opportunities to foster self-expression and self-directed actions in young women. As well, more opportunities need to be developed to enhance caring, character and connection in young men, by conducting gender-specific interventions (Van der Graaff et al., 2018). In Spain, most interventions to date have targeted adolescent problems, with less investment in older youths. The effective promotion of health outcomes in the youth population requires developmentally appropriate practices (Meschke, Peter, & Bartholomae, 2012) following a gender-inclusive approach (Stock, Wille, & Krämer, 2001). In recent times, the Healthy Universities Network has been established to improve health and well-being within Spanish universities (REUS, 2018). Furthermore, the Spanish Institute for Youth (2018c) has recently started actions to promote social participation and empowerment in youth. Regarding gender equity, the Institute for Women and Equal Opportunities (2018) has designed several intervention lines for the youth population in Spain, such as Seminars on Women in Science and Technology, Technology Initiation in Equality, a Program of Co-Responsibility in family and educational settings, and actions addressing equality in entrepreneurship and professional promotion.

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### **Declaration of interest statement**

The authors declare that they have no conflict of interest, no financial interest nor benefit from the direct application of this research.

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Table 1

*Descriptive statistics, reliability, and gender differences*

	$\alpha$	$M (SD)$	$M$ female students ( $SD$ )	$M$ male students ( $SD$ )	$t$ -tests	Cohen's $d$
Competence	.69	3.19(.65)	3.08(.63)	3.36(.65)	$t(766) = 5.99, p < .001$	.44
Confidence	.74	3.69(.63)	3.63(.65)	3.78(.59)	$t(766) = 3.15, p = .002$	.24
Connection	.73	3.66(.56)	3.72(.55)	3.57(.56)	$t(766) = -3.60, p < .001$	.27
Caring	.86	4.07(.70)	4.22(.60)	3.84(.79)	$t(766) = -7.50, p < .001$	.54
Character	.65	3.85(.47)	3.91(.44)	3.76(.49)	$t(766) = -4.48, p < .001$	.32
PYD	.86	18.46(2.03)	18.56(1.94)	18.31(2.14)	$t(766) = -1.66, p = .098$	.12
Support	.79	2.94(.55)	3.00(.55)	2.86(.54)	$t(766) = -3.45, p = .001$	.26
Empowerment	.69	3.15(.45)	3.17(.45)	3.10(.45)	$t(766) = -2.19, p = .029$	.16
Boundaries and expectations	.72	2.92(.43)	2.98(.42)	2.82(.42)	$t(766) = -5.11, p < .001$	.38
Constructive use of time	.34	2.13(.60)	2.11(.62)	2.16(.59)	$t(766) = 1.12, p = .265$	.08
External Assets	.86	11.13(1.57)	11.26(1.60)	10.94(1.50)	$t(766) = -2.78, p = .006$	.21
Commitment to Learning	.77	3.00(.51)	3.11(.49)	2.85(.51)	$t(766) = -6.94, p < .001$	.52
Positive Values	.72	2.96(.41)	3.04(.37)	2.85(.43)	$t(766) = -6.18, p < .001$	.47
Social Competences	.68	3.12(.43)	3.19(.41)	3.01(.43)	$t(766) = -5.75, p < .001$	.43
Positive Identity	.76	2.87(.55)	2.82(.56)	2.96(.52)	$t(766) = 3.53, p < .001$	.26
Internal Assets	.87	11.96(1.42)	12.15(1.39)	11.67(1.41)	$t(766) = -4.58, p < .001$	.34

Table 2

*Zero-order Pearson correlations among study variables*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1.Competence	1															
2.Confidence	.53***	1														
3.Connection	.34***	.49***	1													
4.Caring	.03	.10**	.27***	1												
5.Character	.16***	.37***	.44***	.55***	1											
6.PYD	.63***	.74***	.73***	.59***	.71***	1										
7.Support	.16***	.30***	.66***	.25***	.32***	.49***	1									
8.Empowerment	.28***	.44***	.55***	.20***	.38***	.53***	.57***	1								
9. Boundaries E.	.13***	.30***	.58***	.35***	.39***	.50***	.70***	.58***	1							
10.Constructive T.	.30***	.24***	.37***	.17***	.25***	.39***	.37***	.29***	.32***	1						
11. External Assets	.29***	.41***	.69***	.31***	.42***	.61***	.85***	.76***	.81***	.69***	1					
12. Commitment L.	.02	.22***	.35***	.31***	.39***	.37***	.34***	.35***	.41***	.26***	.43***	1				
13. Positive Values	.18***	.24***	.41***	.53***	.59***	.57***	.35***	.35***	.49***	.34***	.49***	.43***	1			
14 Social Comp.	.20***	.32***	.44***	.47***	.51***	.56***	.35***	.40***	.47***	.22***	.45***	.45***	.62***	1		
15. Positive Identity	.39***	.65***	.44***	.12**	.38***	.58***	.33***	.41***	.33***	.24***	.41***	.31***	.31***	.40***	1	
16. Internal Assets	.27***	.50***	.55***	.46***	.61***	.69***	.46***	.50***	.56***	.35***	.59***	.74***	.75***	.80***	.71***	1

*Note.* \*\*\*  $p < .001$ ; \*\*  $p < .01$ ; \*  $p < .05$ .

Table 3

*Zero-order Pearson correlations among study variables, by gender*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1.Competence	1	.52***	.38***	.03	.18***	.66***	.19***	.33***	.18***	.34***	.34***	.11*	.21***	.29***	.40***	.34***
2.Confidence	.51***	1	.54***	.08	.38***	.77***	.33***	.50***	.35***	.28***	.45***	.26***	.25***	.35***	.65***	.52***
3.Connection	.38***	.47***	1	.24***	.41***	.75***	.66***	.57***	.58***	.41***	.70***	.34***	.39***	.41***	.50***	.55***
4.Caring	.16**	.21***	.27***	1	.51***	.53***	.22***	.17***	.30***	.18***	.27***	.30***	.46***	.39***	.18***	.41***
5.Character	.24***	.42***	.45***	.56***	1	.68***	.29***	.36***	.39***	.27***	.41***	.37***	.56***	.48***	.42***	.59***
6.PYD	.65***	.73***	.70***	.67***	.74***	1	.49***	.57***	.52***	.44***	.64***	.39***	.53***	.56***	.64***	.70***
7.Support	.19**	.30***	.63***	.25***	.33***	.48***	1	.57***	.73***	.41***	.85***	.33***	.33***	.35***	.35***	.45***
8.Empowerment	.26***	.39***	.51***	.20***	.38***	.48***	.56***	1	.57***	.34***	.76***	.32***	.33***	.41***	.43***	.49***
9. Boundaries E.	.16**	.29***	.55***	.34***	.34***	.48***	.64***	.60***	1	.37***	.82***	.40***	.46***	.45***	.37***	.55***
10.Constructive T.	.23***	.16**	.33***	.21***	.24***	.33***	.34***	.21***	.27***	1	.72***	.33***	.35***	.23***	.23***	.37***
11. External Assets	.28***	.37***	.66***	.33***	.42***	.58***	.84***	.75***	.79***	.65***	1	.44***	.46***	.44***	.43***	.58***
12. Commitment L.	.03	.24***	.31***	.23***	.35***	.32***	.30***	.37***	.36***	.20***	.40***	1	.43***	.44***	.37***	.74***
13. Positive Values	.26***	.31***	.40***	.55***	.60***	.61***	.35***	.35***	.48***	.38***	.51***	.35***	1	.58***	.38***	.75***
14 Social Comp.	.19**	.36***	.45***	.49***	.52***	.58***	.32***	.36***	.47***	.23***	.44***	.40***	.63***	1	.46***	.79***
15. Positive Identity	.32***	.63***	.41***	.15**	.39***	.52***	.34***	.41***	.35***	.24***	.43***	.33***	.31***	.40***	1	.77***
16. Internal Assets	.27***	.53***	.52***	.46***	.62***	.68***	.44***	.51***	.55***	.35***	.60***	.72***	.75***	.80***	.71***	1

*Note.* Correlations between the variables in the subsample of male students ( $n = 303$ ) are presented below the diagonal, whereas the correlations in female students ( $n = 465$ ) are shown above. \*\*\*  $p < .001$ ; \*\*  $p < .01$ ; \*  $p < .05$ .

Table 4

*Models of multiple partial mediations by developmental assets in the gender differences in connection, caring, and character, including coefficients and measurement standardized errors*

		a1	a2	a3	a4	a5	a6		
		(em1)	(em2)	(em3)	(em4)	(em5)	(em6)		
Gender effects on mediators		.25***	.16*	.37***	.50***	.44***	.42***		
		(.99)	(.99)	(.97)	(.94)	(.95)	(.96)		
		b1	b2	b3	b4	b5	b6	c'	c
								(ey')	(ey)
Mediators and gender effects on PYD components	Connection		.29***	.30***	.04	.07	.12**	.01	.26***
								(.58)	(.98)
	Caring	.03	-.08	.08	.03	.35***	.19***	.26***	.53***
								(.67)	(.93)
	Character	.03	.13**	.06	.14***		.35***	.06	.33***
								(.68)	(.98)

\*\*\*  $p < .001$ ; \*\*  $p < .01$ ; \*  $p < .05$ .

*Note.* a: Gender effects on each mediator: Support (1), Empowerment (2), Boundaries and Expectations (3), Commitment to Learning (4), Positive Values (5), and Social Competences (6); em: Error measurement of the effect by gender on each mediator; b: Effects by the mediators on PYD dimension; c': Effect by gender on PYD dimensions after including mediators; c: Total effect by gender on PYD dimensions; ey': Error measurement of the effect by gender on PYD dimensions after including the mediators; ey: Error measurement of the total effect by gender on PYD dimensions.

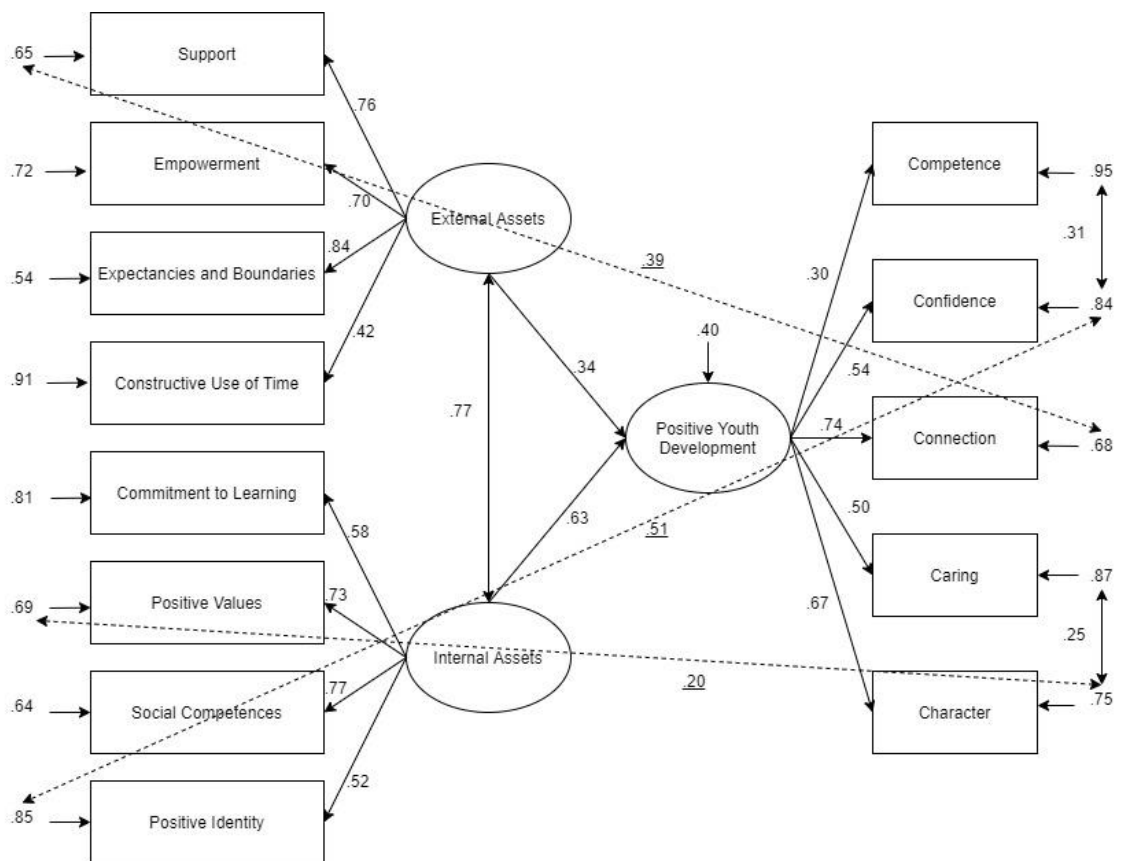


Figure 1: Structural equation model of the relationships between external and internal developmental asset factors and the PYD factor.

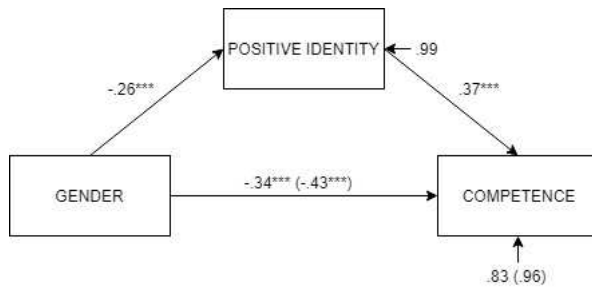


Figure 2: Partial mediation of positive identity in the relationship between gender and the PYD component of competence, indicating coefficients and measurement standardized errors.

*Note.* Total effect by gender on PYD dimension of competence, before adding the mediator is indicated in brackets.

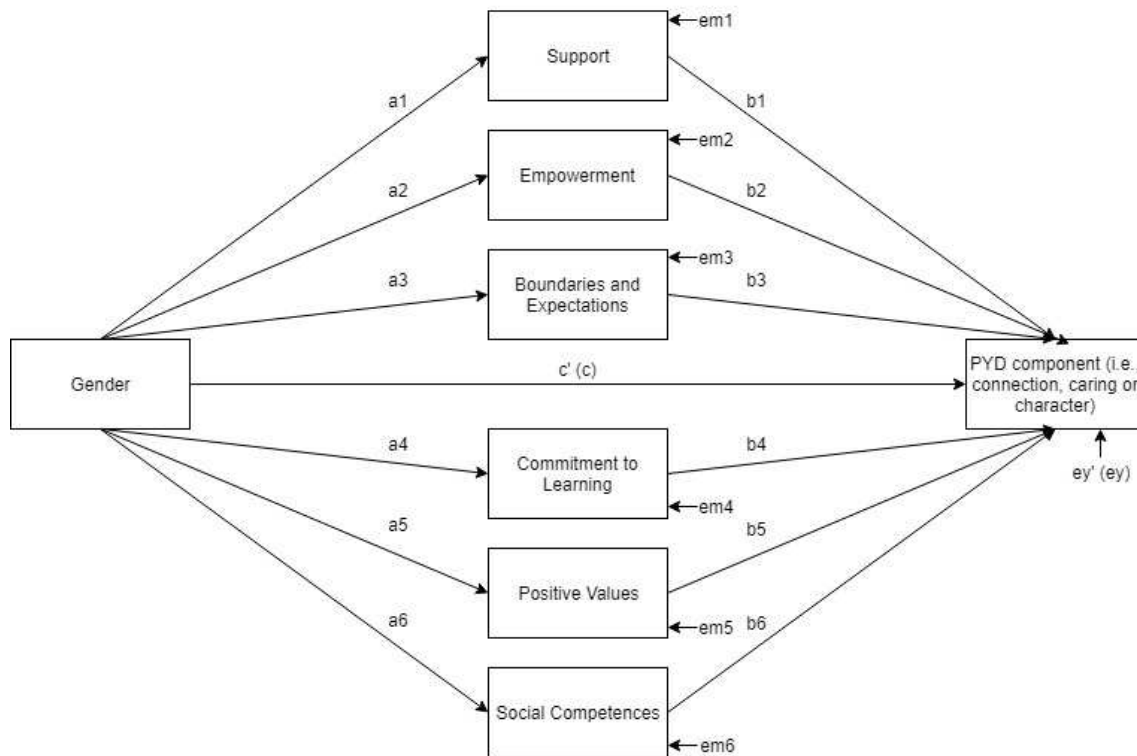


Figure 3: Model of multiple partial mediations by some developmental assets (i.e., support, empowerment, boundaries and expectations, commitment to learning, positive values, and social competences) in the relationship between gender and PYD components of connection, caring, and character.

*Note.* a: Gender effects on each mediator: Support (1), Empowerment (2), Boundaries and Expectations (3), Commitment to Learning (4), Positive Values (5), and Social Competences (6); em: Error measurement of the effect by gender on each mediator; b: Effects by the mediators on PYD dimension; c': Effect by gender on PYD dimensions after including mediators; c: Total effect by gender on PYD dimensions; ey': Error measurement of the effect by gender on PYD dimensions after including the mediators; ey: Error measurement of the total effect by gender on PYD dimensions. Total effect by gender on PYD dimensions (connection, caring, and character), before adding the mediator is indicated in brackets.

