



Differences in Subjective and Psychological Well-Being of Romanian Adolescents over a Four-Year Period and its Relationship with Free Time

Claudia Tejada-Gallardo¹ · Sergiu Bălțătescu² · Carles Alsinet¹ · Claudia Bacter²

Accepted: 11 March 2024
© The Author(s) 2024

Abstract

The aim of this study is to explore changes in subjective well-being (life satisfaction and positive affect), as well as psychological well-being among Romanian adolescents over a 4-year period using data from the Children's Worlds project (Waves 2 and 3). Participants were 12-year-olds ($N=1,504$ in 2015; $N=1,145$ in 2019). The findings indicated a decline in positive affect and psychological prosperity with the passage of time, while life satisfaction remained constant. To investigate factors influencing the decline, we examined the relationships between well-being and the amount of time adolescents spent in their free time (leisure and duties), as well as their satisfaction with their free time. Leisure activities predicted both well-being measures over time. Duties predicted subjective well-being at both waves but only predicted psychological well-being in Wave 3. Satisfaction with free time predicted both well-being approaches only in Wave 3. The findings suggest that factors related to free time do not contribute to declines in well-being, as they show positive associations with subjective and psychological well-being. The declines likely stem from other unexplored variables, underscoring the need for additional research on contributors to the well-being of Romanian adolescents, particularly following disruptions like the COVID-19 pandemic.

Keywords Subjective well-being · Psychological well-being · Free time · Adolescents · Repeated cross-sectional design

1 Introduction

During adolescence, significant psychological changes occur, including emotional, social, and behavioral (Burger & Samuel, 2017). Traditionally, the focus has been on addressing pathologies to alleviate the distress arising from various individual

Extended author information available on the last page of the article

and social issues (Hervás, 2009). However, in the past two decades, there has been growing recognition of the importance of a holistic approach to the developmental process of adolescence, with a focus on well-being (Ben-Arieh, 2008; Ross et al., 2020). Despite a growing number of studies exploring the theoretical foundations and measurement challenges of well-being, the majority of research in this area has focused on the adult population (e.g., Linley et al., 2009).

Research involving children and adolescents has predominantly concentrated on assessing subjective well-being across various life domains such as family, friendships, and leisure time (Casas et al., 2015). This well-being approach is widely acknowledged among researchers who investigate the well-being of adolescents and is considered fundamental to understanding their lives (Bradshaw et al., 2011). Subjective well-being comprises two primary dimensions: the cognitive dimension involves an overall assessment of one's life, whereas the affective dimension encompasses daily experiences of positive and negative emotions (Diener, 2000). By contrast, psychological well-being, defined as the attainment of optimal psychological development and life fulfillment (Ryff, 1989), has received comparatively less attention in adolescent research, particularly during the early stages of development (Viejo et al., 2018). Nevertheless, an increasing number of scholars argue for the inclusion of psychological well-being within the broader conceptualization of well-being, recognizing its pivotal role in comprehensively grasping this construct, especially during adolescence (Sarriera & Bedin, 2017).

Concurrently, assessing both subjective and psychological well-being enables a more comprehensive evaluation of the overall well-being of Romanian adolescents. Furthermore, establishing meaningful connections between well-being and related factors, particularly within significant life domains, such as leisure time, is essential for gaining a deeper understanding of the general well-being of this particular age group. These intricate associations might offer valuable insights into the current subjective and psychological well-being of Romanian adolescents.

1.1 Current Situation of Romanian Children and Adolescents

In recent years, Romania has shown growing interest in the well-being of its children, driven in part by the country's participation in global initiatives focused on assessing child and adolescent well-being. Findings from the "Children's Worlds: International Survey on Child Well-Being (ISCWeB)" project, particularly Waves 2 and 3 of data collection, have revealed that Romanian children reported relatively high levels of subjective well-being compared to their counterparts in other countries (Bălățescu & Bacter, 2016, 2020).

Exploration of well-being in Romanian children and adolescents has been a significant area of research. For instance, a study using data also from the "Children's Worlds" project examined the emotional well-being of preadolescents in 18 countries, including Romania. The findings revealed that preadolescents who received support from family and school reported higher levels of emotional well-being (Bacter et al., 2021). In other studies, researchers have aimed to develop and validate instruments for assessing subjective well-being among adolescents within an educational context. One study by Opre et al. (2018) found that students who demonstrated appropriate

behavior at school reported higher levels of subjective well-being. Additionally, the International Health Behavior in School-aged Children (HBSC) survey has provided valuable insights into overall well-being among Romanian adolescents by assessing various health behaviors and highlighting the significance of perceived well-being as a positive dimension (Băban et al., 2019).

Despite promising findings regarding subjective well-being, there remains a noticeable lack of regular assessments of psychological well-being among Romanian children and adolescents, as identified by UNICEF studies (2021; Copăceanu & Costache, 2022). These studies emphasize the necessity for public policies and longitudinal research to delve into psychological well-being. This comprehensive understanding is vital, as it enables the development of targeted interventions and the provision of appropriate support, which is crucial for the holistic development and well-being of adolescents.

1.2 Free Time and Well-Being in Children and Adolescents

Engaging in pleasurable activities during one's free time has been associated with numerous psychological benefits for both children and adolescents. This provides an opportunity to relax, unwind, and recharge. Participation in personally meaningful and enjoyable leisure activities has been found to alleviate stress and promote psychological well-being (Caldwell & Smith, 2006). The impact of leisure activities on well-being depends on activity type. Research conducted on East Asian adolescents has demonstrated a robust association between engaging in physical activity and exercise and psychological well-being, regardless of academic achievement. On the other hand, adolescents who tend to engage in passive leisure activities such as Internet browsing, video games, napping, and listening to music are less likely to experience high levels of psychological well-being (Lee et al., 2017). Engaging in enjoyable leisure activities also elicits positive emotions, including joy and relaxation, which are linked to increased positive and reduced negative affect (Asquith et al., 2022). Family leisure activities have been found to correlate with emotional well-being in teenagers, highlighting the importance of quality time spent together. However, engaging in productive activities, such as school-related and extracurricular activities, in the presence of parents was linked to lower levels of positive affect and engagement compared to adolescents participating in these activities without their parents (Offer, 2013).

Leisure activities also contribute to positive developmental outcomes such as increased initiative, emotional regulation, teamwork, social skills, and positive relationships (Larson et al., 2006). Newman et al. (2014) proposed a conceptual model of leisure and well-being that includes five psychological mechanisms as mediating factors: detachment-recovery, autonomy, mastery, meaning, and affiliation. These mechanisms help to explain the positive association between leisure activities and well-being. It is important to note that the impact of responsibilities such as domestic activities on psychological well-being may differ from that of leisure activities. While fulfilling duties can generate a sense of accomplishment, mastery, and competence, the overall effect on psychological well-being may not be as fulfilling as that of leisure pursuits. Nevertheless, it is important to acknowledge that the impact

of responsibilities on psychological well-being can vary significantly depending on individual, cultural, and personal circumstances. Hence, the current study focused on the life domain of free time, encompassing both leisure and duty activities, to gain a more profound understanding of how these factors influence the subjective and psychological well-being of Romanian adolescents.

1.3 Objectives

In this study, we aimed (1) to explore the changes in subjective well-being (cognitive and affective components) and psychological well-being among Romanian adolescents over a four-year period, specifically from Wave 2 (2015) to Wave 3 (2019) of the Romanian data collection on the “Children’s Worlds” project. Additionally, we aimed (2) to investigate the relationship between well-being and the amount of free time devoted to leisure and duty activities, as well as the level of satisfaction adolescents derive from how they utilize their free time. Through an exploration of these factors, this study seeks to acquire valuable insights into the importance of free time in relation to the overall well-being of Romanian adolescents. By understanding the impact of these factors, educators and mentors could provide guidance and support to adolescents, helping them navigate towards specific pathways that contribute to their well-being and enhance their quality of life.

2 Method

2.1 Study Design

The present study adopted a repeated cross-sectional design (RCS) to capture societal changes over time. This design involved collecting data from independent samples at two different time points, allowing for the examination of trends and variations across cohorts. Although it does not track individuals’ trajectories, it provides valuable insights into broader patterns and shifts within the studied population, highlighting the dynamic nature of the phenomenon (Yee & Niemeier, 1996).

2.2 Setting

2.2.1 International Survey of Children’s Well-Being–ISCWeB

The present study is part of the International Society for Child Indicators’ research “Children’s Worlds.” The project is a worldwide comparative international survey that approaches children’s situation and well-being through the ISCWeB, which collects solid and representative data on children’s lives and daily activities and, in particular, on their own perception of well-being. The project aims to understand and promote children’s subjective views and experiences of their own lives and well-being, and at the same time, encourage policymakers to take account of these views and act to improve children’s experiences during this developmental stage. In Romania, this project has recollected data across four waves (2011, 2015, 2019, and 2021),

and the current research focuses on data from Waves 2 and 3. These waves included children and adolescents across three age groups (8, 10, and 12 years), with data collected from the participating schools.

2.3 Participants

The data for this study were collected from adolescents, specifically the oldest group in the project, who were 12 years old. In the second wave the sample comprised 1,504 adolescents ($M=12.04$; $SD=0.55$; 48,8% of females), while the third wave included 1,145 adolescents ($M=12.51$; $SD=0.61$; 46% of females). The age range for both samples was 11 to 14 years old. All participants were Romanian adolescents who voluntarily participated in the study, with informed consent obtained from their parents or legal guardians. Eligibility criteria for participation included being an adolescent, attending school, and obtaining the informed consent to participate.

2.4 Variables

The data collected via the ISCWeB encompassed various aspects of children's and adolescents' lives, including their home environment, social circle, school, well-being, neighborhood characteristics, socioeconomic status, and leisure activities. However, given the primary focus of our study, we selectively retained only the information relevant to well-being and free time, excluding other variables from the analysis. These variables were assessed at each wave through standardized self-reports. Well-being indicators, both subjective and psychological, were treated as outcome variables in the analyses, while free time activities were considered potential predictors of the main outcomes.

2.5 Measurement

Life satisfaction. The Children's Worlds-Subjective Well-being Scale (CW-SWBS) is a reduced version of the Huebner (1991) Student Life Satisfaction Scale used in Wave 1 to assess the subjective well-being of children and adolescents. In Wave 2, however, some items were removed or adapted to improve fit, and a change in the response format to an 11-point Likert scale was also made. The scale consists of five items, with two of them being slightly modified from Wave 2 to Wave 3. In Wave 2, these items were: "My life is just right" and "I have what I want in life", while in Wave 3, they were changed to: "I enjoy my life" and "I like my life". The response format remained consistent across both waves: 0 (*not at all*) and 11 (*totally agree*). A Confirmatory Factor Analysis (CFA; see [Results](#) section) confirmed the nature of the construct in both waves. In addition, Casas and González-Carrasco (2021) showed through a multigroup CFA that the scale is comparable cross-nationally. McDonald's Omega values in our sample were 0.90 (Wave 2) and 0.92 (Wave 3).

Positive affect. A short version of Russell's Core Affect Scale (Russell, 2003) was used in the ISCWeB to assess positive affect and emotional health among children and adolescents. From the original six-item version of Russell's Core Affect Scale, we retained the same three positive items that overlapped in both waves. These items

(i.e., happy, calm, and full of energy) evaluated the emotional state over the last two weeks on an 11-point Likert scale from 0 to 10 (0=*not at all*; 10=*extreme*). McDonald's Omega values in our sample were 0.70 (Wave 2) and 0.65 (Wave 3).

Psychological well-being. The Children's Worlds-Psychological Well-being Scale (CW-PWBS) was used to assess the psychological well-being of the children and adolescents. This scale included six items related to the six components of psychological well-being (Ryff, 1989): (1) "I like being the way I am," (2) "I am good at managing my daily responsibilities," (3) "People are generally friendly towards me," (4) "I have enough choice about how I spend my time," (5) "I feel that I am learning a lot at the moment," and (6) "I feel positive about my future." These items were rated on an 11-point Likert scale ranging from 0 to 10 (0=*do not agree*; 10=*totally agree*). McDonald's Omega values in our sample were 0.76 (Wave 2) and 0.77 (Wave 3).

Ways of spending free time and satisfaction with free time. We included a six-item scale to assess how children spend their free time. To achieve this, we used a scale from the ISCWeB to gauge the frequency with which children engage in various activities: "How often do you usually spend time doing the following things when you are not at school?". Following this question, participants rated the items on a 5-point Likert scale ranging from 0 to 5 (0=*never*; 5=*every day*). In line with a previous study by Bacter et al. (2021), these items were categorized into two factors: leisure or fun activities (i.e., playing sports, watching TV, and playing electronic videogames) and duties (i.e., taking care of family members, doing homework, and doing housework). We conducted factor analysis using the component method (varimax rotation with Kaiser Normalization) to calculate the scores for free time. In Wave 2, the first factor accounted for 28.33% of the total variation, while the second factor explained 20.48% of total the variation. In wave 3, the first and second factors explained 27.58% and 19.68% of the total variation, respectively. Regarding the Satisfaction with how adolescents use their free time was measured through an item: "How satisfied are you with how you use your free time?". This item is rated on an 11-point Likert scale from 0 to 10 (0=*not satisfied at all*; 10=*completely satisfied*).

2.6 Study Size

The various international members of the ISCWeB project reached a consensus on a minimum sample size of 1000 for each age group. The Romanian team aimed to attain moderately larger sample sizes, whenever feasible, to enable subgroup analyses when relevant to the study objectives.

2.7 Statistical Analyses

Missing data are a common challenge in research studies, which can potentially compromise the validity and reliability of statistical analyses. Therefore, the first step we took in analyzing the data was to address this issue. To handle missing data, we employed multiple imputation, a widely recognized and effective technique implemented in SPSS version 27. Through multiple imputation, we created multiple imputed datasets by estimating missing values based on observed data and their relationships. This process involves iteratively generating datasets with imputed values

using regression methods. Subsequently, these imputed datasets were analyzed separately, and the results were pooled using specialized algorithms.

Once the missing data was handled, preliminary measurement models were estimated in Wave 2 and Wave 3 using confirmatory factor analysis (CFA) to examine the fit of the measures employed in the study to the hypothesized measurement model (Yang, 2005). The CW-SWBS, Positive Core Affect Scale, and CW-PWBS items were included in the CFA model, with one-order factors representing each scale. Model fit was assessed using several indices and recommended cutoff values: Comparative Fit Index (CFI) and Tucker-Lewis Index (TLI) should exceed 0.90, Root Mean Square Error of Approximation (RMSEA) should be below 0.05, and Standardized Root Mean Residual (SRMR) should be below 0.08 (Marsh et al., 2004). These analyses were conducted using the Mplus 8 software (Muthén & Muthén, 2012).

Following the preliminary CFA, differences in well-being levels related to the study between Waves 2 and 3 were examined using multivariate analysis of variance (MANOVA). Specifically, we explored differences in the subjective and psychological well-being of Romanian adolescents across time (i.e., waves) and gender. The interaction effect of time measurement and gender was assessed to examine whether the impact of waves on the well-being variables differed between males and females. In cases where the interaction effect was significant, a univariate analysis of variance (ANOVA) was conducted to further investigate specific differences. Finally, multiple regression models were employed to explore the predictive relationship between time spent in (1) leisure, (2) duties, and (3) satisfaction with how free time was spent and the well-being of Romanian adolescents. These analyses were performed using SPSS version 27.

3 Results

3.1 Confirmatory Factor Analysis

The results of the CFA supported the validity of the well-being measures in Wave 2 and Wave 3, indicating that they accurately captured the intended constructs. Please refer to Table 1 for a detailed description of the results.

3.2 Differences Between Adolescents' Subjective and Psychological Well-Being by Gender and Time of Measurement

The means for each wave and gender are shown in Table 2. The means were significantly higher for positive affect $t(2647)=11.36, p<0.001$ and psychological well-being $t(2647)=6.78, p<0.001$ in 2015 (Wave 2) than in 2019 (Wave 3). These results showed a decreasing trend in these indicators over time. Regarding gender differences, boys in Wave 3 had significantly higher means for life satisfaction $t_{(1076)}=2.17, p=0.030$ and positive affect $t_{(1076)}=3.12, p=0.002$.

We ran the MANOVA with time of measurement (Wave 2 or Wave 3) as the predictor and life satisfaction, positive affect, and psychological well-being as the outcomes. The overall MANOVA was significant, Pillai's trace=0.07; $F_{(3)}=61.83$,

Table 1 Fit indices for CFA of the three well-being indicators

	χ^2	df	p	CFI	TLI	RMSEA	SRMR
Structural validity							
CW-SWBS (Wave 2)	644.548	10	<0.001	0.931	0.901	0.080	0.039
CW-SWBS (Wave 3)	629.882	15	<0.001	0.987	0.979	0.027	0.021
PA (Wave 2)	907.021	12	<0.001	0.930	0.890	0.068	0.043
PA (Wave 3)	828.801	15	<0.001	0.995	0.990	0.021	0.017
CW-PWBS (Wave 2)	586.182	15	<0.001	0.970	0.940	0.039	0.028
CW-PWBS (Wave 3)	591.091	15	<0.001	0.984	0.973	0.030	0.022

Note CW-SWBS=Children's Worlds-Subjective Well-Being Scale; PA=Positive Core Affect Scale; CW-PWBS=Children's Worlds-Psychological Well-Being Scale

Table 2 Means and standard deviations of subjective and psychological well-being by gender and time of measurement

Wave	Girls M (SD)	Boys M (SD)	Total M (SD)
Life satisfaction	Wave 2	9.31 (1.32)	9.33 (1.24)
	Wave 3	9.27 (1.27)	9.43 (1.15)
Positive affect	Wave 2	9.16 (1.36)	9.22 (1.16)
	Wave 3	8.38 (1.76)	8.69 (1.44)
Psychological well-being	Wave 2	9.02 (1.23)	9.01 (1.16)
	Wave 3	8.72 (1.38)	8.64 (1.41)

$p < 0.001$, $\eta^2_p = 0.07$. The follow-up ANOVA revealed a main effect for positive affect, $F_{(1)} = 131.17$, $p < 0.001$, $\eta^2 = 0.05$. Participants in Wave 3 showed lower means for positive affect ($M = 8.55$, $SD = 1.59$) than those in Wave 2 ($M = 9.19$, $SD = 1.26$). The results also revealed an effect on psychological well-being, $F_{(1)} = 41.29$, $p < 0.001$, $\eta^2 = 0.02$. The participants in Wave 3 also reported lower levels of psychological well-being ($M = 8.67$, $SD = 1.39$) than those in Wave 2 ($M = 9.01$, $SD = 1.19$). In the MANOVA, we also included an interaction effect between the time of measurement and gender. The results showed a statistically significant interaction effect between the combined dependent variables, Pillai's trace = 0.05; $F_{(3)} = 3.91$, $p < 0.08$, $\eta^2_p = 0.05$. This suggests that the effect of the waves (when the measurement took place) on well-being was not the same for boys as for girls. The follow-up ANOVA revealed a main effect of positive affect, $F_{(1)} = 4.65$, $p < 0.03$, $\eta^2 = 0.002$. Specifically, positive affect means were found to be significantly lower in females compared to males in Wave 3 ($t_{(1076)} = 3.127$, $p < 0.001$) and also lower in Wave 3 compared to Wave 2 ($t_{(1252)} = 8.724$, $p < 0.001$).

3.3 Relationship Between Subjective Well-Being, Psychological Well-Being, and Free Time

We ran a multilevel model to analyze the relationship between the variables of interest (leisure, duties, and satisfaction with free time). Table 3 presents the regression coefficients of the predictors of well-being. These results showed that, over time (in Wave 3), the amount of free time and how adolescents were satisfied with it predicted all well-being indicators. We observed that for psychological well-being in Wave 3, all predictors showed a stronger association than in Wave 2, where only the leisure activities variable was significant. For subjective well-being in Wave 3, satisfaction with free time appeared to be the strongest predictor. Leisure activities generally predicted subjective well-being in the same vein in both waves, while duties predicted more subjective well-being in Wave 2 than in Wave 3.

4 Discussion

This study examined the subjective and psychological well-being trends in Romanian adolescents (12 years old group) over a 4-year period (Wave 2 and Wave 3) from data collection on “Children’s Worlds” research project. Our results showed significant

Table 3 Regression coefficients of well-being predictors

Predictors	β	SE	p	Adjusted R ²
Life Satisfaction Wave 2				0.10
Leisure activities	0.17	0.05	0.001	
Duty activities	0.13	0.05	0.017	
Satisfaction with free time	0.01	0.02	0.548	
Life Satisfaction Wave 3				0.25
Leisure activities	0.10	0.02	<0.001	
Duty activities	0.08	0.02	0.001	
Satisfaction with free time	0.40	0.02	<0.001	
Positive Affect Wave 2				0.17
Leisure activities	0.16	0.05	0.001	
Duty activities	0.16	0.05	0.001	
Satisfaction with free time	0.30	0.01	<0.001	
Positive Affect Wave 3				0.15
Leisure activities	0.12	0.04	0.002	
Duty activities	0.09	0.03	0.011	
Satisfaction with free time	0.41	0.03	<0.001	
Psychological Well-being Wave 2				0.10
Leisure activities	0.12	0.06	0.016	
Duty activities	0.08	0.04	0.105	
Satisfaction with free time	0.02	0.03	0.271	
Psychological Well-being Wave 3				0.29
Leisure activities	0.17	0.03	<0.001	
Duty activities	0.14	0.03	<0.001	
Satisfaction with free time	0.47	0.02	<0.001	

decreases in positive affect (SWB) and PWB, regardless of gender. The dimensions of life satisfaction remained stable over time. To investigate the decrease in subjective and psychological well-being of Romanian adolescents, the amount of free time they dedicate to leisure or duty activities and the satisfaction with how they use their free time were included as predictors in the study. Leisure activities predicted both well-being approaches over time. Duties predicted subjective well-being in both waves; however, the association between duties and subjective well-being was more prevalent in Wave 3 than in Wave 2. Regarding psychological well-being, duties predicted only this approach in Wave 3. Satisfaction with how adolescents used their free time in Wave 2 did not predict life satisfaction or psychological well-being. However, this variable predicted both approaches to well-being in Wave 3, an aspect that might have rebounded the well-being of adolescents. According to the findings, the free time variables do not seem to be one of the reasons for the decrease in well-being levels from Wave 2 to Wave 3; in contrast, it was observed that this might be an indicator of greater well-being.

Well-being typically declines from early to late adolescence (González-Carrasco et al., 2017). However, our study aimed to determine whether the well-being of the same age group of adolescents would increase, remain stable, or decrease over a 4-year period. Generally, children in Wave 1 of the ISCWeB project exhibited higher well-being measures than those in Waves 2 and 3 (e.g., Rees et al., 2020; Schutz et al., 2022). These results are consistent with our findings and confirm the trend in adolescents. The decreasing trend in well-being among Romanian adolescents could be due to diverse factors, different from those associated with free time. For instance, both the family and education systems in the country have undergone significant changes over the last decades, which may have affected the well-being of adolescents throughout the years (Stănciulescu, 2010).

This raises important questions about how these changes impact children's experiences and to what extent their lives and well-being are affected. Firstly, the declining trend in well-being among Romanian adolescents over recent decades could be attributed to Ruut Veenhoven's Livability theory (1993). As the Romanian education system has become increasingly academically rigorous and competitive, it likely places greater demands and pressures on students. This heightened academic rigor creates a disconnect between the educational system's expectations and the capacities of adolescents, potentially resulting in decreased subjective and psychological well-being, as proposed by the Livability theory (Bălătescu, 2021). Hence, the highly challenging academic environment that many Romanian students face today may be a significant contributor to declining adolescent well-being, potentially more so than changes in free time activities. In line with this, it can be assumed that the educational system may not be effectively addressing well-being. Moreover, there seems to be a lack of development and implementation of evidence-based programs that target the promotion of adolescents' well-being and the instigation of individual and ecological changes. Secondly, Romanian families often place a strong emphasis on children's academic excellence, with parents offering substantial support (Robila, 2004). While this is generally seen as a positive approach, it may inadvertently contribute to adolescent unhappiness because an exclusive focus on academic achievement can become overwhelming (Negovan et al., 2016).

Our study has yielded an intriguing finding: contrary to other life domains, such as school, which may negatively impact the well-being of Romanian adolescents (Montserrat et al., 2015), time spent in leisure and duties, and the satisfaction with free time did not appear to be significant contributors to well-being decreases. In fact, our research suggests that variables related to free time can positively influence well-being, even though the overall trend indicates a decrease. As such, there is a case for promoting free time, particularly time spent in leisure activities, that bring satisfaction to adolescents, as this could enhance their overall well-being.

The persistent decline in well-being over the years raises the question of whether Romanian adolescents' well-being has been further impacted by the COVID-19 pandemic from 2019 to the present day. This is a plausible hypothesis, given the substantial disruptions and challenges the pandemic has brought to daily life. However, this notion remains speculative, and further research is imperative to substantiate this claim, considering the intricate interplay of various factors that contribute to well-being, including social, economic, educational, and psychological.

4.1 Limitations

This study had several limitations that should be acknowledged. First, it is important to recognize that, despite conducting two rounds of measurements, this remains a cross-sectional study. Consequently, adolescents from the initial wave may have higher well-being scores than those from the first wave. Although this difference is unlikely to be attributed to developmental or generational factors, it requires consideration when interpreting the results. Second, our research design, while meticulously executed, does not allow us to establish causal relationships. Future studies should explore qualitative perspectives and encompass various age groups, potentially including data on psychological well-being, for a more comprehensive understanding of well-being. Third, the CW-SWBS included two slightly modified items in Wave 3 as compared to Wave 2, which was done to enhance the overall fit of the scale (confirmed in the CFA). Although the results related to this variable remained consistent over time, and the CFA successfully represented the intended structure in both waves, it would be advisable for future studies to utilize only the items that were consistent and repeated in both waves. Finally, since our last data collection in 2019, the COVID-19 pandemic has had a significant impact on the world, particularly on the lives of children and adolescents. Consequently, it is plausible that there has been a further decline in the well-being of Romanian adolescents, especially considering the lingering psychological effects of the COVID-19 pandemic. Nevertheless, further studies are required to confirm this hypothesis.

5 Conclusions

This study underscores the importance of fostering leisure activities that genuinely satisfy adolescents, as this contributes significantly to their subjective and psychological well-being. The findings revealed a strong association between engaging in leisure activities that bring joy and overall well-being. Moreover, this study sheds

light on the pivotal role of duties in shaping the psychological well-being of adolescents. It is evident that both leisure and fulfilling responsibilities play vital roles in the general well-being of adolescents. However, this study raises an interesting point. While it establishes the importance of leisure and duties, it also indicates that the amount of free time and the level of satisfaction derived from it alone cannot explain the observed decreases in well-being over time. This intriguing insight highlights the need for further research to explore additional variables that may influence this decline. While leisure and responsibilities are integral aspects of Romanian adolescents' well-being, there are likely other factors at play that need to be investigated to comprehensively understand the declining well-being trend over time.

Funding Open Access funding provided thanks to the CRUE-CSIC agreement with Springer Nature. *The Children's Worlds: International Survey of Children's Well-Being (ISCWeb)* project is supported by Jacobs Foundation, Switzerland. Data collection in Romania for Wave 2 was also funded by Jacobs Foundation. For Wave 3 was realized within the project "Child well-being in Romania", funded by Fondation Botnar, Switzerland, with the support of Jacobs Foundation, Switzerland and University of Oradea. Open Access funding provided thanks to the CRUE-CSIC agreement with Springer Nature.

Data Availability Data is freely available from the Project website (<https://iscweb.org/>).

Code Availability Not applicable.

Declarations

The authors have no financial or proprietary interests in any material discussed in this article.

Conflict of Interest No conflict of interest declared.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.





References

- Asquith, S. L., Wang, X., Quintana, D. S., & Abraham, A. (2022). The role of personality traits and leisure activities in predicting wellbeing in young people. *BMC Psychology*, *10*(1). <https://doi.org/10.1186/s40359-022-00954-x>.
- Băban, A., Tăut, D., Balazsi, R., & Dănilă, I. (2019). *Health behaviours among adolescents in Romania: Health Behaviour in School-aged Children (HBSC) study 2018*. https://cdn.who.int/media/docs/librariesprovider2/country-sites/serbia/hbsc-study-2018-romaniaeng.pdf?sfvrsn=af6360cd_3&dowload=true
- Bacter, C., Bălătescu, S., Marc, C., Săveanu, S., & Buhaş, R. (2021). Correlates of preadolescent emotional health in 18 countries. A study using children's words data. *Child Indicators Research*, *14*(4), 1703–1722. <https://doi.org/10.1007/s12187-021-09819-y>.

- Bălțătescu, S. (2021). Ruut veenhoven's livability concept and children's happiness around the globe. In A. C. Michalos (Ed.), *The Pope of Happiness: A Festschrift for Ruut Veenhoven* (pp. 1–13). Springer International Publishing. https://doi.org/10.1007/978-3-030-53779-1_1.
- Bălțătescu, S., & Bacter, C. (2016). *Bunăstarea văzută prin ochii copiilor români: rezultatele studiului internațional Lumea copiilor (ISCWeB)* [Wellbeing through the eyes of Romanian children: results of the international study Children's World (ISCWeB)]. Editura Universității din Oradea, Editura Presa Universitară Clujeană. <http://editura.ubbcluj.ro/www/ro/ebook.php?id=1978>.
- Bălțătescu, S., & Bacter, C. (2020). *Children's Worlds National Report - Romania*. Children's Worlds. The International Survey of Children's Well-Being (ISCWeB). <https://iscweb.org/wp-content/uploads/2020/12/Romania-National-Report-Wave-3.pdf>.
- Ben-Arieh, A. (2008). The child indicators movement: Past, present, and future. *Child Indicators Research*, 1, 3–16. <https://doi.org/10.1007/s12187-007-9003-1>.
- Burger, K., & Samuel, R. (2017). The role of perceived stress and self-efficacy in young people's life satisfaction: A longitudinal study. *Journal of Youth and Adolescence*, 46(1), 78–90. <https://doi.org/10.1007/s10964-016-0608-x>.
- Caldwell, L. L., & Smith, E. A. (2006). Leisure as a context for youth development and delinquency prevention. *Australian & New Zealand Journal of Criminology*, 39(3), 398–418. <https://doi.org/10.1375/acri.39.3.398>.
- Casas, F., & González-Carrasco, M. (2021). Analysing comparability of four multi-item well-being psychometric scales among 35 countries using children's worlds 3rd wave 10 and 12-year-olds samples. *Child Indicators Research*, 14(5), 1829–1861. <https://doi.org/10.1007/s12187-021-09825-0>.
- Casas, F., Sarriera, J. C., Alfaro, J., González, M., Bedin, L., Abs, D., Fuguer, C., & Valdenegro, B. (2015). Reconsidering life domains that contribute to subjective well-being among adolescents with data from three countries. *Journal of Happiness Studies*, 16, 491–513. <https://doi.org/10.1007/s10902-014-9520-9>.
- Copăceanu, M., & Costache, I. (2022). *Sănătatea mintală a copiilor și a adolescenților din România. Scurtă radiografie*. <https://www.unicef.org/romania/ro/documents/s%C4%83n%C4%83tateamintal%C4%83-copiiilor-%C8%99i-adolescen%C8%9Bilor-din-rom%C3%A2nia-scurt%C4%83-radiografie>.
- Diener, E. (2000). Subjective well-being: The science of happiness and a proposal for a national index. *American Psychologist*, 55(1), 34–43. <https://doi.org/10.1037/0003-066X.55.1.34>.
- González-Carrasco, M., Casas, F., Malo, S., Viñas, F., & Dinisman, T. (2017). Changes with age in subjective well-being through the adolescent years: Differences by gender. *Journal of Happiness Studies*, 18, 63–88. <https://doi.org/10.1007/s10902-016-9717-1>.
- Hervás, G. (2009). Psicología Positiva: Una introducción. *Revista interuniversitaria de formación del Profesorado*, 23(3), 23–41.
- Huebner, E. S. (1991). Initial development of the student's life satisfaction scale. *School Psychology International*, 12(3), 231–240. <https://doi.org/10.1177/01430343911230>.
- Larson, R. W., Hansen, D. M., & Moneta, G. (2006). Differing profiles of developmental experiences across types of organized youth activities. *Developmental Psychology*, 42(5), 849–863. <https://doi.org/10.1037/0012-1649.42.5.849>.
- Lee, E. Y., Yi, K. J., Walker, G. J., & Spence, J. C. (2017). Preferred leisure type, value orientations, and psychological well-being among east Asian youth. *Leisure Sciences*, 39(4), 355–375. <https://doi.org/10.1080/01490400.2016.1209139>.
- Linley, P. A., Maltby, J., Wood, A. M., Osborne, G., & Hurling, R. (2009). Measuring happiness: The higher order factor structure of subjective and psychological well-being measures. *Personality and Individual Differences*, 47(8), 878–884. <https://doi.org/10.1016/j.paid.2009.07.010>.
- Marsh, H. W., Hau, K. T., & Wen, Z. (2004). In search of golden rules: Comment on hypothesis-testing approaches to setting cutoff values for fit indexes and dangers in overgeneralizing Hu and Bentler's (1999) findings. *Structural Equation Modeling*, 11(3), 320–341. https://doi.org/10.1207/s15328007sem1103_2.
- Montserrat, C., Dinisman, T., Bălțătescu, S., Grigoraș, B. A., & Casas, F. (2015). The effect of critical changes and gender on adolescents' subjective well-being: Comparisons across 8 countries. *Child Indicators Research*, 8, 111–131. <https://doi.org/10.1007/s12187-014-9288-9>.
- Muthén, L. K., & Muthén, B. O. (2012). *Mplus user's guide* (6th ed.). Muthén & Muthén.

- Negovan, V., Glăveanu, V. P., & Stănculescu, E. (2016). Mapping psychological well-being: The case of children and adolescents in Romania. In B. K. Nastasi & A. P. Borja (Eds.), *International Handbook of Psychological Well-Being in Children and Adolescents* (pp. 151–170). Springer New York. https://doi.org/10.1007/978-1-4939-2833-0_10.
- Newman, D. B., Tay, L., & Diener, E. (2014). Leisure and subjective Well-Being: A model of psychological mechanisms as mediating factors. *Journal of Happiness Studies*, 15(3), 555–578. <https://doi.org/10.1007/s10902-013-9435-x>.
- Offer, S. (2013). Family time activities and adolescents' emotional well-being. *Journal of Marriage and Family*, 75(1), 26–41. <https://doi.org/10.1111/j.1741-3737.2012.01025.x>.
- Opre, D., Pinte, S., Opre, A., & Berte, M. (2018). Measuring adolescents' subjective well-being in Educational Context: Development and Validation of a multidimensional instrument. *Journal of Evidence - Based Psychotherapies*, 18(2), 161. <http://jebp.psychotherapy.ro/vol-xviii-no-2-2018/measuring-adolescents-subjective-well-being-in-educational-context-development-and-validation-of-a-multidimensional-instrument/>.
- Rees, G., Savahl, S., Lee, B., & Casas, F. (2020). *Children's views on their lives and well-being in 35 countries: A report on the Children's Worlds study, 2016-19*. <https://iscweb.org/the-data/wave-3/wave-3-comparative-report/>.
- Robila, M. (2004). Child development and family functioning within the Romanian context. In Families in Eastern Europe (pp. 141–154). [https://doi.org/10.1016/S1530-3535\(04\)05009-5](https://doi.org/10.1016/S1530-3535(04)05009-5).
- Ross, D. A., Hinton, R., Melles-Brewer, M., Engel, D., Zeck, W., Fagan, L., Herat, J., Phaladi, G., Imbago-Jácome, D., Anyona, P., Sanchez, A., Damji, N., Terki, F., Baltag, V., Patton, G., Silverman, A., Fogstad, H., Banerjee, A., & Mohan, A. (2020). Adolescent well-being: A definition and conceptual framework. *Journal of Adolescent Health*, 67(4), 472–476. <https://doi.org/10.1016/j.jadohealth.2020.06.042>.
- Russell, J. A. (2003). Core affect and the psychological construction of emotion. *Psychological Review*, 110(1), 145–172. <https://doi.org/10.1037/0033-295X.110.1.145>.
- Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, 57(6), 1069–1081. <https://doi.org/10.1037/0022-3514.57.6.1069>.
- Sarriera, J. C., & Bedin, L. M. (2017). A multidimensional approach to well-being. In *Psychosocial well-being of children and adolescents in Latin America: Evidence-based interventions* (pp. 109–128). Springer. https://doi.org/10.1007/978-3-319-55601-7_6.
- Schutz, F. F., Sarriera, J. C., & Bedin, L. M. (2022). Subjective well-being of Brazilian children over time: Comparing children's worlds 1st and 3rd wave of 10 and 12-year-olds samples. *Child Indicators Research*, 15(2), 433–446. <https://doi.org/10.1007/s12187-021-09908-y>.
- Stănculescu, E. (2010). Children and childhood in Romanian society and social research: Ideological and market biases and some notable contributions. *Current Sociology*, 58(2), 309–334. <https://doi.org/10.1177/0011392109354247>.
- UNICEF (2021). *Worlds of Influence Understanding What Shapes Child Well-being in Rich Countries*. Innocenti Research Centre. <https://www.drugsandalcohol.ie/32934/1/Report-Card-16-Worlds-of-Influence-child-wellbeing.pdf>.
- Veenhoven, R. (Ed.). (1993). *Happiness in nations: Subjective appreciation of life in 56 nations, 1946–1992*. Erasmus University of Rotterdam, Department of Social Sciences, RISBO, Center for Socio-Cultural Transformation.
- Viejo, C., Gómez-López, M., & Ortega-Ruiz, R. (2018). Adolescents' psychological well-being: A multidimensional measure. *International Journal of Environmental Research and Public Health*, 15(10), 2325. <https://doi.org/10.3390/ijerph15102325>.
- Yang, B. (2005). Factor analysis methods. *Research in organizations: Foundations and methods of inquiry* (pp. 181–199). Berrett-Koehler.
- Yee, J. L., & Niemeier, D. (1996). Advantages and disadvantages: Longitudinal vs. repeated cross-section surveys. *Project Battelle*, 94, 16–22.
- Bradshaw, J., Keung, A., Rees, G., & Goswami, H. (2011). Children's subjective well-being: International comparative perspectives. *Children and Youth Services Review*, 33(4), 548–556. <https://doi.org/10.1016/j.childyouth.2010.05.010>.

Authors and Affiliations

Claudia Tejada-Gallardo¹  · **Sergiu Bălțătescu**²  · **Carles Alsinet**¹  ·
Claudia Bacter² 

✉ Claudia Tejada-Gallardo
claudia.tejada@udl.cat
Sergiu Bălțătescu
bsergiu2@gmail.com
Carles Alsinet
carles.alsinet@udl.cat
Claudia Bacter
claudianbacter@gmail.com

¹ Department of Psychology, Sociology and Social Work, Universitat de Lleida, Lleida, Spain

² Doctoral School of Sociology, University of Oradea, Oradea, Romania