

Developmental Differentiation of Well-Being Structure from Middle Childhood through Early Adolescence: Effects of Age and Gender

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The structure of well-being in adults comprises two prominent components: subjective well-being (SWB) and psychological well-being (PWB). SWB has its roots in hedonism, while PWB has roots in eudaimonia. Does the structure of these two components of well-being differ in school-aged children and young adolescents? Is the trend of well-being structure related to gender and the social ecological systems that are crucial for mental development during childhood? This study aimed to investigate the developmental trends of the structure of well-being in children from school age to adolescence, and to assess the relationship between gender and various domains of children's life with well-being. Data for the study was collected from 1,230 8-year-olds (third graders), 1,337 10-year-olds (fifth graders), and 1,511 12-year-olds (seventh graders) as part of the third wave of the International Survey of Children's Well-Being (ISCWeB) between September 2017 and March 2018. The study analyzed SWB, PWB, and life satisfaction in social domains, as well as examined the effects of gender and age. The data was analyzed using exploratory factor analysis (EFA) and measurement invariance analysis. The results of EFA for 10- and 12-year-old children showed a two-factor model of well-being structure, with one factor being "positive" (including items from life satisfaction and positive affect of the SWB subscale, and items from the PWB subscale), and the other factor being "negative" (including items from negative affect of the SWB subscale). Measurement invariance analysis showed that the SWB was similar in 10-year-old and 12-year-old children, but the PWB was lower in 12-year-olds compared to 10-year-olds. Life satisfaction in social domains decreased in boys from 8 to 12 years of age, while it followed an inverted U shape in girls, peaking at 10 years old. All the ecological systems (family, friendship, school, and community) were positively related to children's well-being, with the strongest relationship being between family and well-being. This study not only revealed the developmental paths of social ecological systems and children's factors (cognition and identity) in relation to children's well-being, but also provided implications for improving children's mental health.

Keywords: *early adolescence, International Survey of Children's Well-Being, middle childhood, subject/psychological well-being, social ecological systems*

Extended Abstract

According to the constitution of the World Health Organization (1948), "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." Similarly, the definition

of "health society" must also include mental health, with an emphasis on the importance of overall well-being for both physical and mental health and highlighting well-being as a multi-dimensional construct with physiological,

psychological, and social aspects (Bourne, 2010).

The roots of research on subjective well-being (SWB) can be traced back to two ancient Greek philosophical concepts, hedonia and eudaimonia, as noted by Keyes (2013) and Ryff et al. (2021). The concept of well-being derived from hedonia is referred to as subjective well-being (Diener, 1984), and the concept derived from eudaimonia is termed psychological well-being (PWB; Waterman et al., 2010). Most studies of children's well-being have evaluated SWB, with only a few examining the development of PWB. Children's well-being is shaped by their socioecological context, which includes their family, peers, school, and neighborhood, and their perception of these aspects of life is a major determinant of their well-being (Lawler et al., 2015, 2017; Newland et al., 2015). Although the number of studies on the components and related factors of children's SWB has increased in recent decades, many have focused on adolescents aged 10 and above (Lee & Yoo, 2015; Yoo et al., 2015). Few studies have examined the SWB of children aged 8 to 12 (Casas & González-Carrasco, 2019).

In this study, we explored the development of children's well-being perspective by examining children aged 8, 10, and 12 years old. Our focus was on determining the age range at which the distinction between SWB and PWB becomes apparent, evaluating any differences between the sexes, and determining which life aspect was most strongly correlated with well-being. We tested the following four hypotheses.

Hypothesis 1: We combined survey items related to SWB and PWB and performed an exploratory factor analysis to investigate how children's well-being perspective changes over time. We predicted that the well-being perspective of the 10-year-old and 12-year-old groups would be explained by two factors.

Hypothesis 2: We sought to determine whether there were any differences in the development of well-being perspective between boys and girls during the period between middle childhood and adolescence.

Hypothesis 3: This hypothesis was based on Bronfenbrenner's ecological systems theory, which suggests that family, friends, school, and neighborhood play a major role in shaping children's PWB, and that

children's satisfaction with specific life aspects may change as they age. We hypothesized that boys and girls have different priorities, with girls placing more emphasis on interpersonal relationships. Thus, we predicted that compared with boys, girls would be more satisfied with the relationship aspect of their lives.

Hypothesis 4: This hypothesis related to the impact of satisfaction with different life aspects on overall well-being. We predicted that satisfaction with family and friendship would have the greatest effect on well-being for 8-year-old children and 12-year-old girls, respectively. Furthermore, we expected that the quality of family relationships would explain the majority of the variance in children's well-being due to the significance of family life for children during early adolescence.

Methods

Sample Description

The study data were collected from Taiwanese children through the International Survey of Children's Well-Being (ISCWeB; Chen et al., 2021). The participants were students from regular classes in both public and private schools in Taiwan; those in special education and resource classes were excluded. The survey was conducted anonymously in groups with students from the same class and took 20-30 minutes to complete. After those whose parents did not give written consent were excluded, the final study sample comprised 1,230 8-year-old children (570 boys), 1,337 10-year-old children (670 boys), and 1,511 12-year-old children (745 boys).

Measures

Well-being

Subjective well-being. The study used two scales to assess the children's SWB: the Children's Worlds Subjective Well-Being Scale (CW-SWBS) and the Children's Worlds Positive and Negative Affects Scale (CW-PNAS). The CW-SWBS assesses cognitive SWB with six items, such as *I enjoy my life*. The response format for the 8-year-old group was a 5-point Likert scale, while for the 10- and 12-year-old groups, it was an

11-point Likert scale ranging from 0 (*not at all satisfied*) to 10 (*totally satisfied*). The CW-PNAS was used to assess affective SWB, with two items (*happy* and *sad*) for the 8-year-old group, scored on a 5-point Likert scale, and six items (*happy*, *sad*, *calm*, *stressed*, *full of energy*, and *bored*) for the 10- and 12-year-old groups, measured on an 11-point Likert scale.

Psychological well-being. The Children's Worlds Psychological Well-Being Scale (CW-PSWBS) was used to assess the PWB of the 10- and 12-year-old groups. It consists of six items, such as *I like being the way I am*, rated on an 11-point Likert scale ranging from 0 (*not at all satisfied*) to 10 (*totally satisfied*).

Domain-based Satisfaction

The Children's Worlds Domain-Based Subjective Well-Being Scale (CW-DBSWBS) was used to assess the children's satisfaction with their family, peers, school, and neighborhood. Satisfaction with each aspect was rated on a 5-point Likert scale ranging from 0 (*disagree*) to 4 (*totally agree*). The assessment for satisfaction with family consists of six items, such as *We have a good time together in my family*. The assessment for peer satisfaction consists of four items, such as *I have enough friends*. Satisfaction with school was measured using seven items, such as *If I have a problem at school, my teachers will help me*. Finally, satisfaction with the neighborhood was measured using six items, such as *There are enough places to play or have a good time*.

Demographic Data

In addition to the measures of well-being and satisfaction with different aspects of life, basic demographic information such as the children's school year and gender was also collected.

Data Analysis

Hypothesis 1 was tested using exploratory factor analysis, while Hypotheses 2, 3, and 4 were tested using multiple-group confirmatory factor analysis. The data analysis was conducted using R software.

Results

The results (Table 1) showed that the well-being structure of both the 10-year-old and 12-year-old groups consisted of two factors: a positive factor (including life satisfaction, positive affect, indices of SWB and PWB) and a negative factor (including negative affect items for SWB).

As shown in Table 2, the PWB level was lower in the 12-year-old group than in the 10-year-old group (boys in the 12-year-old group vs. boys in the 10-year-old group: $d = -0.256$, $p < .001$; girls in the 12-year-old group vs. boys in the 10-year-old group: $d = -0.304$, $p < .001$), and no significant difference was found between the two groups in terms of the life-satisfaction latent variable of SWB ($\Delta CFIs \geq -0.0032$, $\Delta RMSEAs \leq 0.0022$). The results of the analysis showed that there was no significant difference in life satisfaction between boys and girls in the 8-, 10-, and 12-year-old groups (8-year-old group: $ps < .01$, $\Delta CFIs \geq -0.0032$, $\Delta RMSEAs \leq 0.0031$; 10-year-old group and 12-year-old group: $ps < .05$, $\Delta CFIs \geq -0.0032$, $\Delta RMSEAs \leq 0.0022$). The results also showed that there was no significant difference in PWB between boys and girls in the 10- and 12-year-old groups ($ps < .05$, $\Delta CFIs \geq -0.0032$, $\Delta RMSEAs \leq 0.0022$).

As shown in Table 3, the girls in all three groups were more satisfied with their friendships and teacher-student relationships than the same-age boys were (8-year-old group: $ps < .05$; 10-year-old group: $ps < .05$; 12-year-old group: $ps < .05$). Changes in life satisfaction differed between boys and girls, with boys showing a downward trend from late childhood to early adolescence ($ps < .05$), while girls' life satisfaction followed an inverted U-shaped curve, with the highest level of satisfaction being observed in 10-year-old girls (better in the 10-year-old group than the 8-year-old group: $ps < .05$; better in the 8-year-old group than the 12-year-old group: $ps < .05$; better in 10-year-old group than 12-year-old group: $ps < .05$).

For children in the phase between late school-age and early adolescence, SWB and PWB were closely correlated with satisfaction with various aspects of their lives, including family, friendships, school, and neighborhood

($ps < .05$). Among these aspects, satisfaction with family was most strongly correlated with well-being ($r = 0.255$), indicating that this aspect had the greatest influence on their overall SWB. The level of satisfaction with friendships and teacher–student relationships was higher for girls than for same-age boys, and changes in life satisfaction differed between boys and girls.

Discussion

We investigated the development of well-being in Taiwanese children during the transition from school-age to adolescence and examined the correlations between their well-being and satisfaction with various aspects of life. The data for this investigation were collected from the third wave of the ISCWeB, which included children aged 8, 10, and 12 years, covering the period from middle and late school-age to early adolescence. The variables analyzed were SWB, PWB, and satisfaction with four aspects of life (family, friendship, school, and neighborhood), along with demographic variables such as gender and age group. The main findings are as follows.

First, the data analysis revealed that the children's PWB structures underwent differentiation as they progressed from middle childhood to late childhood and then to early adolescence. The findings showed improvements in children's understanding of their purpose in life, autonomy, potential for personal growth, mastery over their environment, strength of positive relationships, and self-acceptance as they grew older. These components

of PWB are tied to the significance of personal existence and self-fulfillment.

Second, we found that 10-year-old boys' satisfaction with the friendship aspect of their lives decreased earlier than that of 10-year-old girls, which is different from studies conducted in other countries. This trend may be attributable to the unique way that boys are taught to foster friendships, highlighting the impact of upbringing context on well-being formation. This supports the idea that well-being is culturally and contextually specific (Fegter, 2021), and it underscores the importance of considering cultural factors in the study of children's well-being development. This also emphasizes the need to prioritize awareness of PWB topics, such as the meaning of individual existence and self-realization, in well-being programs for senior elementary school students, with a focus on promoting friendship-building among boys.

Finally, children's well-being was associated with their satisfaction with various aspects of life, particularly the family. This highlights the importance of monitoring changes in children's well-being during the transition from school-age to adolescence, as well as changes in the socioecological systems that impact their lives. Early identification of any abnormal changes in well-being and related ecological systems can facilitate timely support and intervention. Hence, it is crucial to consider age-related changes in children's well-being when designing programs aimed at improving their mental health and well-being.