A Positive-Psychology-based Multiple Regression model predicting Wellbeing in Chilean Youth

Un modelo de regresión múltiple basado en la psicología positiva que predice el bienestar en jóvenes chilenos

Pablo A. Pérez-Díaz [1], Daniela Bachmann Vera [1], Nora Wiium [2].

[1] Institute of Psychology, Sede Puerto Montt, Austral University of Chile, Puerto Montt, Chile
[2] Faculty of Psychology, University of Bergen, Bergen, Hordaland, Norway.

Abstract

The PYD model promotes constructive behaviours in youth by underscoring positive attributes usually found during the transition from childhood to adulthood in order to foster healthy development. In a nutshell, PYD comprises five key competence (5C), forty developmental assets, and the flourishing model. In the present study, 261 participants were approached by an online survey (nWomen= 189, nMen = 72, MeanAge= 22 years old), as part of the Cross-national project on PYD (CN-PYD), which included several measures, among which those included in the research were: The Developmental assets Scale, the Short-form of the Five Cs, and the Mental Health Continuum Short-Form (MHC-SF). Emotional, Social, Psychological and General Wellbeing scores were tested on the premise that females would score significantly lower than male participants (H1). In addition, two multiple regression models were tested with the first wave of the Chilean PYD project on the premise that Positive Identity, Confidence, Character, and Connection would predict the variance of General Wellbeing (H2), and Psychological Wellbeing (H3). The findings provided total support for H1 and H2, and partial support for H3. Overall, the research complements previous investigations conducted with Latin American and Chilean Youth.

Resumen

El modelo PYD promueve comportamientos constructivos en los jóvenes al subrayar los atributos positivos que generalmente se encuentran durante la transición de la niñez a la edad adulta para fomentar un desarrollo saludable. En pocas palabras, PYD comprende cinco competencias clave (5C), cuarenta activos del desarrollo y el modelo florecimiento. En el presente estudio, se abordó a 261 participantes mediante una encuesta en línea (nMujeres= 189, nHombres = 72, Edad promedio = 22 años), como parte del Proyecto transnacional sobre PYD (CN-PYD), que incluía varias medidas, entre los que se incluyeron en la investigación: La Escala de activos del Desarrollo, la Forma Abreviada de las Cinco C y la Forma Abreviada del Continuo de Salud Mental (MHC-SF). Las puntuaciones de Bienestar Emocional, Social, Psicológico y General se evaluaron bajo la premisa de que las mujeres obtendrían una puntuación significativamente más baja que los participantes masculinos (H1). Además, se probaron dos modelos de regresión múltiple con la primera ola chilena del proyecto PYD, bajo la premisa de que la Identidad Positiva, la Confianza, el Carácter y la Conexión predecirían la varianza del Bienestar General (H2) y el Bienestar Psicológico (H3). Los hallazgos proporcionaron apoyo total para H1 y H2, y apoyo parcial para H3. En general, la investigación complementa investigaciones previas realizadas con jóvenes latinoamericanos y chilenos.

Youth developmental processes have been researched thoroughly, albeit most of these investigations have focused on the negative outcomes instead of the young people's resources. Therefore, several researchers have generated diagnoses or responded to problematic behaviours that were believed to be predominant during adolescence, including eating disorders, substance abuse, risk behaviours, and antisocial behaviour, among others (Barboza et al., 2009; Frías & Barrios, 2016; Gálvez-Nieto et al., 2018; Shek et al., 2021).

Recently, this view - which underestimated young people's capabilities - has changed to one that recognizes their potential for change and development, based on the overall positive psychology framework (Catalano et al., 2019; Conway et al., 2015; Damon, 2004; Garassini, 2020; Sanders et al., 2017). From this positive view, adolescents are comprehended as individuals with free will, life alternatives, and individual resources that can be discovered and fostered. Due to positive psychology highlighting these aspects, there is an impetus for new approaches to understand and promote these aspects in young people (Shek et al., 2019), especially those traditionally neglected or under-researched.

In this context, a novel theoretical approach, namely: Positive Youth Development (PYD), was born, which, although it has been interpreted and developed differently across researchers (e.g., J. V. Lerner et al., 2009; Silbereisen & Lerner, 2007), it is characterized by recognizing the strengths of Youth and the plasticity of development itself (Tolan et al., 2016), emphasizing that young people´s re-

sources when nurtured properly, school success rates rise, promote the development of prosocial behaviours, enhance self-care and provide with additional of tools to overcome adversity. In other words, they increase the chances of achieving optimal development (Catalano et al., 2004; Damon, 2004; Hull et al., 2020; Zhu & Shek, 2020). This new approach reveals that although preventing risky behaviours is necessary, promoting adolescents' positive skills and values is essential to accomplish an adequate transition from childhood to adulthood (Gálvez-Nieto et al., 2018; Oliva et al., 2008; Pertegal et al., 2010; Yang & McGinley, 2021).

PYD theoretical frameworks

Several models have been generated to develop adolescents' psychosocial potentialities (Benson et al., 2011; Catalano et al., 2004; Dimitrova & Wiium, 2021). The most relevant PYD theoretical developments are the 5Cs competence framework (Lerner et al., 2005; Geldhof et al., 2015; Dimitrova et al., 2021) the development assets theory (Benson, 2007; Scales, 2011), and the flourishing model (Keyes, 2005, 2007). Among these, the 5C's model for healthy youth development stands out (Lerner et al., 2003), as it is the most empirically supported theoretical approach (Conway et al., 2015).

The 5Cs Competence Framework

This model is based on the ecological perspective, and it covers 5 important domains for positive development: competence, character, connections, trust, and care (Årdal et al., 2017; Domínguez et al., 2021; Geldhof et al.,

2015). Competence refers to a positive view of oneself in different areas (academic, cognitive, vocational and social); Character accounts for the internalization of standards for socially acceptable behaviour; Connection evidences the presence of positive links with others (people and organizations) in which there are two-way exchanges; Trust refers to the security to function effectively and face challenging situations, and Care refers to the sense of empathy towards others and the development of altruistic actions based on it (Lerner et al., 2003, 2005, 2015).

These Cs are complementary, as young people benefit from having adequate development in all of them; It is therefore alleged that when an adolescent manifests these Five Cs consistently over time, they are more likely to have a healthy life trajectory in which there are concrete contributions to own identity, family, community, and society (Shek et al., 2019). This sense of contribution supported the inclusion of a sixth C (Contribution, Lerner, 2004). Even more recently, the model has been strengthened due to new theoretical and empirical developments that enhanced its validity. The new addition to the model incorporates a seventh C (Creativity), which represents the ability to solve problems in an original and useful way, according to the specific social environment in which youth develops (Dimitrova et al., 2021; Dimitrova & Wiium, 2021).

The Developmental Assets Framework

The developmental assets represent a theoretical construct encompassing a broad range of environmental and interpersonal strengths

which predict several academic, psychological, social, and health outcomes (Benson, 1990, 2007). As highlighted by Benson (2007), the theory relies on the principle that emerging adults select those resources that provide advantages for their own life goals and context. The theory comprises 40 elements, which can be split into internal and external assets and it is rooted in the large metatheory of developmental system theory (e.g., Ford & Lerner, 1992), which conceives human development as a combination of internal and contextual processes.

The internal assets include four factors: commitment to learning, positive values, social competence, and Positive Identity. Complementary to them, the external assets include four factors: support, empowerment, boundaries and expectations, and constructive use of time. The most relevant construct within this framework to our research is Positive Identity, which has been defined as "a sense of control and purpose, as well as recognition of own strengths and potentials, including personal power, self-esteem, and positive outlook" (Dimitrova & Wiium, 2021, p. 5).

The Flourishing Framework

Finally, the flourishing model is based on several wellbeing measures mostly treated by researchers as outcomes of thriving, although these flourishing variables have been conceptualised as independent variables by scholars (Ryff & Keyes, 1995; Keyes, 2005). The theory advances on extensive previous developments on subjective wellbeing, a construct that targets happiness and life satisfaction

through self-report measures (Conceição & Bandura, 2008), with the mental health continuum (MHC, Keyes, 2002) being the most validated measure for appraising wellbeing. For Keyes (2002), emotional wellbeing comprises the presence or absence of positive feelings about being alive, psychological wellbeing represents more private and personal criteria for assessing overall functioning, whereas social wellbeing refers to the more public and social criteria by which people appraise their functioning.

Noteworthy, poorer mental health has been reported in females compared to males in the United States, as women doubled men in languishing and depression, experienced more pure depression (without languishing), and scored significantly lower on flourishing (Keyes, 2002). Keyes (2007) confirmed wellbeing mean differences between genders in subsequent research conducted in the United States, in which additional support was provided for an advantage of men over women on complete mental health (i.e., the absence either of languishing or depression), among other salient sociodemographic covariates, such as race, education, and the interaction between race and gender. In contrast, Chitgian-Urzua et al. (2013) reported no mean differences in psychological wellbeing between females and males when tested through Ryff and Keyes´ (1995) psychological wellbeing scale in Chilean adults.

PYD Measurement and Modelling with Latin American Populations

Despite the described recent theoretical and empirical progress, it is still necessary to have broader international research that allows testing and adjusting PYD models to novel populations, as the majority of the PYD research has been conducted with North American samples (e.g., Benson, 1990, Lerner, 2005). Therefore, it is crucial to recognise the contextual diversity in which emerging adults grow (Pertegal et al., 2010). In this regard, some authors have suggested that considering this contextual view is relevant due to young people resorting to different resources to promote positive development depending on the characteristics of the environments (Shek et al., 2019). In the case of Latin America, research in the area is still incipient and the results are not sufficiently settled to provide tools for professionals working with emerging adults, as there is a need for a measure with empirical support that allows its application in diverse contexts. In this regard, Chile is no exception, since there is still a significant gap on this matter, despite the evidence showing that it is urgent to develop youth intervention policies and programs that respond to current developmental needs in the country (Instituto Nacional de la Juventud, 2021; Trajtenberg et al., 2021).

However, novel attempts have been conducted with Peruvian, Colombian, and Mexican populations (i.e., Domínguez Espinoza et al., 2021; Manrique-Millones, Wium, et al., 2021). For instance, Manrique-Millones, Wium, et al. (2021) highlight strong positive associations between internal assets and wellbeing criteria in Colombian and Peruvian emerging adults, a study in which partial measurement invariance was attained for Benson's DAP and the Keyes' MHC-SF. Likewise, Domínguez Espi-

noza et al. (2021) reported similarly direct and robust associations between 5Cs and healthy lifestyle behaviours, such as regular fruit/vegetable intake and physical activity. Moreover, closely related research recently conducted by Pérez-Díaz et al. (2022) tested the predictive role of Positive Identity, Confidence and Character on Psychological Wellbeing in Chilean Youth through SEM (Structural Equation Modelling) and mediation analysis. This work revealed that Positive Identity from the developmental assets approach, significantly predicted Chilean emerging adults' Psychological Wellbeing (flourishing model) and that this relationship was double mediated by young Chileans' Confidence and Character, as conceptualised in the 5Cs model. In this research, Positive Identity explained up to 80% of Psychological Wellbeing variance, 80% of Confidence, and 16% of Character, being the primary study on which the current research is theoretically and empirically supported.

Aims of the study

There is a thrust in academia to fill the existent gaps in the PYD literature, with attention to methodological, theory-driven, inclusive, and novel research across related disciplines (Psychology, public health, family studies, public policy) and populations, especially those neglected in the English peer-review scholarship. In this regard, the cross-national project on Positive Youth Development (CN-PYD) aims to disseminate and equally consider scholarship from a wide range of researchers and countries in the world (Sheik, 2021). This is the ethos and the theoretical umbrella under which the cur-

rent research was developed, which is aimed at filling this gap regarding Chilean Youth. It portrays evidence for the design of interventions tailored to promote positive development in young people, in the context of growing problems related to violence and mental health.

Hypothesis one (H1): Wellbeing scores (i.e., Emotional, Social, Psychological, and General Wellbeing) will be significantly lower in Chilean emerging women than in Chilean emerging men.

Hypothesis two (H2): A multiple regression model including Positive Identity, Confidence, Character and Connection as predictors, will significantly predict the variance of General Wellbeing in Chilean emerging adults.

Hypothesis two (H3): A multiple regression model including Positive Identity, Confidence, Character and Connection as predictors, will significantly predict the variance of Psychological Wellbeing in Chilean emerging adults.

Method

Participants. The sample comprised 261 Chilean juveniles (n_{Women}= 189, n_{Men} = 72, $Mean_{Age}$= 21.87, SD_{Age}= 3.14) who were approached by convenience sampling through an online survey uploaded to Qualtrics. The data collection extended from April to November 2021. The questionnaire was disseminated through a single link by the authors of the study and two undergraduate dissertation teams under the supervision of the principal researcher. The study obtained ethical clearance through the University of Bergen, Norway, dated June 24th, 2019, with reference number 612969. In addition, local ethics approval was obtained in

Chile on June 25th, 2020, from the Vice-rectory of Research, Development and Artistic Creation (VIDCA)-Ethics and Bioethics Committee of the Austral University of Chile, and their subcommittee on Bioethics in Human Research. The dataset used in this research has been made freely available online at: https://data.mendeley.com/datasets/76nwjf62kk

Measures. *The Developmental Assets Profile.* The developmental assets were measured with The Developmental Assets Profile (DAP; Benson, 2007). The questionnaire comprises 58 items, on a 5-point Likert response scale, across external assets (i.e., Support, empowerment, expectations and boundaries, constructive use of time) and internal assets (i.e., commitment to learning, positive values, social competence, and positive identity). The DAP has been implemented across diverse cultural and language populations, encompassing more than 25,000 adolescents and emerging adults aged 9–31 (see Scales et al., 2017). In the current study, all scales showed acceptable to high internal consistency, except for constructive use of time: Support (α = .78), empowerment (α = .72), expectations and boundaries (α = .79) constructive use of time (α = .40), commitment to learning (α = .81), positive values (α = .79) social competence (α = .75), positive identity (α = .84). Only positive identity was used in the analyses of the present study.

The PYD Short Form. The 5Cs were measured with the PYD Short Form (PYD-SF; Geldhof et al., 2014). The questionnaire comprises 34 items, on a 5-point Likert response scale, across five scales (i.e., Competence, Confidence, Character, Caring, and Connection). All of these scales displayed acceptable to high internal consist-

ency scores: Competence (α = .71), Confidence (α = .87), Character (α = .64), Care (α = .79), and Connection (α = .74), with the lowest Character and the highest Confidence, being the two Cs included in the analyses of the current research. The Developmental Assets Profile and the PYD Short Form were translated from English to Latin American Spanish and back-translated to assure linguistic equivalence in previous research conducted by Manrique-Millones, Pineda-Marin, et al. (2021) as part of the ongoing cross-cultural study on PYD (see Wiium & Dimitrova, 2019).

The Mental Health Continuum Short-Form (MHC-SF). The wellbeing measures were assessed through the Spanish Version of the Mental Health Continuum Short-Form (MHC-SF, Echeverría et al., 2017), which is a self-reported 14-item questionnaire on a 6-point Likert response scale originally designed by Keyes (2002, 2008) to assess emotional (3 items), psychological (6 items), and social (5 items) wellbeing during the last month. All these scales displayed high internal consistency scores: Emotional Wellbeing (α = .83), Psychological Wellbeing (α = .89), Social Wellbeing (α = .76), and the overall score of Wellbeing (α = .91). Psychological Wellbeing and General Wellbeing were utilised in the analyses of the current research. Echeverría et al. (2017) have provided evidence of strong measurement invariance (up to the latent mean level) for the MHC-SF on gender, region of residence, age, and application time, in a large sample of Chilean adults.

Design and Procedure. The study design is cross-sectional, survey research. To test the first hypothesis, t-test-independent-samples analyses based on 1000 bootstrap samples were con-

ducted. Moreover, to control type I error (i.e., falsely claiming an effect when this is not present in the population of interest), we calculated False Discovery Rate (FDR) adjusted p-values. FDR is the proportion of erroneously rejected null hypotheses when testing multiple comparisons (Benjamini & Hochberg, 1995). To test the second and third hypotheses of the study, we conducted multiple regression analyses with forced introduction of the predictors (i.e., Confidence, Character, Positive Identity, and Connection) on General Welbeing as the criterion for testing H2, and Psychological Wellbeing as the criterion for testing H3.

Moreover, multicollinearity diagnostics were conducted, after which it was determined that multicollinearity between the exogenous variables (Positive Identity, Confidence, Character, and Connection) was minimal. More specifically, VIF (Variance Inflation Factor) scores were in the range of 1.125 to 2.004 (cf. values above 5 reveal serious multicollinearity, Hair et al., 2011), whilst tolerances were in the range of .50 to .89 (cf. values closer to 0 indicate low tolerance which translates as high multicollinearity, whereas values closer to 1 reveal high tolerance which suggests low multicollinearity, Hair et al., 2014). Consequently, tolerances values below .20 are of concern (Hair et a., 2011). In a nutshell, VIF and tolerance scores reflect low multicollinearity for the exogenous variables included in the models testing H2 and H3. All the analyses were conducted in SPSS version 24 (IBM, 2016).

Results

Descriptive statistics of the variables implemented in the research are provided in Table 1.

We assessed the normality of the overall sample, and the subgroups of emerging women and emerging men separately through normality plots (normal quantile–quantile, Q-Q), determining that the observations in the overall sample and the respective groups distributed approximately normal across the studied variables, as their values were in the -1 to +1 range, which is within the expected boundary of -2 to +2 (Hair et al., 2014).

Regarding H1, the t-test analyses confirmed the hypothesis of emerging Chilean males scoring higher than Chilean emerging women in all wellbeing measures ($p < .05$), as presented in Table 2. These findings remained statistically significant even after FDR adjustment was conducted. Moreover, the effect size of these differences in wellbeing was in the range of .028 to .042, which can subsequently be interpreted as low to medium effect sizes, being the mean difference in Psychological Wellbeing the lowest, and the mean difference in Social Wellbeing the highest. In other words, emerging women resembled more to emerging men in psychological wellbeing, and these groups resemble less in social wellbeing.

Regarding H2, a model (model 1) including positive identity, confidence, character, and connection as predictors of General Wellbeing was supported. Each of the chosen predictors contributed to explaining at a statistically significant level, the variability of general wellbeing, with Positive Identity, Confidence, and Connection explaining most of the variability of the model ($p < .001$), and Character explaining the least ($p < .05$). This model predicted 64% of the variance of General Wellbeing in the sample. Regarding H3,

Table 1

Descriptive Statistics of the Chilean Sample of Emerging Adults

	Min	Max	M	SD	Skew	Kurt
Overall Sample						
Emotional Wellbeing	1,00	6,00	3,97	1,23	-0,37	-0,89
Social Wellbeing	1,00	5,40	2,70	1,08	0,34	-0,80
Psychological Wellbeing	1,00	6,00	3,95	1,24	-0,35	-0,86
General Wellbeing	1,21	5,64	3,51	1,04	-0,10	-0,91
Positive Identity	1,14	4,00	2,63	0,64	0,01	-0,65
Confidence	1,00	5,00	3,31	0,89	-0,43	-0,31
Character	2,00	5,00	3,97	0,55	-0,77	0,88
Connection	1,25	4,88	3,36	0,70	-0,36	-0,20
Emerging Women						
Emotional Wellbeing	1,33	6,00	3,86	1,20	-0,25	-0,95
Social Wellbeing	1,00	5,40	2,61	1,06	0,38	-0,78
Psychological Wellbeing	1,00	6,00	3,85	1,25	-0,24	-0,88
General Wellbeing	1,21	5,50	3,41	1,04	0,01	-0,90
Positive Identity	1,14	4,00	2,59	0,65	0,07	-0,52
Confidence	1,00	5,00	3,24	0,90	-0,39	-0,28
Character	2,00	5,00	3,96	0,56	-0,80	0,99
Connection	1,25	4,75	3,35	0,68	-0,42	-0,14
Emerging Men						
Emotional Wellbeing	1,00	6,00	4,26	1,25	-0,75	-0,38
Social Wellbeing	1,00	5,40	2,93	1,12	0,19	-0,83
Psychological Wellbeing	1,50	6,00	4,19	1,17	-0,63	-0,61
General Wellbeing	1,50	5,64	3,76	0,99	-0,37	-0,70
Positive Identity	1,57	3,86	2,75	0,61	-0,13	-0,98
Confidence	1,50	4,83	3,50	0,85	-0,54	-0,30
Character	2,25	4,88	4,01	0,53	-0,67	0,60
Connection	1,63	4,88	3,40	0,757	-0,28	-0,35

Note. Min = Minimum, Max = Maximum, M = Mean, SD = Standard Deviation, Skew = Skewness, Kurt = Kurtosis.

Table 2

Independent Samples t-Tests Between Emerging Men and Emerging Women in Chile

	Levene's F test	p	t	df	p	FDRp	d	MD	Bias	SE	p	Lower 95%CI	Upper 95%CI
						Bootstrap							
Emotional Wellbeing	0,035	0,85	-2,359	259	0,019	0,038	0,032	-0,397	-0,002	0,17	0,017	-0,734	-0,057
Social Wellbeing	0,315	0,58	-2,142	259	0,033	0,044	0,042	-0,319	-0,004	0,15	0,031	-0,596	-0,533
Psychological Wellbeing	0,448	0,50	-2,008	259	0,046	0,046	0,028	-0,342	-0,002	0,16	0,034	-0,651	-0,038
General Wellbeing	0,561	0,46	-2,482	259	0,016	0,038	0,034	-0,345	-0,003	0,14	0,012	-0,618	-0,088

Note. t = t-test, df = degrees of freedom, p = significance value, *FDRp* = False Discovery Rate adjusted p-value for multiple comparisons, d = Cohen's d effect size statistic, *MD* = mean difference, *SE* = standard error. Bias-corrected and accelerated (BCa) bootstrap intervals are reported. All p-values are two-tailed.

the same set of predictors was tested on the criterion variable Psychological Wellbeing. H3 was partially supported, due to Positive Identity ($p <$ .001), Confidence ($p <$ .001), and Character ($p <$ .01) retaining their predictive role on Psychological Wellbeing, and with Connection positively related to Psychological Wellbeing, although not a statistically significant level ($p = 0.09$). All in all, this model predicted 61% of the variance of Psychological Wellbeing in the sample. The coefficients of the multiple regression analyses and the respective multicollinearity diagnostics are informed in Table 3.

Discussion

The present study first tested gender-based hypotheses on wellbeing measures between Chilean emerging women and men. Secondly, and more fundamentally, it provided evidence on the role of Positive Identity, Confidence, Character, and Connection as predictors of General and Psychological Wellbeing in a sample of emerging adults in Chile. The research

is closely related to previous work on the predictive role of Positive Identity, Confidence and Character in Chilean Youth when tested through SEM and mediation (Structural Equation Modelling, see Pérez-Díaz et al., 2022). In the referenced investigation, the researchers confirmed that Positive Identity was the core internal developmental asset explaining the variance of psychological wellbeing, and that in this relationship, Confidence and Character acted as mediators of the effects of Positive Identity on Psychological Wellbeing. Similarly, Manrique-Millones, Wiium, et al. (2021) reported that internal assets were found strong predictors of wellbeing scores with a Latin American sample comprised of Colombian and Peruvian emerging adults. In this research, the association between internal assets and emotional, social and psychological wellbeing was markedly stronger than those between external assets and the same wellbeing criteria. The present study expands on these past findings,

Table 3

Multiple Regression Coefficients and Multicollinearity Diagnostics

Predictors	Beta	t	p	Tolerance	VIF	R	R^2	$Adj.R^2$
			Model 1					
Intercept		-3.206						
PI	0.395	7.452***	0,001	0.499	2.004			
CF	0.327	6.215***	0,001	0.504	1.983			
CH	0.098	2.421*	0,016	0.854	1.170			
CO	0.160	3487***	0,001	0.666	1.502	0.801	0.642	0.636
			Model 2					
Intercept		-3.454						
PI	0.418	7.677***	0,001	0.499	2.004			
CF	0.337	6.210***	0,001	0.504	1.983			
CH	0.120	2.883**	0,004	0.854	1.170			
CO	0.080	1.686	0,093	0.666	1.502	0.788	0.620	0.614

Note: PI = Positive Identity, CF = Confidence, CH = Character, CO = Connection. The dependent variable in Model 1 is General Wellbeing, whilst the dependent variable in Model 2 is Psychological Wellbeing. Standardized coefficients and two-tailed p-values are reported. VIF = Variance Inflation Factor. * $p < .05$, ** $p < .01$, *** $p < .001$. R= Correlation Coefficient, R^2 = Coefficient of determination, *Adj. R^2* = Adjusted coefficient of determination.

as it provides gender-based wellbeing differences in the sample, and highlights the role of Positive Identity, Confidence, Character, and Connection on Chilean emerging adults' wellbeing through a classical multiple regression data analytical approach.

All pairwise comparisons on Gender, as tested in H1, determined that emerging men scored significantly higher on Emotional, Social, Psychological, and General Wellbeing than emerging Chilean women, even after adjustment for multiple comparisons through FDR, which is mostly consistent with the literature (e.g., Keyes, 2002, 2007), albeit novel with Chilean samples (cf. Chitgian-Urzua et al., 2013). Moreover, the percentage of variance from Model 1 and Model 2 explaining General Wellbeing and Psychological Wellbeing was noticeable when H2 and H3 were tested, given that more than 60% of the variability of the criteria was explained for the included predictors in the multiple regression tested models. However, it is interesting the beta change regarding Connection, as it loses its predicting power regarding psychological wellbeing when contrasted to general wellbeing. This finding is theoretically intuitive, as connection indicates positive bonds with others and organisations in which there is a bidirectional exchange between young people and society (Lerner, 2005), whereas General Wellbeing measures Positive Emotions (Emotional Wellbeing), Positive Social Functioning (Social Wellbeing) and Positive Psychological functioning (Psychological Wellbeing) altogether.

Empirically, previous SEM research conducted with a sample of over 700 university students in Ghana tested the role of the 5Cs on the mental health criteria from the MHC-SF implemented in the present study (Kabir et al., 2021). These authors provided support for the claim hereby presented, as the effect of Connection to wellbeing criteria was stronger for Emotional Wellbeing and Social Wellbeing compared to Psychological Wellbeing, albeit being the three statistically significant after controlling for age and gender. However, General Wellbeing was not included as an overall score of mental health in Kabir et al.' study, somehow limiting its comparability with the present study.

Therefore, the effect of Connection must be understood in a greater bioecological context (Bronfenbrenner & Morris, 2006), providing this a rationale for the larger effect of Connection on General Wellbeing rather than on Psychological Wellbeing, as the former is a global score merging social, emotional, and psychological wellbeing. Similarly, the larger effect of Positive Identity and Character on Psychological Wellbeing must be understood from an individual differences perspective, as these predictors appraise inner competence or assets rather than adults an interrelation between the emerging adult and their context.

In addition, Competence, Confidence and Character did not significantly explain the variance of any wellbeing criteria in Kabir et al. (2021), which is partially consistent with the present research, as Competence was early disregarded as a potential predictor in exploratory multiple regression analysis due to their lack of explanatory power over wellbeing criteria, although being inconsistent regard-

ing the powerful predictive role of both Confidence and Character on General Wellbeing and Psychological Wellbeing in this and past research with Chilean population (Pérez-Díaz et al., 2022). Lastly, regarding Caring, Kabir et al. reported a positive effect of low magnitude on psychological wellbeing only, which was absent when tested in preliminary analyses with the Chilean data.

Our research is not exempt from limitations. Firstly, survey research is known to be affected by social desirability, and in this regard, our research is not free absent from this potential bias. Secondly, given that there were marked gender-based differences across the measured wellbeing scores, future research should replicate the reported H1 findings with larger and evener sample sizes across genders, a scenario that was impossible to attain in the present study due to non-probabilistic, convenience, sampling design. Thirdly, all participants responded to the PYD questionnaires online and were assessed when mostly strict lockdown measures were still in place in the country, which could have lowered their wellbeing scores or even exacerbated their assets or competence as a consequence of thriving in the COVID-19 pandemic. Further research may elucidate other unexplored relationships between PYD predictors and flourishing measures (such as those comprised in the Mental Health Continuum Short-Form) with new waves of Latin American and Chilean emerging adults from the Cross-national project on PYD (CN-PYD).

References

Årdal, E., Holsen, I., Diseth, Å., & Larsen, T. (2017). The Five Cs of Positive Youth Development in a school context; gender and mediator effects. *School Psychology International*, 014303431773441. https://doi.org/10.1177/0143034317734416

Barboza, G. E., Schiamberg, L. B., Oehmke, J., Korzeniewski, S. J., Post, L. A., & Heraux, C. G. (2009). Individual Characteristics and the Multiple Contexts of Adolescent Bullying: An Ecological Perspective. *Journal of Youth and Adolescence, 38*(1), 101-121. https://doi.org/10.1007/s10964-008-9271-1

Benjamini, Y., & Hochberg, Y. (1995). Controlling the False Discovery Rate: A Practical and Powerful Approach to Multiple Testing. *Journal of the Royal Statistical Society, 57*(1), 289–300.

Benson, P. L. (1990). *The troubled journey: A portrait of 6th-12th grade youth*. Search Institute.

Benson, P. L. (2007). Developmental assets: An overview of theory, research, and practice. In R. Silbereisen & R. Lerner (Eds.), *Approaches to positive youth development* (pp. 33–59). Sage Publications.

Benson, P. L., Scales, P. C., & Syvertsen, A. K. (2011). The contribution of the developmental assets framework to positive youth development theory and practice. En Advances in Child Development and Behavior (Vol. 41, pp. 197-230). Elsevier. https://doi.org/10.1016/B978-0-12-386492-5.00008-7

Bronfenbrenner, U., & Morris, P. A. (2006). The Bioecological Model of Human Development. In R. M. Lerner & W. Damon (Eds.), Handbook of child psychology: Theoretical models of human development (pp. 793–828). John Wiley & Sons Inc.

Catalano, R. F., Berglund, M. L., Ryan, J. A. M., Lonczak, H. S., & Hawkins, J. D. (2004). Positive Youth Development in the United States: Research Findings on Evaluations of Positive Youth Development Programs. *The ANNALS of the American Academy of Political and*

Social Science, *591*(1), 98-124. https://doi.org/10.1177/0002716203260102

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

Chitgian-Urzúa, V., Alfonso Urzúa, M., & Vera-Villarroel, P. (2013). Análisis Preliminar de las Escalas de Bienestar Psicológico en Población Chilena. *Revista Argentina de Clinica Psicologica*, *22*(1), 5–14.

Conceição, P., & Bandura, R. (2008). Measuring Subjective Wellbeing: A Summary Review of the Literature. *United Nations Development Program*, *April 2008*, 1–25. http://sdnhq.undp.org/developmentstudies/docs/subjective_wellbeing_conceicao_bandura.pdf

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*. https://doi.org/10.3389/fpsyg.2015.01941

Damon, W. (2004). What is Positive Youth Development? *The ANNALS of the American Academy of Political and Social Science, 591*(1), 13-24. https://doi.org/10.1177/0002716203260092

Dimitrova, R., Fernandes, D., Malik, S., Suryani, A., Musso, P., & Wiium, N. (2021). The 7Cs and Developmental Assets Models of Positive Youth Development in India, Indonesia and Pakistan. En R. Dimitrova & N. Wiium (Eds.), *Handbook of Positive Youth Development* (pp. 17-33). Springer International Publishing. https://doi.org/10.1007/978-3-030-70262-5_2

Dimitrova, R., & Wiium, N. (2021). Handbook of Positive Youth Development: Advancing the Next Generation of Research, Policy and Practice in Global Contexts. En R.

Dimitrova & N. Wiium (Eds.), *Handbook of Positive Youth Development* (pp. 3-16). Springer International Publishing. https://doi.org/10.1007/978-3-030-70262-5_1

Domínguez, A. del C., Wiium, N., Jackman, D., & Ferrer-Wreder, L. (2021). Healthy Lifestyle Behaviors and the 5Cs of Positive Youth Development in Mexico. En R. Dimitrova & N. Wiium (Eds.), *Handbook of Positive Youth Development* (pp. 109-121). Springer International Publishing. https://doi.org/10.1007/978-3-030-70262-5_8

Dimitrova, R., Fernandes, D., Malik, S., Suryani, A., Musso, P., Wiium, N. (2021). The 7Cs and Developmental Assets Models of Positive Youth Development in India, Indonesia and Pakistan. In Dimitrova, R., Wiium, N. (Eds.) *Handbook of Positive Youth Development. Springer Series on Child and Family Studies* (pp. 17–33). Springer. https://doi.org/10.1007/978-3-030-70262-5_2

Dimitrova, R., Wiium, N. (2021). Handbook of Positive Youth Development: Advancing the Next Generation of Research, Policy and Practice in Global Contexts. In Dimitrova, R. & Wiium, N. (Eds.) *Handbook of Positive Youth Development. Springer Series on Child and Family Studies* (pp. 3–16). Springer. https://doi.org/10.1007/978-3-030-70262-5_1

Domínguez Espinosa, A.d.C., Wiium, N., Jackman, D., Ferrer-Wreder, L. (2021). Healthy Lifestyle Behaviors and the 5Cs of Positive Youth Development in Mexico. In Dimitrova, R. & Wiium, N. (Eds.) *Handbook of Positive Youth Development. Springer Series on Child and Family Studies* (pp. 109–121). Springer. https://doi.org/10.1007/978-3-030-70262-5_8

Echeverría, G., Torres, M., Pedrals, N., Padilla, O., Rigotti, A., & Bitran, M. (2017). Validación de la versión en español del cuestionario del continuo de salud mental-versión corta. *Psicothema*, *29*(1), 96–102. https://doi.org/10.7334/psicothema2016.3

Ford, D. H., & Lerner, R. M. (1992). *Developmental systems theory: An integrative approach*. Sage Publications.

Frías, M., & Barrios, M. I. (2016). Recursos que contribuyen al desarrollo positivo en jóvenes. *Escritos de Psicología/Psychological Writings, 9*(3), 37-44. https://doi.org/10.5231/psy.writ.2016.2911

Gálvez-Nieto, J. L., Vera-Bachmann, D., Trizano-Hermosilla, Í., Polanco, K., & Salvo, S. (2018). Propiedades Psicométricas de la Versión Reducida de la Escala de Valores para el Desarrollo Positivo Adolescente (EVDPA-R) en Estudiantes Chilenos. *Revista Colombiana de Psicología, 27*(2), 69-84. https://doi.org/10.15446/rcp.v27n2.65500

Garassini, M. E. (2020). *Desarrollo positivo adolescente* (1ª ed.). Manual Moderno.

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. https://doi.org/10.1111/jora.12039

Geldhof, G. J., Bowers, E. P., Mueller, M. K., Napolitano, C. M., Callina, K. S., Walsh, K. J., et al. (2015). The Five Cs model of positive youth development. In E. P. Bowers, G. J. Geldhof, S. K. Johnson, L. J.Hilliard, R. M. Hershberg, J. V. Lerner, & R. M. Lerner (Eds.), *Promoting positive youth development.Lessons from the 4-H study* (pp. 161– 186). Springer. https://doi.org/10.1007/978-3-319-17166-1_9

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2014, 7th ed.). *Multivariate data analysis*. Pearson Education Limited.

Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing Theory and Practice, 19*(2), 139–152. https://doi.org/10.2753/MTP1069-6679190202

Heraux, C. G. (2009). Individual Characteristics and the Multiple Contexts of Adolescent Bullying: An Ecological Perspective. *Journal of Youth and Adolescence, 38*(1), 101-121. https://doi.org/10.1007/s10964-008-9271-1

Hill, P. L., Edmonds, G. W., Peterson, M., Luyckx, K., & Andrews, J. A. (2016). Purpose in life in emerging adulthood: Development and validation of a new brief measure. *The Journal of Positive Psychology, 11*(3), 237–245. https://doi.org/10.1080/17439760.2015.1048817

Hull, D. M., Powell, M. G., Fagan, M. A., Hobbs, C. M., & Williams, L. O. (2020). Positive youth development: A longitudinal quasi-experiment in Jamaica. *Journal of Applied Developmental Psychology, 67*, 101118. https://doi.org/10.1016/j.appdev.2020.101118

IBM Corp. Released 2016. *IBM SPSS Statistics for Windows, Version 24.0*. IBM Corp.

Instituto Nacional de la Juventud. (2021). Problemáticas y desafíos de las juventudes en Chile. (N.1). Instituto Nacional de la Juventud. https://www.injuv.gob.cl/sites/default/files/injuv2021_problematicas_y_desafios_de_l as_juventudes_en_chile_-1.pdf

Kabir, R. S., Doku, D. T., & Wiium, N. (2021). Connection in Youth Development Key to the Mental Health Continuum in Ghana: A Structural Equation Model of Thriving and Flourishing Indicators. *Frontiers in Psychology, 12*:676376. https://doi.org/10.3389/fpsyg.2021.676376

Keyes, C. L. M. (2002). The mental health continuum: From languishing to flourishing in life. *Journal of Health and Social Behavior, 43*(2), 207–222. https://doi.org/10.2307/3090197

Keyes C. L. (2005). Mental illness and/or mental health? Investigating axioms of the complete state model of health. *Journal of consulting and clinical psychology, 73*(3), 539–548. https://doi.org/10.1037/0022-006X.73.3.539

Keyes, C. L. M. (2007). Promoting and Protecting Mental Health as Flourishing: A Complementary Strategy for Improving National Mental Health. *American Psychologist, 62*(2), 95–108. https://doi.org/10.1037/0003-066X.62.2.95

Lerner, R. M. (2004). *Liberty: Thriving and civic engagement among America's youth.* Sage Publications. https://doi.org/10.4135/9781452233581

Lerner, R. M., Dowling, E. M., & Anderson, P. M. (2003). Positive youth development: Thriving as the basis of personhood and civil society. *Applied Developmental Science*, *7*(3), 172–180. https://doi.org/10.1207/S1532480XADS0703_8

Lerner, R. M., Lerner, J. V., Almerigi, J. B., Theokas, C., Phelps, E., Gestsdottir, S., Naudeau, S., Jelicic, H., Alberts, A., Ma, L., Smith, L. M., Bobek, D. L., Richman-Raphael, D., Simpson, I., Christiansen, E. D. D., & Von Eye, A. (2005). Positive youth development, participation in community youth development programs, and community contributions of fifth-grade adolescents: Findings from the first wave of the 4-H study of positive youth development. *Journal of Early Adolescence*, *25*(1), 17–71. https://doi.org/10.1177/0272431604272461

Manrique-Millones, D.L., Pineda-Marin, C.P., Millones-Rivalles, R.B., Dimitrova, R. (2021). The 7Cs of Positive Youth Development in Colombia and Peru: A Promising Model for Reduction of Risky Behaviors Among Youth and Emerging Adults. In: Dimitrova, R. & Wiium, N. (Eds.) *Handbook of Positive Youth Development. Springer Series on Child and Family Studies* (pp. 35–48). Springer. https://doi.org/10.1007/978-3-030-70262-5_3

Manrique-Millones, D., Wiium, N., Pineda-Marín, C., Fernández-Arata, M., Alfonso-Murcia, D., López-Martínez, J. L., & Millones-Rivalles, R. (2021). Association Between Substance Use Behaviors, Developmental Assets and Mental Health: A Glance at Latin American Young College Students. *Frontiers in Psychology*, *12*:639578. https://doi.org/10.3389/fpsyg.2021.639578

Oliva, A., Hernando, Á., Parra, Á., Pertegal, M.-Á., Ríos, M., & Antolín, L. (2008). *La Promoción del desarrollo adolescente: Recursos y estrategias de intervención*. Junta de Andalucía. Consejería de Salud.

Pérez-Díaz, P. A., Nuno-vasquez, S., & França, M. (2022). Positive identity predicts psychological wellbeing in Chilean Youth: A double-mediation model. *Frontiers in Psychology, 13*:999364. https://doi.org/10.3389/fpsyg.2022.999364

Pertegal, M.-Á., Oliva, A., & Hernando, Á. (2010). Los programas escolares como promotores del desarrollo positivo adolescente. *Cultura y Educación, 22*(1), 53-66. https://doi.org/10.1174/113564010790935169

Ryff, C. D., & Keyes, C. L. M. (1995). The structure of psychological wellbeing revisited. *Journal of Personality and Social Psychology, 69*(4), 719–727. https://doi.org/10.1037/0022-3514.69.4.719

Sanders, J., Munford, R., & Liebenberg, L. (2017). Positive youth development practices and better outcomes for high risk youth. *Child Abuse & Neglect, 69*, 201-212. https://doi.org/10.1016/j.chiabu.2017.04.029

Scales, P. C. (2011). Youth developmental assets in global perspective: Results from international adaptations of the developmental assets profile. *Child Indicators Research*, *4*(4), 619–645. https://doi.org/10.1007/s12187-011-9112-8

Scales, P. C., Roehlkepartain, E. C., & Shramko, M. (2017). Aligning Youth Development Theory, Measurement, and Practice Across Cultures and Contexts: Lessons from Use of the Developmental Assets Profile. *Child Indicators Research*, *10*(4), 1145–1178. https://doi.org/10.1007/s12187-016-9395-x

Sheik, Daniel. (2021). Foreword. In: Dimitrova R. & Wiium, N. (Eds.) *Handbook of Positive Youth Development. Springer Series on Child and Family Studies* (pp. 5–7). Springer.

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. T. L., Zhao, L., Dou, D., Zhu, X., & Xiao, C. (2021). The Impact of Positive Youth Development Attributes on Posttraumatic Stress Disorder Symptoms Among Chinese

Adolescents Under COVID-19. *Journal of Adolescent Health, 68*(4), 676-682. https://doi.org/10.1016/j.jadohealth.2021.01.011

Silbereisen, R., & Lerner, R. (2007). Approaches to Positive Youth Development: A View of the Issues. En R. Silbereisen & R. Lerner, Approaches to Positive Youth Development (pp. 3-30). SAGE Publications Ltd. https://doi.org/10.4135/9781446213803.n1

Tolan, P., Ross, K., Arkin, N., Godine, N., & Clark, E. (2016). Toward an integrated approach to positive development: Implications for intervention. *Applied Developmental Science, 20*(3), 214-236. https://doi.org/10.1080/10888691.2016.1146080

Trajtenberg, N., Dodel, M., Sanchez De Ribera, O., Cabello, P., & Claro, M. (2021). Online and offline victimisation: A cluster analysis of adolescent victims of bullying and cyber-bullying in Chile. *Journal of Children and Media, 15*(4), 568-587. https://doi.org/10.1080/17482798.2021.1902358

Yang, P.-J., & McGinley, M. (2021). Commonalities and specificities of positive youth development in the U.S. and Taiwan. *Journal of Applied Developmental Psychology, 73*, 101251. https://doi.org/10.1016/j.appdev.2021.101251

Zhu, X., & Shek, D. T. L. (2020). Impact of a positive youth development program on junior high school students in mainland China: A pioneer study. *Children and Youth Services Review, 114*, 105022. https://doi.org/10.1016/j.childyouth.2020.105022