Article

Brief Version of the Ryff Psychological Well-Being Scales for Children and Adolescents: Evidence of Validity

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Abstract

Background: Well-being has become a core concept in the study of positive child health, however, previous instruments for well-being evaluation have been centered mainly on the hedonic component. Therefore, the objective of this study was to adapt the Psychological Well-being Scales for assessing eudaimonic well-being in children and adolescents using a single-item per dimension approach. **Method:** A total of 312 participants (52.9% girls; ages 10-18) from Spain completed the Psychological Well-Being Scales Short Form, the WHO-5 Well-Being Index, and their psychological well-being was evaluated via a semi-structured interview by a developmental psychologist who was an expert in positive psychology. **Results:** Parallel analysis and exploratory factor analysis suggested a unidimensional structure that showed an excellent fit to the data. The new measure also demonstrated scalar invariance across gender and age. Moreover, the new scale significantly correlated with both WHO-5 and the expert‚Äôs ratings of psychological well-being, indicating adequate criterion validity. **Conclusions:** The Psychological Well-Being Scales Short Form is a useful, brief measuring instrument that reduces children cognitive fatigue during evaluation.

Keywords: Well-being, eudaimonic, children, quality of life, measurement.

Resumen

Versión Reducida de las Escalas de Bienestar Psicológico de Ryff Para Niños y Adolescentes: Evidencias de Validez. **Antecedentes:** el bienestar se ha convertido en un concepto central para el estudio de la salud infantil, aunque los instrumentos previos para su evaluación se han centrado en su componente hedónico. Por ello, nuestro objetivo fue adaptar las Escalas de Bienestar Psicológico para su uso con niños y adolescentes utilizando un enfoque de un único ítem por dimensión. **Método:** un total de 312 participantes (52,9% mujeres; edades 10-18) españoles completaron la nueva versión reducida de las escalas de bienestar psicológico, el índice de bienestar de la OMS-5, y su bienestar fue evaluado mediante una entrevista semiestructurada. **Resultados:** el análisis paralelo y el análisis factorial exploratorio sugirieron una estructura unidimensional que mostró un ajuste excelente a los datos. Además, la nueva medida presentó invariancia escalar para el género y la edad. La nueva escala correlacionó significativamente con la escala de OMS-5, así como con la evaluación del experto externo sobre la satisfacción con la vida global, indicando una adecuada validez de criterio. **Conclusiones:** la versión reducida de las Escalas de Bienestar Psicológico para jóvenes ha mostrado unas excelentes propiedades psicométricas, siendo un instrumento de medición breve que reduce la fatiga cognitiva de los jóvenes durante la evaluación.

Palabras clave: bienestar, eudaemónico, jóvenes, calidad de vida, medición.

Well-being has become a core concept in the study of psychology (Diener et al., 1999; Ryan & Deci, 2001; Seligman & Csikszentmihalyi, 2000). Traditionally, there are two main theoretical approaches based on different philosophical views of human nature dating back to ancient Greece: hedonic and eudaimonic well-being. The former is based on the Epicurean view of happiness and sees well-being as equivalent to hedonism (Kahneman, 1999) and pleasure (Ryan & Deci, 2001). The most common construct used to study hedonic well-being is subjective well-being, which is made up of positive/negative affect and satisfaction with life (Diener et al., 1999). In contrast, according

to the eudaimonic perspective, feeling happy is not necessarily equivalent to feeling well (Waterman, 1993). In this case, well-being refers to optimal psychological functioning and experience (Ryan & Deci, 2001) and not just to momentary experienced pleasure (Fromm, 1981). From this second view emerges psychological well-being (Deci & Ryan, 2008) which is centered on the fulfillment of one's own potential and not just to happiness per se. Specifically, it postulates that not all human desires lead to well-being, thus the mere satisfaction of desires does not necessarily imply achieving *telos* (purpose).

Nowadays, well-being is conceptualized as a multidimensional phenomenon that includes both *hedonia* and *eudaimonia* (e.g., Ryan & Deci, 2001). Previous research has shown that the hedonic and the eudaimonic components of well-being are moderately correlated (e.g., Compton et al., 1996). As a consequence, different researchers have proposed a structure in which hedonic and eudaemonic well-being are two different factors of positive mental health (see for example, Keyes et al., 2002).

During recent years, researchers have become more interested in the study of positive child mental health (e. g., Gámez-Guadix, et al., 2020; Tomyn & Cummins, 2011; Vallejo-Slocker et al., 2020). However, most instruments created to evaluate child well-being are based on the hedonic perspective. For example, one of the most widely-used instruments for evaluating subjective well-being is the Subjective Happiness Scale (Lyubomirsky & Lepper, 1999), which measures global happiness in both adult and adolescent populations. Other instruments designed to measure child hedonic well-being are the World Health Organization-Five Well-Being Index (Regional Office for Europe World Health Organization, 1998), the International Survey of Children's Well-Being (Llosada-Gistau et al., 2019) and the Personal Wellbeing Index-School Children (Tomyn & Cummins, 2011).

Although, there is a wide range of instruments evaluating child subjective well-being, there are only a few measures related to psychological (eudaimonic) well-being. One of the most widely used is the Stirling Children's Well-being Scale which measures emotional and psychological well-being in children aged from 8 to 15 years (Liddle & Carter, 2015). This scale includes two sub-components, Positive Emotional State and Positive Outlook which, according to the authors, correspond to Subjective (Hedonic) Well-being and Psychological (Eudaimonic) Well-being, consecutively. However, this measure has various limitations. It lacks factorial validity (Liddle & Carter, 2015), while it does not take into account purpose in life which is an important component of eudaimonic well-being (Ryff & Keyes, 1995).

One of the most important theoretical models incorporating both hedonic and eudaimonic well-being perspectives is the Complete State Model of Health (CSMH; Keyes, 2005, 2006). It composes of 14 dimensions based on Keyes' model of Emotional Well-Being (EWB), Social Well-Being (SWB) and Psychological Well-Being (PWB). Emotional well-being is defined in terms of positive affect/satisfaction with life (Keyes et al., 2008), and social well-being is related to social acceptance, social actualization, social contribution, social coherence, and social integration (Keyes et al., 2008; Malti et al., 2012).

More important for the present research, psychological well-being is associated to autonomy, self-acceptance, positive relations with others, environmental mastery, personal growth, and purpose in life (Keyes et al., 2008). The most commonly used instrument to measure psychological well-being are the Psychological Well-being Scales (PWBS) developed by Ryff (1989) for adult population. In brief, autonomy refers to the ability to evaluate oneself by personal standards and not look for others' approval. Self-acceptance is related to having a positive attitude toward oneself and one's life and it may be developed as early as in preschool age (Cvencek et al., 2016). Positive relationships with family and friends are another important component of well-being. The fourth dimension of a positive psychological functioning, environmental mastery, is about the sense of mastery and competence in managing the environment and make effective use of surrounding opportunities. The next dimension, purpose in life is a cognitive system that concerns the feeling of having a meaningful life, having goals and objectives. Finally, personal growth refers to the feeling of continued development of the improvement in self and behavior over time, keep developing their potential, to grow and expand as a person (Ryff, 1989). More recently, to measure the 14 dimensions proposed by the CSMH, Petrillo and colleagues (2015) developed the Mental Health Continuum Short Form (MHC-SF). Although

the MHC-SF is widely used to measure hedonic and eudaimonic well-being for adult population, to the best of our knowledge, the measure is not adapted to children and adolescents.

For this reason, in the present research we aim to adapt the PWBS proposed by Ryff (Díaz et al., 2006; Ryff, 1989) for the evaluation of children and adolescents eudaimonic well-being. We intended to maintain the original items as close as possible to the original scale but adapted to children's language and cognitive level. Moreover, we pretended to maintain the original structure proposed by Ryff (1989). To develop the new scale of Children Psychological Well-Being (based on Ryff, 1989) we used the single-item dimension approach proposed in the MHC-SF (Lamers et al., 2011). Using a single item per dimension has proven to be a valid strategy to measure well-being (Angulo-Brunet et al., 2020; Cunny & Perri, 1991; Petrillo et al., 2015) and it has an important advantage when it is used with children in order to reduce cognitive fatigue.

Method

Participants

In this study, three hundred and twelve children and adolescents from Spain participated voluntarily and without any compensation. Participants were recruited through letters of invitation to their legal guardians explaining the project and the voluntary nature of the participation. Precisely, we sent 450 invitations to parents through schools that previously accepted to participate to our study. All schools were located in the region of Castilla-La Mancha (Spain). Three hundred and twelve participants delivered the informed consent signed by legal guardians and formed the final sample of the study. Participants were 165 female (52.9%) and 147 male (47.1%) and aged between 10 and 18 years ($M = 13.52$, $SD = 2.54$). One hundred and seven were Primary Education students, 140 were middle school students, and 61 were high school students.

Instruments

Psychological Well-being Scales for Youths (PWB-SF-Y). The new instrument was based on the Psychological Well-being Scales proposed by Ryff (1989) and adapted to Spanish by Díaz, and colleagues (2006). The original instrument presents good psychometric properties. Regarding factorial validity, the proposed six-dimensional structure has been confirmed in Spanish samples (Diaz et al., 2006; van Dierendonck, et al., 2008). The instrument dimensions have shown good internal consistency in previous studies in Spanish population, with Cronbach's α values ranging between .69 and .93. (e.g., Asensio-Aguerri et al., 2019; Díaz et al., 2015).

In order to adapt the items of the Spanish version of the scale (Díaz et al., 2006) to children and adolescents population, we followed the instructions by Muñiz and Fonseca-Pedrero (2019) for the construction of original items (see also, Haladyna & Rodriguez, 2013). Precisely, a group of experts in developmental and positive psychology (4 education experts – 2 academic and 2 professionals – and 7 psychology experts – 4 academic and 3 professionals), unaware of the research objective, analyzed the content of the items contained in the original scale and selected one item per dimension, according to the basic principles that should guide the construction of item banks: representativeness, relevance, diversity, clarity, simplicity and understandability (Muñiz & Fonseca-Pedrero, 2019). That is, new items were simple,

free of technicalities, negations, double negatives, or excessively verbose or ambiguous statements, in order for the scale to be comprehensible for children and adolescents. Each expert adapted the selected original items to children's population and the final version of the scale was created through consensus (see Table 1 for the correspondence between the original items and the adapted ones). Participants responded to the six items using a scale ranging from 1 (strongly disagree) to 6 (strongly agree).

The World Health Organization-Five Well-Being Index (WHO-5). This is one of the most widely used scales to assess Subjective well-being. It consists of five self-reported items related to different emotional situations. Precisely, participants are asked to indicate the frequency to which they experimented each of the five emotions on a 6-point Likert scale (0 = At no time, 5 = All the time). This measure is suitable for children from 9 and above (Regional Office for Europe World Health Organization, 1998). The instrument dimensions have shown good internal consistency in previous studies, with Cronbach's α values ranging between .82 and .94. (e.g., de Wit et al., 2007; Khosravi et al., 2015).

Semi-structured interview of Psychological well-being. Using a similar procedure as Diener and colleagues (1985), a developmental psychologist expert in positive psychology conducted a semi-structured interview with each of the participants for approximately one hour. The semi-structured interview was based on questions about well-being in some of the main domains in childhood and adolescence.

Specifically, participants were asked about their well-being related with 1) family life (e.g., relationships with parents), 2) friends, 3) school, 4) self-concept. The interview concluded by asking participants to indicate their 5) overall well-being and the aspects of their life they liked most, and the ones they would like to change. Through a global evaluation of these domains, the interviewer rated each participant in terms of psychological well-being using a single item anchored by 0 (low well-being) and 10 (high well-being) (for similar procedures, see Bajo et al., 2021).

Procedure

This study was part of a research project funded by the Spanish Ministry of Science and was approved by the ethics committee of the "Universidad de Castilla - La Mancha" (UCLM) and the HGUCR ("Comité Ético de Investigación Clínica HGUCR-UCLM"). We first visited the educational centers to inform directors in detail about the project and ask for their collaboration. Next, informed consent forms were delivered to school directors, tutors, and families. Only participants who presented the informed consent form signed by their legal guardian participated in the study. Participants were interviewed individually in a laboratory, were informed that the collected data would be confidential and anonymous, and that they could stop whenever they considered it convenient. The study was presented as a research project on personality traits, beliefs, and attitudes. Half of the participants completed, in order of appearance, the Psychological Well-Being Scales for Youths, the WHO-5 Well-being Index, their age, gender and level of education. The other half of the participants first completed the WHO-5 measure, followed by the Psychological Well-Being Scales for Youths, and demographic data. Finally, a developmental psychologist expert in positive psychology, unaware of participants' answers in the questionnaire, conducted a semi-structured interview with each participant with the purpose of evaluating their global life satisfaction.

Data Analysis

In order to test the factorial validity of the PWB-SF-Y we employed a two-step process (e.g., Esteller-Cano et al., 2021). The sample was randomly divided into two subsamples of 156 children. Since no prior published studies have examined the factorial validity of the PWB-SF-Y, as this instrument contains new adapted items, we first conducted an exploratory factor analysis (EFA) using the first sub-sample (Gerbing & Hamilton, 1996). Suitability of the

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Table 1
Original and adapted items of Psychological Well-Being Scales (Díaz et al., 2006). [In italic the translation in English]

Original items (Díaz et al., 2006)	**Adapted items to children population**
1. En su mayor parte, me siento orgulloso de quien soy y la vida que llevo. *[In general, I feel confident and positive about myself.]* (Self-acceptance)	1. Estoy orgulloso/a de quién soy y la vida que llevo. *[I am proud of who I am and the life I lead.]*
2. Sé que puedo confiar en mis amigos, y ellos saben que pueden confiar en mí. *[I know that I can trust my friends, and they know they trust me.]* (Positive relationships)	2. Sé que puedo confiar en mis amigos y amigas y que ellos pueden confiar en mí. *[I know that I can trust my friends and that they can trust me.]*
3. Tengo confianza en mis opiniones incluso si son contrarias al consenso general. *[I have confidence in my opinions, even if they are contrary to the general consensus.]* (Autonomy)	3. Confío en mis opiniones, aunque sean contrarias a las de otros. *[I trust my opinions, even if they are contrary to those of others.]*
4. He sido capaz de construir un hogar y un modo de vida a mi gusto. *[I have been able to build a living environment and a lifestyle for myself that is much to my liking.]* (Environmental mastery)	4. Soy capaz de estar a gusto en mi hogar y con mi vida. *[I am able to be comfortable in my home and with my life.]*
5. Me siento bien cuando pienso en lo que he hecho en el pasado y lo que espero hacer en el futuro *[I feel good when I think of what I have done in the past and what I hope to do in the future.]* (Purpose in life)	5. Me siento bien con lo que he conseguido hasta ahora y lo que espero conseguir. *[I feel good about what I have achieved so far.]*
6. Para mí, la vida ha sido un proceso continuo de estudio, cambio y crecimiento. *[I have the sense that I have developed a lot as a person over time.]* (Personal growth)	6. Creo que cada vez sé más cosas de mí mismo/a y del mundo en el que vivo. *[I think I know more and more about myself / and about the world I live in.]*

matrix for conducting the EFA was tested using the Kaiser-Meyer-Olkin (KMO) test and Bartlett's test of sphericity. One of the most critical methodological decisions regarding EFA is the number of factors to retain. Following various authors' recommendations (e. g., Hayton et al., 2004) to estimate the number of factors to maintain we used parallel analysis (PA). Following the criterion established by the PA of the number of factors to be extracted, an EFA with Factor program 10.10.03 edition (Lorenzo-Seva & Ferrando, 2006) was conducted. We employed robust unweighted least squares as factor extraction method. With the second sub-sample we conducted a Confirmatory Factor Analysis (CFA) using robust maximum likelihood estimation method in MPLUS 8.5. The standard goodness-of-fit indices used for testing the acceptability of the model were: χ^2, Tucker-Lewis index (TLI), comparative fit index (CFI), root mean square error of approximation (RMSEA), and standardized root mean square residual (SRMR). As a general rule, it can be said that TLI and CFI values greater than .95, and values of the RMSEA and SRMR less than .08, indicate good model fit (Bandalos & Finney, 2018; Hu & Bentler, 1999). The measurement invariance by gender and age was tested through multi-group CFA estimation. First, configural invariance was tested where the factorial structure is constrained to be the same for both groups (male-female; children-adolescent). Then, we checked metric invariance (the magnitude of all factor loadings was constrained to be the same for both gender and age groups). Finally, the scalar invariance was tested constraining the intercepts of items to be the same across gender and age groups. Once the factorial validity was analyzed, we tested internal consistency through Cronbach's α and corrected total-item correlations. Finally, we tested the criteria validity of the PWB-SF-Y using a well-being rating made by an expert who interviewed each participant about their life, and the convergent validity using the WHO-5 Well-being Index. Pearson correlations were used to examine the relationships between the PWB-SF-Y and WHO-5 measure and Spearman coefficient for the relationships between previous measures and the score of the semi-structured interview of Life Satisfaction (ordinal measure).

Results

Dimensionality and Factor Structure

Table 2 presents Means, Standard Deviations, Skewness, Kurtosis and Pearson correlation coefficients among PWB-SF-Y items. The data for skewness ranged from -0.29 to -1.75, and Kurtosis ranged from -0.23 to 1.85. According to Finney &

DiStefano (2006) criteria (maximums of 2 for skewness and 7 for kurtosis), the variables in our study follow a normal distribution. In order to test the factorial validity, in the first step we conducted an EFA with the sub-sample 1. The KMO test gave a result of .81 and Bartlett's sphericity test was significant ($\chi^2 = 298.04$, $p < .000$), indicating that EFA was adequate for this sample. Mardia's multivariate skewness and kurtosis coefficients were 12.23 and 65.30. To estimate the number of factors to maintain we used parallel analysis (PA). Only the first eigenvalue of the real dataset exceeded mean random values (3.10 > 1.27). Following the criterion established by the PA, six items were introduced into the EFA analysis. The first factor explained 51.70% of variance and all factor loadings were higher than .40 (Table 3). Next, the one factor solution was tested through CFA using the sub-sample 2. Mardia's multivariate skewness and kurtosis coefficients of this sub-sample were 11.51 and 70.97. Figure 1 shows the item loadings in one-factor model. As shown in Table 4, the unidimensional solution had a good fit, with values of TLI and CFI ≥ .95 and values of SRMR and RMSEA < .08.

Measurement Invariance

The next step was testing invariance across gender (Male vs. Female) through multi-group CFA estimation (Byrne, 2008;

Table 3
Exploratory factor analysis of PWB-SF-Y items

	1
Self-acceptance	.83
Positive Relations	.48
Autonomy	.56
Environ. Mastery	.65
Purpose in Life	.73
Personal Growth	.64
% Variance	51.70

Note: Presented is the factorial matrix of a Robust Unweighted Least Squares extraction

Table 2
Means, Standard Deviations, Skewness (Ske), Kurtosis (Kurt), and Pearson's correlations of PWB-SF-Y Items

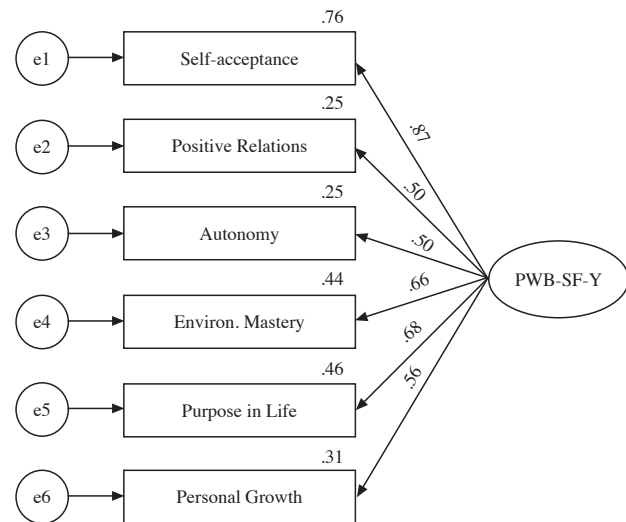|	Mean	SD	Ske	Kurt	2	3	4	5	6
1. Self-acceptance	5.04	1.22	-.79	-.23	.39**	.47**	.49**	.57**	.51**
2. Positive Relations	5.22	1.14	-.63	-.41		.24**	.29**	.24**	.27**
3. Autonomy	4.85	1.15	-.96	.44			.24**	.26**	.35**
4. Environ. Mastery	4.63	1.36	-1.22	.66				.60**	.32**
5. Purpose in Life	4.54	1.28	-1.75	1.85					.35**
6. Personal Growth	5.00	1.09	-1.06	.63					

** $p < .01$

Figure 1. Standardized solution for the one-factor model (6 items) of the PWB-SF-Y

Vandenberg & Lance, 2000). The configural model, which does not constrain any parameters, showed a good fit to data (Table 4). The metric invariance, where factor loads are constrained to be equal, also showed an adequate fit to data. Fit comparison between both configural and metric models indicated metric invariance (χ^2 diff = 5.76, *df* diff = 5, *p* = .33, ΔTLI ≤ .02, ΔCFI ≤ 0.01, ΔSRMR ≤ 0.3, ΔRMSEA ≤ 0.3) (Chen, 2007). Once full metric invariance is supported, the next step was to test for scalar invariance. Scalar invariance was tested by constraining loadings and item intercepts to be equivalent in the two groups. This model also showed an adequate fit to data. Also, fit comparison between metric and scalar models supported scalar invariance (χ^2diff = 3.58, *df* diff = 5, *p* = .61, ΔTLI ≤ .02, ΔCFI ≤ 0.01, ΔSRMR ≤ 0.3, ΔRMSEA ≤ 0.3).

To test invariance across age (Children 10-13 years old vs. Adolescent 14-18 years old) we conducted another multi-group CFA estimation. The configural and metric models showed an acceptable fit to data (Table 4). Also, comparison between both configural and metric models indicated no relevant fit indices differences ΔTLI ≤ .02, ΔCFI ≤ 0.01, ΔSRMR ≤ 0.3, ΔRMSEA ≤ 0.3) and change in χ^2 was not significant (χ^2 diff = 12.69, *df* diff = 10, *p* = .24). Finally, the scalar invariance model showed an acceptable fit to data. Fit comparison between metric and scalar models supported scalar invariance (χ^2 diff = 10.37, *df* diff = 10, *p* = .41, ΔTLI ≤ .02, ΔCFI ≤ 0.01, ΔSRMR ≤ 0.3, ΔRMSEA ≤ 0.3).

Reliability

Internal consistency analysis revealed an adequate value for the PWB-SF-Y (α = 0.78). Also, the items showed medium to high corrected item-total correlation, ranging from .39 to .72 (Self-acceptance: .72; Positive Relations: .39; Autonomy: .43; Environ. Mastery: .56; Purpose in Life: .60; Personal Growth: .50). Removing any item would not increase the value of the Cronbach's alpha.

Evidence of Validity Based on the Relationship with Other Variables

Table 5 shows the descriptive statistics and correlations of the different instruments used to measure psychological well-being. As expected, the PWB-SF-Y showed a significant correlation with the WHO-5. More important for the purpose of the present study,

Table 4
Goodness of Fit Indexes for the One factor Solution and Invariance across Gender and Age

Models	χ^2	df	p	TLI	CFI	SRMR	RMSEA
One-Factor Model	13.32	9	.14	.95	.96	.04	.05
Gender							
Configural invariance	21.92	18	.23	.95	.97	.05	.05
Metric invariance	27.68	23	.22	.95	.96	.08	.05
Scalar invariance	31.26	28	.30	.97	.97	.08	.04
Age							
Configural invariance	28.05	27	.40	.99	.98	.06	.03
Metric invariance	40.74	37	.30	.97	.97	.09	.04
Scalar invariance	51.11	47	.31	.96	.96	.10	.04

** *p* < .01

Table 5
Means (M), median (*), standard deviations (SD), and Pearson or Spearman (ϱ) correlations of well-being measures

WB Measures	M	SD	2	3 (ϱ)
1. PWB-SF-Y	4.88	.84	.67**	.59**
2. WHO-5	3.15	.98		.66**
Validity Measure				
3. Psychological Wellbeing Interview	6.00*			

** *p* < .01

the PWB-SF-Y showed a strong correlation with the interviewer's ratings of global psychological well-being (validity criterion). The WHO-5 also showed a strong correlation with the validity criterion.

Discussion

The goal of the present research was to adapt Psychological Well-Being Scales (Ryff, 1989) to children and adolescent population. To do it, a group of experts in children positive psychology adapted the items proposed by Ryff (1989), and translated to Spanish by Diaz and colleagues (2006), to participants' age. Following Lamers and colleagues (2011), the group of experts employed one item for each dimension in order to use the simplest instrument possible for our population and to reduce cognitive fatigue (Ackerman & Kanfer, 2009).

Concerning the psychometric properties of the new instrument, both the parallel analysis and the exploratory factor analysis indicated that our measure was unidimensional, explaining the first factor more than 40% of the variance. Subsequently, in a confirmatory analysis this one-factor model showed an excellent fit to the data. The next step was to test the invariance of the new measure across gender and age. The results confirmed scalar invariance for both gender and age. With the objective of examining the validity of the measure, we employed a criterion validity coefficient in terms of a semi-structured interview conducted by a developmental psychologist expert in positive psychology and unaware of the research purpose. The PWB-SF-Y significantly correlated with both the expert's ratings of global life satisfaction and the WHO-5, indicating that the new measure has an adequate criterion validity.

Although previous research has been centered in the evaluation of hedonic well-being in children (e.g., Llosada-Gistau et al., 2019), it is necessary to evaluate eudaimonic well-being because it is related with important aspects of children's positive life. For example, autonomy increases students' engagement in learning activities (Jang et al., 2010). Also, low self-acceptance is related to anxiety (Muris et al., 2003) and eating disorders (Stice, 2002). Moreover, positive relationships with peers lead to more prosocial values, better beliefs about the self, and better academic performance than those who have peer relationship problems (e.g., Wentzel, 2017). Research with adolescents showed that environmental mastery is related to high levels of positive affect and life satisfaction (García & Siddiqui, 2009). Another important dimension of psychological well-being is purpose in life, which leads adolescents to more prosocial behavior (Machell et al., 2016) and highest life satisfaction (Bronk et al., 2009). Finally,

personal growth initiative increases well-being and diminishes psychological distress (Ayub & Iqbal, 2012).

Despite the findings described above, the present research has some limitations. The first one is related to the sample size that was limited by the difficulty in accessing to children population and obtain parents' consent for participation. However, sample size did not significantly influence the results. Concerning exploratory factor analysis, the $N:p$ ratio is 26, which is higher than the ones generally recommended in the literature to yield good recovery of factors, and communalities are greater than .60. Both components are indicators of good factor recovery (Hogarty et al., 2005). Regarding confirmatory factor analysis, the sample size is adequate considering the simple structure of the proposed one factor-model (Koran, 2020). The second limitation is related to the fact that no information is presented for convergent validity for each dimension of psychological well-being. Finally, the last limitation concerns the use of a single-item strategy, which has psychometric shortcomings (e.g., predictive validity; Bergkvist

& Rossiter, 2007). However, using one item per dimension also has some advantages, especially in well-being evaluation (Cunny & Perri, 1991). Also, using a short version of the scale is useful in order to avoid cognitive fatigue (Ackerman & Kanfer, 2009; Angulo-Brunet et al., 2020) which is especially relevant with children population.

In sum, evaluating eudaimonic well-being is especially relevant in children's life, since it is related, among others, with prosocial values and behaviors, self-esteem, better academic performance and less psychological distress (e.g., Ayub & Iqbal, 2012; Bronk et al., 2009; Wentzel, 2017). For this reason, our objective was to develop a new short version of PWBS (Díaz et al., 2006; Ryff, 1989) for children and adolescents that would maintain the original theoretical dimensions using a single-item per dimension approach. The new measure showed adequate factorial validity, scale invariance across gender and age, and good reliability, suggesting that it can be a useful instrument for the study of children and adolescents eudaimonic well-being.

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