

The subjective well-being of adolescents in residential care compared to that of the general population



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ABSTRACT

The aim of this research is to study the subjective well-being of adolescents in residential care and compare it with that of the general population of the same age in Catalonia. Two samples were used: one from the general population in the first year of secondary education ($n = 491$; 50% boys; mean age = 12.1 years) and another from the residential care population aged 12–13 years ($n = 226$; 56% boys; mean age 12.5). The questionnaire of the International Survey of Children's Well-Being (ISCWeB) was used. It includes two psychometric scales: the Personal Well-Being Index–School Children (PWI-SC7) and the Overall Life Satisfaction (OLS); the former being adapted for the in-care population. To test the validity of the factorial structure of data for the two groups, a Confirmatory Factor Analysis (CFA) of the PWI-SC7 and different multi-group structural equation models (SEMs) were conducted. The CFA of the PWI-SC7 showed a good fit with the pooled sample and good comparability of correlations and regressions between the two groups. The SEM with constrained loadings allowed us to compare the contribution of the different items on the PWI-SC7 latent variable which was higher in all cases for adolescents in care. Likewise it showed a high correlation between OLS and PWI-SC7 in both populations, being it more intense among adolescents in care. **Scores on the OLS and on the PWI-SC7 are significantly lower among adolescents in care. However, according SEM results mean scores of the PWI-SC7 are not strictly comparable between groups.** Results challenge public policy concerning children by increasing efforts to promote equal opportunities for the in-care community and improve satisfaction with particular life domains, such as school and residential homes.

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1. Introduction

Children and adolescents who enter the protection system in Spain do so to be protected from a situation of risk of abuse or from actual abuse, as in most Western countries. Abuse is understood as a deliberate act, and includes sexual, physical or psychological abuse, as well as by default acts such as abandonment or neglect by parents or caregivers. In line with that proposed by Garbarino (1977) and Belsky (1993), we frame childhood abuse within developmental–ecological models based on systems theory, whereby cause and effect relationships are not identified but rather abuse is understood as the result of a multiple influence of diverse factors and the interaction among them (personal factors related to the children and parents, family relationships and parenting skills, and social context). The existence of these factors increases the likelihood of there being a situation which is harmful to the child, but with no certainty of this (Berger & Slack, 2014). In Catalonia, 70.4% of children in public care entered the child protection system due to neglect in 2009 (MTAS, 2011). As in other industrialized countries (Gilbert et al., 2009), the most common maltreatment among those in

the Spanish child protection system is neglect, followed by psychological or emotional maltreatment. In third position we find physical abuse, and finally sexual abuse.

Another major area of research is the study of how children are affected by the fact of suffering a situation of family abuse and the effects this can have on their future. Gilbert et al. (2009) used prospective studies to show a strong relationship between the abuse suffered in childhood and later behavioural problems and a moderate relationship with depression, educational achievements and having a job, among others.

The results of a European study focusing on the educational pathways of young people who have been in the protection system (Montserrat, Casas, & Malo, 2013) show how there is evidence that children in both residential and family foster care seem to be at risk of exclusion due to unequal opportunities in compulsory and post-compulsory education, and that their pathways often display delays and dropout, even among those who demonstrate greater capabilities for study: the family context and lack of real support for and prioritizing of schooling often shown by the protection and educational systems have influenced the low educational achievements of this population. Currie and Widom (2010) studied the socioeconomic status of those who had stayed in the protection system into adulthood, finding lower

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levels of education and employment compared to the general population, with worse results for women from a care background. Hager and Runtz (2012) explored the relationship between childhood physical and psychological maltreatment and self-reported physical health in adult women, showing that physical and psychological child maltreatment were significantly associated with greater physical health concerns.

But another question is yet to be addressed: how are they when they are in care? The statistical and social invisibility this phenomenon has often suffered from in many European countries (Casas & Montserrat, 2009) has contributed to prolonging problems associated with it. In Catalonia, a region located in north-eastern Spain and from which the results of the present study are drawn, the percentage of students in the school year corresponding to their age at 15 is 69.4% among adolescents in the general population, compared with 31.7% of the population in care, those in residential care faring even worse than children in non-kinship and kinship foster care (Montserrat, Casas, & Bertran, 2013). Difficulties at school, both social and academic, are also highlighted in other studies (Attar-Schwartz, 2009; Del Valle, López, Montserrat, & Bravo, 2009; Martín & Dávila, 2008; Palacios & Jiménez-Morago, 2007).

As for possible mental health problems suffered by those in residential care, in a study conducted in south-western Spain, Sainero, Bravo, and Del Valle (2013) found that 27% of these children aged between 6 and 18 were receiving psychological treatment. However, when they were administered the Child Behavior Checklist (CBCL) and the Youth Self Report (YSR) (Achenbach & Rescorla, 2001) within the context of the study, the percentage of children having a clinical score on one of the scales rose to 45%; according to the authors, this means that many of these children had not been diagnosed or received treatment. It also emerged from this study that 18% of the children in these centres had intellectual disabilities, a relatively unstudied phenomenon in Spain.

The present study focuses on the population of children living in residential centres, which on average represents 50% of those in the protection system in Spain. The other half are in family foster care, mostly kinship care, and in general terms children in care represent 0.5% of the general population in Spain (Montserrat, Casas and Malo, 2013). However, the poor quality of official statistics on child protection at local and national level constitutes an important gap in Spain, with only a few snapshots available and some of the figures coming from research. Despite the efforts made by the regional autonomous governments to avoid placing children in residential care and to promote family foster care, the fact that half of the children in care in Spain are currently in residential homes reflects the lack of success of these policies. López et al. (2010) conducted a study to identify the factors determining such intensive use of residential care and the reasons why so many children stay for long periods of their lives in this type of placement, as well as obstacles to achieving either family reunification or foster care or adoption. Findings were related to (i) parents with a significant occurrence of alcohol problems and other addictions, with a poor likelihood of rehabilitation, which can explain the lack of family reunification. There were also situations of domestic violence (38%); (ii) children with some psychological problems and difficulties at school; (iii) half the children were placed with siblings, which is indeed a protective factor but a difficult situation for family integration (both for the original family and for foster carers); (iv) two thirds of children had previously been placed in another institution or family, so they were more reluctant to leave the resource; (v) difficulties in forecasting; and (vi) a lack of foster parents emerged as a factor contributing to long-term residential care.

And finally, what do we know about the subjective well-being of children in care?

There are very few studies on the subjective well-being of children in care. Generally speaking, it is only in recent years that studies have begun to appear which include the perspective of children, some of them focusing on their well-being using not only objective but also subjective data. Subjective well-being (SWB) refers to people's life

satisfaction, both overall and for different domains. Although overall satisfaction comprises two components, one more cognitive (how people evaluate their life) and one more affective (emotions associated with life experiences) (Casas, 2011), in this study we refer only to the former.

Dinisman, Montserrat, and Casas (2012) studied SWB among adolescents, taking into account recent changes they had experienced in their lives. They found that those who had undergone few changes in terms of parents or caregivers, school, home or area where they lived reported significantly higher well-being than those who had experienced more changes (who were mainly living in single parent families or in care). Therefore, in this study stability appears as a key factor in the SWB of the adolescents surveyed.

Tomyn (2013) found that adolescents with unstable living arrangements and who have experienced situations of domestic violence score very low on SWB using the Personal Well-Being Index-School Children (PWI-SC) and have a higher risk of depression. In his Australian study on adolescents at risk, especially with problems at school, and including absenteeism, the author shows that the SWB of those at risk is significantly lower than that of the general population, although the two samples are both within the normal 70+ range on 100. The author attributes this to the resilience shown by many young people at risk despite their difficult situation (Tomyn, 2013). This may be related to the homeostasis theory (Cummins, 2003), whereby SWB is normally quite positive and stable (within a range of values between 70 and 90 points) for most people with an evolved mechanism to maintain their personal well-being. However, this homeostatic system can be challenged when life events exceed people's capacity to cope, and hence the importance of providing resources to compensate for this situation. In the aforementioned study (Tomyn, 2013), adolescents at risk are almost two times more likely than the general sample to be at a high risk of depression. They scored very low, especially for the domains 'Standard of living', 'Future Security' and "Health", compared to the general population sample. In addition, women at risk scored lower in all seven PWI-SC domains, being more prone to depression. Satisfaction with school was also much lower among adolescents at risk (also found by Dinisman et al., 2012) compared with the general population. Moreover, like other authors Casas (2011) and Tomyn (2013) observe that personal well-being decreases with age from 12 to 19 for both genders in general population samples.

Regarding children in care, different authors have already highlighted the negative effects of instability suffered by children in the child protection system (Sinclair, Baker, Lee, & Gibbs, 2007; Wade, Biehal, Farrelly, & Sinclair, 2011). Research focusing on young people who had been in residential care shows that one of the factors that seems to have most influence is the number of centres they have been in rather than the number of years they have spent in the protection system (Del Valle, Bravo, Álvarez, & Fernanz, 2008; Sala, Jarriot, Villalba, & Rodríguez, 2009; Silva & Montserrat, 2014).

In this field, we find authors such as Montserrat and Casas (2007) and Palacios and Jiménez-Morago (2007), who explore the satisfaction of children and adolescents in kinship care with regard to life and the care they receive. Rees et al. (2012) analysed the SWB of a sample of English children aged 8 to 16 – using both satisfaction with overall life and satisfaction with several life domains as indicators – and observed that children who were not living with their family (children in foster care, in residential homes or in other non-family arrangements) scored significantly lower than the general population.

1.1. The research question

The aim of this study is to analyse the subjective well-being (SWB) of adolescents in residential care and compare this to the general population of the same age. We explore their overall life satisfaction and life domains regarding satisfaction with (i) health, (ii) how secure they

feel, (iii) opportunities in life, (iv) things they have, (v) their relationships in general, (vi) the school they attend, and (vii) their use of time.

2. Method

2.1. Design and samples

In conducting this study we worked with two different samples of the Catalan adolescent population: those in their 1st year of secondary education in Catalonia (ESO), which corresponds to the age of 12–13 (we shall call them “general population”) and the population aged 12 and 13 in public residential care (which we shall call “adolescents in residential care”).

To study the subjective well-being of the general population, we used the data from the study *Calidad de vida y bienestar infantil subjetivo en España* (Quality of life and subjective well-being of children in Spain) conducted by UNICEF and the University of Girona (Casas & Bello, 2012). The questionnaire used in the said study was taken from the *International Survey of Children's Well-Being* (ISCWeB) with some minor changes to adapt the tool to the Spanish context. This questionnaire includes two psychometric scales that will be used in the present research, the *Personal Well-being Index—School Children* (PWI-SC) and the *Overall Life Satisfaction* (OLS).

From the initial sample of 626 adolescents enrolled in the 1st year of ESO in the general population we selected students aged between 12 and 13 (510 adolescents). Of these, 19 cases (3.73%) were eliminated because they were missing 3 or more items on the PWI-SC. These 19 cases did not show any relevant distinct characteristic compared to the other children. The remaining missing data from the scale items were imputed by regression using the SPSS software, version 19. The final sample of the general population is composed of 491 adolescents enrolled in the 1st year of ESO.

With regard to those in residential care, data were collected using the same ISCWeB questionnaire after adapting it to fit the characteristics of this population, as explained later. Of the total number of adolescents in residential care born in Catalonia between 1998 and 2000 ($N = 526$), 376 (71.5%) responded to the questionnaire. Once we had selected those aged between 12 and 13 to make the sample comparable by age with that of the general population, we were left with a sample of 235 adolescents. Of these, 9 cases were eliminated because they were missing 3 or more items on the PWI-SC. The remaining missing data from the scale items were imputed by regression using the same procedure. The final in-care population sample comprised 226 adolescents.

If we compare some characteristics of the two samples we see that the proportion of boys is slightly higher among the in-care population (56% compared to 50% among the general population). We also note that the average age is slightly higher among the in-care population (12.1 for the general population and 12.5 for those in care). In addition, of the latter, 5.3% are enrolled at special education schools.

2.2. Questionnaires

The ISCWeB is a self-administered questionnaire. In the present study, answers to 34 questions were selected, grouped into 12 thematic sections: personal information, home and people you live with, money and possessions, friends and other people, the area where you live, school, free time, your life, how you feel about yourself, more about you, your home, and the questionnaire itself. The Catalan version of the ISCWeB had already been tested by Casas and Bello (2012).

The final version of the ISCWeB questionnaire administered to the in-care adolescent population included the same 34 questions with the same thematic sections. Some changes were made to adapt it to the in-care population, as follows:

- Four questions were added in relation to the protection system: whether they have a relationship with their parents; the type of visits

they would propose; the level of agreement about living in residential care; and whether they would prefer another type of placement. These questions will be analysed separately in a different article.

- Satisfaction with “family” was replaced by satisfaction with “residential home”.
- Satisfaction with “parents” was replaced by satisfaction with “educators”.

For example, in the original questionnaire (ISCWeb), there are questions like the following: I feel safe at home; My parents (or the people who look after me) listen to me and take what I say into account. In the version used with children living in residential homes, the questions were: I feel safe at residential home; My educators listen to me and take what I say into account.

Once the changes had been made and before administering the questionnaire to the in-care adolescents, it was tested on 8 male and 8 female adolescents.

2.3. Data collection

The sampling units for collecting data from the general adolescent population comprised schools and colleges offering 1st year secondary education (ESO) in Catalonia. Stratified random cluster sampling was used, the strata being whether schools were public or private and whether they were located in urban, semi-urban or rural areas. In schools with more than two 1st year groups, two were randomly selected. The questionnaire was administered in groups in students' regular classroom by previously trained researchers during the first term of 2011–2012 (Casas & Bello, 2012).

As for the in-care population sample, the questionnaire was sent by post to adolescents in their own name. The envelope included a letter with a brief description of the study and the questionnaire to be filled in, along with a contact email address to answer any questions regarding the questionnaire. In addition, and to encourage the adolescents' participation, we also contacted the directors of each residential centre to inform them of the data collection process and the purpose of the study. The survey was performed during 3 months, from December 2012 to February 2013. To protect the confidentiality of the answers, we asked the directors of the centers to ensure the appropriate precautions to keep the survey answers confidential.

2.4. Instruments

The questionnaire ISCWeB includes two psychometric scales: the *Personal Well-Being Index* (PWI) and *Overall Life Satisfaction* (OLS).

The *Personal Well-Being Index* (PWI) is a scale designed to measure subjective well-being. Each of the seven original items evaluates satisfaction with a given life domain in a more or less generic and abstract way. Its psychometric properties have been published in several studies (Cummins, Eckersley, Van Pallant, Vugt, & Misajon, 2003; International Wellbeing Group, 2006; Lau, Cummins, & McPherson, 2005). The score for each item ranges from 0 to 10 points and only the end values are labelled. The overall value is the result of aggregating the different items and converting the result to a scale of 0 to 100.

Although this scale was created for use with adults, it has been tested with populations aged 12 and above in different countries (Brazil, Chile, Romania), showing good psychometric properties in these cases (Casas et al., 2012).

The version used by Casas and Bello (2012) and also in this study has some variations from the original PWI as it incorporates two items from the *Personal Well-Being Index—School Children* (PWI-SC) version (Lau et al., 2005), plus an item on use of time proposed by Casas et al. (2012) and already used in several countries. We shall call this version the PWI-SC7 and it includes the following items:

- Satisfaction with your health
- Satisfaction with how secure you feel
- Satisfaction with the opportunities you have in life
- Satisfaction with the things you have
- Satisfaction with your relationships in general
- Satisfaction with the school you attend
- Satisfaction with your use of time.

The *Overall Life Satisfaction (OLS) scale* is a single-item scale measuring overall life satisfaction. The importance of including this single item in studies on subjective well-being has been stressed by several authors (Campbell, Converse, & Rogers, 1976). The score ranges from 0 to 10 points and only the end values are labelled.

Both, the PWI and the OLS are usually considered good SWB indicators, and therefore a high correlation between the two scales is expected, as displayed in previous research (Casas & Bello, 2012).

2.5. Data analysis

A descriptive analysis of all variables stratified by type of population and by gender among the in-care population was carried out. Student's *T*-test and the effect size were used.

Because PWI-SC scale has not been previously used with in-care population in Spain, we will first test the validity of the factorial structure of data from the two populations in distinct contexts with different Confirmatory Factor Analysis (CFA) models using the AMOS20 programme for Structural Equation Modelling (SEM). The maximum likelihood estimate was used. The bootstrap method was used because the data displayed a higher than desirable multivariate kurtosis and because the sample of children in residential care is <400, and therefore the statistical power for sophisticated analysis may be reduced (Kim, 2005).

To test model fit, the fit indexes considered were the CFI (Comparative Fix Index), the RMSEA (Root Mean Square Error of Approximation) and the SRMR (Standardized Root Mean Square Residual). We assumed as acceptable those CFI results above 0.950 and RMSEA and SRMR results below 0.05, as recommended by Batista-Foguet and Coenders (2000), Arbuckle (2010) and Byrne (2010). However, we also consider, like some other authors that RMSEA values up to 0.08 represent reasonable approximate values in large samples (Browne & Cudeck, 1989; Byrne, 2010).

In order to compare CFA coefficients across groups (in our case, comparing the in-care population and the general population), it is first necessary to verify for configural invariance, which provides a basic test that the model generated by the pooled sample is valid separately for each group – and then for factorial invariance, which refers to the degree items on a questionnaire that mean the same to the members of the different groups studied, and is a requirement for the meaningful comparison of factors. Otherwise, the differences in means or correlation coefficients can be attributed to real differences in the distribution or different meanings of the variables (Meredith, 1993). We consider two types of factorial invariance: metric, which is a requirement in comparing variances, covariances and regression coefficients among groups, and strong factorial invariance, which is a requirement in comparing the means of factors among groups (Coenders, Batista-Foguet, & Saris, 2005).

We developed tests for statistical fitting of the model in three steps. The first step was to test the fit of an unconstrained multi-group model (configural invariance). The second step was to test the metric factorial invariance using constrained factor loadings. Finally, we tested strong factorial invariance using constrained factor loadings and intercepts.

2.6. Ethical considerations

Confidentiality and anonymity of the data were ensured according to Spanish Act 15/1999 on data confidentiality. Individual data was

encoded to ensure anonymity. This study was approved by the department of the Catalanian Government responsible for the Child Protection System (DGAIA). The informants participated voluntarily and without receiving incentives.

3. Results

3.1. Exploratory analysis

Table 1 shows the mean response for each of the scales studied (PWI-SC7 and OLS) and for each of the items comprising the PWI-SC7 scale among both the in-care and general populations.

Both the overall scores for both scales and those of each of the items studied show statistically significantly lower ($p < .001$) mean satisfaction scores among in-care adolescents than those of the general population. All effect sizes calculated support that there are differences between the two groups studied – the effect size is medium ($d > = 5$) or large ($d > = 0.8$) in all items and scale indexes.

Both scales show a relatively high correlation, although this is markedly higher among the in-care population (0.546 in the general population and 0.665 in the in-care population).

Table 2 shows the mean response for each of the scales studied (PWI-SC7 and OLS) and for each of the items comprising the PWI-SC7 scale according to the gender of adolescents in care. Boys averaged higher on both scales and almost all items comprising the PWI-SC7 scale (with the exception of *Things you have* and *Your relations in general*, where girls scored slightly higher). In addition, we find that with *How secure you feel* and the OLS these gender differences are statistically significant. The effect sizes calculated show that the differences by gender are meaningless ($d < 20$) in some items or small (between $d \geq 20$ & $d < 50$) in the others. In fact, the greater effect sizes are found in the two variables mentioned above: *How secure you feel* ($d = 0.33$) and *OLS* ($d = 0.36$).

3.2. Confirmatory factor analysis of the PWI-SC7

An initial model with the aggregated samples relating the items on the PWI-SC7 scale to a latent variable, without constraints and without allowing covariance of errors, showed only an acceptable fit, with a RMSEA of 0.058 (see Table 3, Model 1). We then tested the same model including an error covariance between *satisfaction with the things you have* and *satisfaction with your opportunities in life*. This modified model shows a better fit (Table 3, Model 2; Fig. 1 shows the standardized factor loads with the aggregated samples), which led us to test that it as an unconstrained multigroup model (Model 3), and then the same model with constrained loadings (Model 4) and then with constrained loadings and intercepts (Model 5).

According to Chen (2007) and Cheung and Rensvold (2001) a rule to accept a model with additional constraints is that fit statistics (particularly CFI) do not change more than 0.01. We find that Model 5 shows a bigger decrease in its fit statistics and therefore strong factorial invariance cannot be accepted, suggesting that response styles are different in both groups, with the result that means cannot be compared.

We therefore use Model 4 (Table 3) to carry out a comparison of correlations and regressions between the groups, as it shows a good fit and allows us to compare the standardized factorial loadings of the two samples.

The data in Table 4 show that all of the standardized factorial loadings on the latent variable PWI-SC7 are higher among the in-care population than among the general population of the same age, and we can therefore state that they contribute more to the subjective well-being of the former than of the latter.

Further analysis shows that among the in-care population the item with the greatest loadings on the latent variable is *satisfaction with your use of time*, followed by *satisfaction with security* and, further behind, *satisfaction with opportunities in life*. Although these items

Table 1
Descriptive results for the different items and the PWI-SC7 and OLS scales.

Satisfaction with:		General population	Residential care	Effect size Cohen's <i>d</i>
Your health	Mean	9.48	*8.61	.51
	Std. dev.	1.13	2.15	
How secure you feel	Mean	8.88	*7.61	.59
	Std. dev.	1.66	2.57	
Opportunities in life	Mean	8.84	*7.31	.64
	Std. dev.	1.60	2.98	
Things you have	Mean	9.27	*7.27	.98
	Std. dev.	1.23	2.61	
Your relations in general	Mean	9.05	*8.18	.51
	Std. dev.	1.29	2.05	
The school you attend	Mean	8.87	*7.60	.55
	Std. dev.	1.63	2.86	
Your use of time	Mean	8.47	*7.37	.50
	Std. dev.	1.85	2.52	
PWISC7	Mean	89.78	*77.07	.91
	Std. dev.	8.94	17.52	
OLS	Mean	9.08	*7.10	.82
	Std. dev.	1.39	3.14	

* Statistically significant differences: $p < .001$.

contribute less to the latent PWI-SC7 variable among the general population, they display higher factorial loadings, but in a different order: *satisfaction with security*, *satisfaction with opportunities in life* and *satisfaction with use of time*.

It is also interesting to note that the item on the scale with the lowest contribution in both groups is *satisfaction with things you have*, while this item's contribution on the overall index is very similar for the two groups (0.420 among the general population and 0.432 among the in-care population).

Finally, we incorporated the OLS and gender into Model 4 and found that it fits well (Model 6 in Table 3). Table 5 displays standardized estimates with confidence intervals calculated using the bootstrap method (see also Fig. 2 for the in-care adolescent population sample).

We find that the correlation between gender and OLS reaches statistical significance only for the in-care population, correlating lower with in-care girls than boys. However, gender does not display a statistically significant relationship with the latent variable PWI-SC7 in either of these groups at this age.

We also find a strong relationship between the OLS and the PWI-SC7 in both populations, although it is stronger among the in-care

population (0.65 among the general population and 0.74 among the in-care population).

4. Discussion

Using classical statistics we have found that although the adolescent in-care population scores above 75 points out of 100 on the PWI-SC7 scale and above 7 points out of 10 on the OLS, and in all studied items, compared with the general population adolescents in care score significantly lower satisfaction means ($p < .001$) on both scales used, for all studied items. These findings are in line with results obtained by Rees et al. (2012) who compared SWB among children living in other family arrangements, where the former also showed lower levels of subjective well-being than the latter. Tomyn (2013) obtained similar results with population at risk. In our study we focused on those in residential care.

Despite that it was not part of the main objective, we found out gender differences in residential care outcomes. Among adolescents in care we have found that on OLS scale (where girls scored below 7 in a 0 to 10 scale) and in the item *how secure you feel*, boys display greater average score than girls. These differences were statistically significant ($p < .05$). This result is in line with those of other authors such as Tomyn (2013), who also found in his Australian study that girls at risk scored lower on PWI-SC life domains, being more prone to be depressed. This finding needs to be considered in light of the practical implications it may have, while also requiring confirmation through further research.

By means of one SEM analysed here (Model 6), we also observed that gender reaches statistical significance among adolescents in care and in relation to the OLS, with girls in care scoring lower than boys (Table 5). In contrast, gender did not show significant differences in relation to the PWI-SC7 scale among either the general population or adolescents in care, a result found previously by Casas et al. (2013).

Using SEM, the CFA for the modified version of the PWI-SC here used, the PWI-SC7, displayed good fit statistics. The same is true of the multigroup model (Model 3) comparing the two samples and the multigroup model with constrained loadings (Model 4), while it did not show a good fit with constrained loadings and intercepts (Model 5). Configural invariance confirms that the PWI-SC7 is comparable between the two samples, and metric factorial invariance confirms that correlations and regressions are comparable between the two groups. The lack of fit in the latter model presumably indicates that the two studied groups' response styles to the same questions differ, resulting in it not being appropriate to compare the overall index means of the scale between the two groups. However, with only the loadings

Table 2
Descriptive results for the different items and the PWI-SC7 and OLS scales by gender among the in-care population.

Satisfaction with:		Residential care		Effect size
		Boys	Girls	Cohen's <i>d</i>
Your health	Mean	8.84	8.31	.24
	Std. dev.	1.85	2.45	
How secure you feel	Mean	7.99	*7.13	.33
	Std. dev.	2.27	2.85	
Opportunities in life	Mean	7.57	6.97	.20
	Std. dev.	2.91	3.04	
Things you have	Mean	7.23	7.32	-.03
	Std. dev.	2.61	2.62	
Your relations in general	Mean	8.08	8.31	-.11
	Std. dev.	2.09	2.01	
The school you attend	Mean	7.85	7.28	.20
	Std. dev.	2.52	3.24	
Your use of time	Mean	7.50	7.21	.11
	Std. dev.	2.54	2.50	
PWISC7	Mean	78.68	75.04	.21
	Std. dev.	16.40	18.72	
OLS	Mean	7.60	*6.47	.36
	Std. dev.	2.99	3.23	

* Statistically significant differences: $p < .05$.

Table 3
Statistical fit of the different structural equation models analysed using the PWI-SC7.

Model		χ^2	df	p-value	CFI	RMSEA (confidence interval)	SRMR
1	Initial PWI-SC7	47.19	14	.000	.974	.058 (.040–.076)	.030
2	PWI-SC7 + 1 with error cov	39.31	13	.000	.979	.053 (.035–.073)	.028
3	PWI-SC7 Model 2 w/o constraints	61.12	26	.000	.959	.043 (.029–.058)	.024
4	PWI-SC7 Model 2 with constrained loadings	75.16	32	.000	.950	.043 (.031–.056)	.033
5	PWI-SC7 1 + constrained loadings + intercepts	127.22	38	.000	.896	.057 (.046–.068)	.048
6	PWI-SC7 + OLS + gender + 1 error cov + constrained loadings	105.88	56	.000	.957	.035 (.025–.045)	.036

constrained, the model presents a good fit in relating the PWI-SC7 to external variables such as the OLS and gender (Model 6).

Model 4 with constrained loadings allowed us to compare the contribution of different items on the PWI-SC7 scale, leading us to find that the contribution of each item on the latent variable PWI-SC7 is higher among adolescents in care than among the general population. This suggests that all of the selected items contribute more to the subjective well-being of adolescents in care than that of adolescents in the general population.

As we can see in Table 1, for all the measures residential care has a considerable higher standard deviation; more than the double that the general population has. It indicates that within residential care there are some adolescents with higher scores and more participants with lower scores than normative group. To answer this emerging question, it will be interesting to explore for further research which other factors are influencing SWB in population in care: variables such as time in the child protection system, number of changes, type of abuse and neglect, and relationship with parents or issues related to education. It would be another step for implications for practice and political decisions.

The fact that the items *satisfaction with your use of time* and *satisfaction with how secure you feel* contribute most to the subjective well-being of adolescents, followed by *satisfaction with opportunities in life*, suggests something of potential relevance: it may be that adolescents living in residential care have fewer opportunities to decide on the use they make of their time, this being more in the hands of the protection services, especially with regard to family relationships or free-time activities. This item ranks third among the general population.

The fact that the standardized regression weights are higher in the domains relating to perceived security and life opportunities might be explained by possible situations of neglect or abuse suffered and the lack of stability in these adolescents' lives (Del Valle et al., 2008; Dinisman et al., 2012; Sala et al., 2009; Silva & Montserrat, 2014). The reference to *opportunities you have in life* may be linked in part to the *lack of stability at school, with a lot of changes*, in some cases. Children entering the care system sometimes have to move to another school, and there may be new changes while they are in care. Losing their friends, their activities, their teachers could be related to loosing opportunities (Del Valle et al., 2009; Martín & Dávila, 2008; Montserrat, Casas and Bertran, 2013; Montserrat, Casas and Malo, 2013; Palacios & Jiménez-Morago, 2007). However these working hypotheses should be taken into account in future research work to determine whether they can be confirmed or rejected.

It should also be noted that for both the in-care and the general population the item that contributes least to subjective well-being is *satisfaction with the things you have*. This low weight of the material possessions among adolescents in both samples coincides with findings from other studies (Casas & Bello, 2012), suggesting that this domain is less central in their life satisfaction than adults may usually think.

By means of SEM we observe that there is a high correlation between the OLS and the PWI-SC7 scale among both the general population and adolescents in care, although the correlation is higher among the latter (Table 5).

The fact that questionnaires were administered to the general population in the school setting (their participation was not part of school requirements) whereas in the case of adolescents in care it was in their residential setting may introduce some bias, although we are not able to state precisely what kind. Even though both groups responded alone and anonymously, this must still be considered a possible limitation. For further research it would be important to explore if these differences in SWB present early in the placement of children in residential care and also control for potentially covariates related to demographic characteristics. In addition, it would be important to explore whether the size and the functions of children's home would have impacted the scale responses.

With this research we have advanced further in our understanding of the subjective well-being of adolescents in residential care,

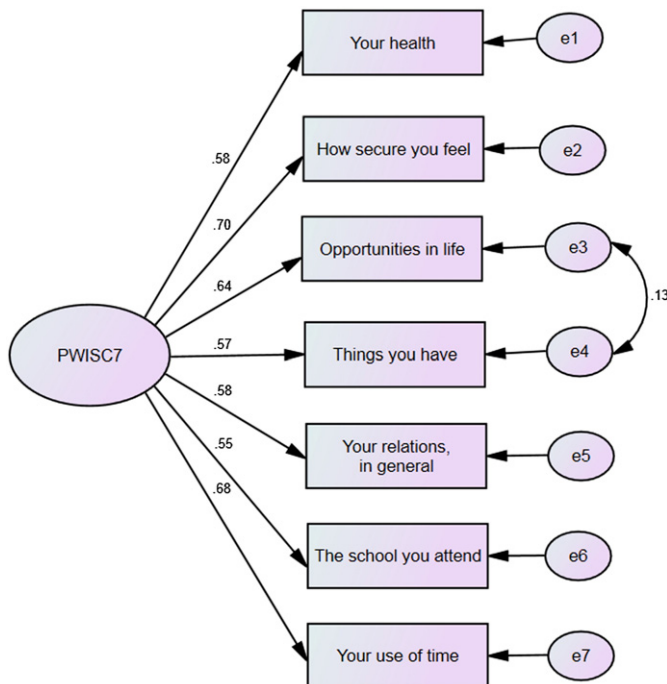


Fig. 1. Subjective well-being. Model 2. Aggregated data.

Table 4
Confirmatory Factor Analysis of the PWI-SC7 using the multigroup model, with constrained loads. Standardized factor loads (Model 4).

	Bootstrap ML. 95% confidence intervals. Resamples = 500		General population			Residential care		
			Estim	Lower	Upper	Estim	Lower	Upper
Your health	← PWI-SC7	.510	.403	.621	.553	.461	.649	
How secure you feel	← PWI-SC7	.570	.485	.664	.740	.656	.813	
Opportunities in life	← PWI-SC7	.535	.425	.637	.622	.472	.737	
Things you have	← PWI-SC7	.420	.336	.509	.432	.318	.542	
Your relations in general	← PWI-SC7	.477	.378	.575	.587	.481	.682	
The school you attend	← PWI-SC7	.447	.358	.533	.527	.412	.647	
Your use of time	← PWI-SC7	.534	.440	.638	.775	.670	.864	

Table 5
Multigroup structural equation model relating OLS and gender to the PWI-SC7, with constrained loads. Standardized estimates (Model 6).

Bootstrap ML. 95% confidence intervals. Resamples = 500			General population			Residential care		
			Estimate	Lower	Upper	Estimate	Lower	Upper
PWISC7	←	OLS	.654*	.541	.750	.743*	.643	.825
PWISC7	←	Gender	.054	-.033	.137	.008	-.107	.116
OLS	→	Gender	-.012	-.091	.075	-.18*	-.309	-.039
Your health	←	PWISC7	.494*	.372	.616	.547*	.452	.65
How secure you feel	←	PWISC7	.559*	.472	.643	.747*	.666	.815
Opportunities in life	←	PWISC7	.566*	.472	.644	.651*	.527	.749
Things you have	←	PWISC7	.439*	.356	.523	.452*	.357	.585
Your relations, in general	←	PWISC7	.454*	.366	.542	.573*	.473	.677
The school you attend	←	PWISC7	.459*	.374	.536	.547*	.446	.659
Your use of time	←	PWISC7	.511*	.411	.598	.758*	.671	.835

* Statistically significant ($p \leq .05$).

comparing it with that of the general population. We have found that their overall subjective well-being is lower – and even more so among girls in care – and that items related to the use they make of their time, how secure they feel and the opportunities they have in life are more important to the SWB for adolescents in care, than to their peers from the general population, results which represent real challenges for public policy, which needs to guarantee and promote equal opportunities and greater life satisfaction for children and adolescents in public care. Moreover, in order to improve various aspects in the lives of adolescents, and especially adolescents in care, there is also an increasing need for them to be consulted themselves (in line with Casas & Bello, 2012); that is, for them to give their views on aspects of their life that affect them and for these views to be taken into account in the various domains of their everyday life, both in terms of professional practice, so they might ultimately have more control over their own lives, and in terms of research in this area. In this sense, within the research's second round, focus groups with adolescents in care and also with those from the general population will be developed in order to argue the survey results. Child welfare systems need to improve in promoting safety and permanency for children, focusing more on the social and emotional well-being of children who have been maltreated (ACF, 2012). According to developmental–ecological models based on the systems theory (Belsky, 1993), the influence of all these factors on SWB of children in care has implications for practice and policy makers,

and actions are needed in order to avoid situations that may become harmful to the child.

Finally, in this study we focused on comparing the SWB of adolescents in the general population with that of adolescents in residential care, who represent almost half of the adolescents in care in Catalonia. In future research it will be necessary to study the SWB of adolescents in kinship and foster care and compare this with both that of adolescents from the general population and those in residential care. This will allow us to determine which of the care placements (kinship care, foster care or residential care) provides better levels of SWB for adolescents in care.

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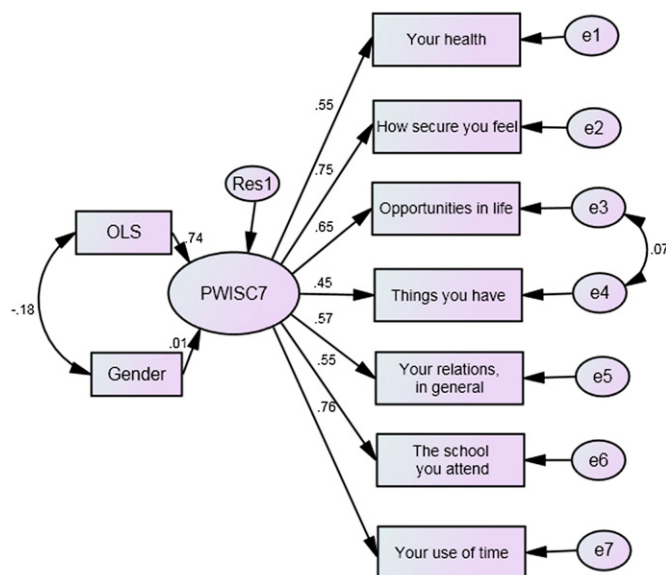


Fig. 2. Multigroup SEM relating the PWI-SC7 to the OLS and gender. Standardized weights for the in-care population. Constrained loads (Model 6 in Table 3).

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