

Children's and Adolescents' Happiness Conceptualizations at School and their Link with Autonomy, Competence, and Relatedness

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“This is the peer reviewed version of the following article: (Lopez-Perez, B., & Zuffiano, A. Children's and Adolescents' Happiness Conceptualizations at School and their Link with Autonomy, Competence, and Relatedness. *Journal of Happiness Studies*). This article may be used for non-commercial purposes in accordance with the Springer Terms and Conditions for Self-Archiving.”

HAPPINESS AT SCHOOL

Abstract

Previous research on children's and adolescents' happiness either focused on their conceptualisations or the link between self-reported happiness with different outcomes. However, very few studies have connected both approaches to better understand children's and adolescents' happiness. To address this gap, we used a mixed-method approach, to investigate if the conceptualizations of happiness at school of 744 British children and adolescents could signal differences in autonomy, competence, and relatedness. An initial coding of the responses showed thirteen conceptualizations (i.e., positive feelings, harmony/balance, leisure, friends, getting good grades, non-violence, moral actions, purpose, autonomy, competence, teachers, emotional support, and learning). Log-linear models showed that some of the conceptualizations differed across both age groups and gender. Latent class analysis showed that happiness conceptualizations could be classified in five different groups. Interestingly, whereas for children there were no differences; for adolescents, there were differences between classes in their levels of autonomy and relatedness. The implications of these findings for promoting students' well-being at school are discussed.

Keywords: children; adolescents; happiness; school; self-determination theory.

Children's and Adolescents' Happiness Conceptualizations at School and its Link with Autonomy, Competence, and Relatedness

The scientific study of happiness has been approached from hedonic and eudaimonic theories. From the hedonic perspective, happiness is understood as the experience of positive affect, the absence of negative affect and high life satisfaction (e.g., Diener, Lucas, & Oishi, 2002). On the other hand, the eudaimonic theories understand happiness as comprising meaning, personal growth and self-actualization (e.g., Ryan & Deci, 2000). Some authors have proposed theories that reconcile both approaches (e.g., Seligman, 2011), which is the perspective adopted in the present study when approaching the concept of happiness. The study of children's and adolescents' happiness has been focused mainly in hedonic elements. In detail, many of the initial studies were focused on developmental changes in the understanding of the emotion of happiness or positive affect (Harter, 2012; Lewis & Michalson, 1983). Further studies focused on the experience of life satisfaction and its link with different demographic, cognitive, personality, and behavioural factors (e.g., Dew & Huebner, 1994; Huebner, Suldo, & Gilman, 2006; Suldo, Savage, & Mercere, 2014). These research programs were focused on general happiness, however as acknowledged by van de Wetering, van Exel, and Brouwer (2010) happiness is domain-specific and therefore what children and adolescents report in general may be different to how happy they feel at home or at school. Hence, it is important to conduct domain-specific studies to better understand children and adolescents' happiness.

Children and Adolescents' Happiness at School

School is one of the most important contexts for children and adolescents' development as it is where children and adolescents acquire most of their knowledge

1 and develop socio-emotional skills (Eccles & Roeser, 2011). Given its importance, there
2
3 are multiple interventions aimed at promoting children's happiness or well-being at
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5 school (e.g., Boniwell, Osin, & Martinez, 2016; Suldo, 2016).
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9 The study of happiness or well-being at school has been conducted from a
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11 quantitative approach focusing on the outcomes or the possible determinants of
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13 happiness. Concerning the outcomes, most studies have linked happiness with academic
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15 achievement, since schools put a big emphasis on students' performance (Mega,
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17 Ronconi, & De Beni, 2014). Although initial research did not find any link (Huebner,
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19 1991; Huebner & Alderman, 1993), other studies found a significant positive
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21 relationship (Cheng & Furnham, 2002; McCullough, Huebner, & Laughlin, 2000), as
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23 well as reciprocal links between happiness and academic achievement (Quinn &
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25 Duckworth, 2007). More recent works have highlighted the mediating role of happiness
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27 on the link between school variables (e.g., students' perception of teachers or class
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29 climate) and school performance (López et al., 2017). Besides academic achievement,
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31 happiness is also reciprocally related to school belongingness (Tian, Zhang, Huebner,
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33 Zhen, & Liu, 2016), higher intrinsic motivation (Low, King, & Caleon, 2016), and
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35 academic self-regulation (Villavicencio & Bernardo, 2016).
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44 When looking at the possible determinants of happiness most studies have
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46 emphasized the role that basic psychological needs can have in the experience of well-
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48 being (*Self-determination theory*, Deci & Ryan, 2000, 2008). These basic psychological
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50 needs are: autonomy (i.e., feeling one is mastering their life and can control their own
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52 behaviour), competence (i.e., sense of dealing effectively with the demands from the
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54 environment), and relatedness (i.e., having close and affectionate relationship with
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56 others; Ryan & Deci, 2000). The satisfaction of these needs does not only depend on the
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1 individual's competences but also on the affordances and demands of the environment
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4 (Guay, Ratelle, & Chanal, 2008). Therefore, children's happiness at school may not
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6 only depend on their own capacities but also on the contextual factors present in the
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8 school setting such as teachers' style (Reeve, 2009) or deadlines (Deci & Ryan, 2000),
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10 which may undermine students' intrinsic motivation (Deci, Vallerand, Pelletier, &
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12 Ryan, 2011). Overall, different studies have shown that teaching practices that foster
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14 students' autonomy, competence, and relatedness help students satisfy these
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16 psychological needs while simultaneously increase their well-being (Deci & Ryan,
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18 2002; Tsai, Kunter, Lüdtke, Trautwein, & Ryan, 2008; Wentzel & Wigfield, 2007).
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21 Importantly, the satisfaction of those needs is affected and has an effect (cross-lagged
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23 relationships) on self-reported happiness (Stiglbauer, Gnambs, Gmsjäger, & Batinic,
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25 2013).
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31 **What do Children and Adolescents Understand by Happiness?**

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35 Although the previous studies have advanced our understanding of the possible
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37 causes and consequences of happiness, they have investigated the role of happiness
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39 strictly relying on quantitative data. However, other research has stressed the
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41 importance of studying happiness from a qualitative point of view (e.g., Freire, Zenhas,
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43 Tavares, & Iglésias, 2013) to obtain a more in depth understanding of what children and
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45 adolescents comprehend what being happy at school is for them (López-Pérez &
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47 Fernández-Castilla, 2018).
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52 Investigating children's and adolescents' conceptualizations of happiness is
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54 important for different reasons. First, people's cognitions play a role in shaping their
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56 behavior (Ajzen, 2011). Hence, by looking at children's and adolescents' definitions of
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58 what being happy at school is, researchers and educators can better understand how
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1 students strive for happiness in that setting. Second, previous research with both adults
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4 (Delle Fave, Brdar, Freire, Vella-Brodrick, & Wissing, 2011) and children (López-Pérez
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6 & Fernández-Castilla, 2018) has found that quantitative measures of happiness did not
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8 correlate significantly with all the happiness conceptualizations mentioned by
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10 participants; therefore, a qualitative approach can add valuable information by capturing
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12 a richer perspective not predefined by the researcher. Finally, research in psychology
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14 and sociology has highlighted the importance of placing children and adolescents at the
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16 center of the study (Ben-Arieh et al., 2001), rather than assuming an adultcentric
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18 perspective (Fattore, Mason, & Watson, 2006), which may not enable us to truly
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20 understand what happiness means for them.
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26 Initial research on children's and adolescents' conceptualizations of happiness at
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28 school conducted with Spanish children and adolescents found that seven
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30 conceptualizations emerged in both age groups (i.e., being with friends, being praised,
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32 getting good grades, learning, leisure, enjoyment, and helping). The conceptualization
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34 of happiness as 'being with friends' was mostly reported by children, whereas 'helping'
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36 was mentioned mostly by adolescents. Furthermore, whereas for adolescents some of
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38 the conceptualizations (e.g., leisure, being praised, and helping) were linked to their
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40 quantitative self-reports of happiness, this was not true for children.
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46 Findings from this study as well as initial research on general happiness
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48 conceptualizations in children and adolescents identified clear age differences and
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50 mixed results in regards to gender (Fattore et al., 2006; Freire et al., 2013; López-Pérez,
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52 Sanchez, & Gummerum, 2016). Potential developmental differences in the happiness
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54 conceptualizations may be due to the different cognitive, emotional, and social changes
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56 that occur in the transition from childhood to adolescence.
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1 At a cognitive level, whereas children use concrete terms to define abstract
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4 concepts (Maio, 2010), adolescents can reason at a more abstract level compared to
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6 children (Kruger, 2005; Marini & Case, 1994); it is not surprising then that in the
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8 studies focused on general happiness and at school, adolescents have mentioned more
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10 abstract categories related to eudaimonic conceptualizations (e.g., ultimate purpose in
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12 life or prosocial behaviour) (López-Pérez et al., 2016; López-Pérez & Fernández-
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14 Castilla, 2018).

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19 At an emotional level, children and adolescents experience changes in their
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21 emotion expression, understanding and regulation (Izard et al., 2011; Yurgelun-Todd,
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23 2007). In detail, although adolescents exhibit more advanced emotion understanding
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25 they also present more difficulties to regulate their own emotions (Zeman, Cassano,
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27 Perry-Parrish, Carisa, & Stegall, 2006). These emotional changes could potentially have
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29 an effect in how children and adolescents appraise happiness (Coffey, 2019) and
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31 ultimately explain the previous age differences found in conceptualizations.

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37 At a social level, identity becomes more prevalent for adolescents, as they think
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39 more frequently than children who they want to be (Lerner & Steinberg, 2009). This is
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41 also congruent with the findings on general conceptualizations on happiness, as
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43 adolescents mentioned more categories related to autonomy and experience of freedom,
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45 which may correspond to a eudaimonic approach.

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50 Concerning gender, previous research provided mixed results concerning
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52 possible differences in the conceptualizations of happiness between boys and girls
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54 (Freire et al. 2013; Giacomoni et al. 2014; López-Pérez & Fernández-Castilla, 2018).
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56 Hence, further studies are needed to better understand if there are differences in the way
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58 boys and girls conceptualize happiness.

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The Present Research

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Previous research on children and adolescents' happiness has either focused on the link of autonomy, competence, and relatedness with children's well-being at school (Stiglbauer et al., 2013; Taylor et al., 2014; Tsai et al., 2008; Wentzel & Wigfield, 2007) or on the description of happiness conceptualizations frequencies (e.g., Giacomoni et al. 2014). However, as acknowledged by Delle Fave et al (2011) there is a scarcity of studies that have connected the two and that have taken a mixed method approach in its study, which can help to better understand the link between conceptualizations of happiness and key variables for happiness such as autonomy, competence, and relatedness(Freire et al., 2013).

Based on previous research, we explored whether children and preadolescents from the United Kingdom (UK) mentioned categories of happiness similar to the ones identified previously in Spain (López-Pérez & Fernández-Castilla, 2018). However, given that the UK constitutes a different cultural context to Spain in terms of individualism (i.e., orientation towards individual goals rather than group goals; Goodwin & Plaza, 2000; Gouveia, Clemente, & Espinosa, 2003; Minkov et al., 2017), we did not exclude that different conceptualizations or themes may emerge from coding students' qualitative answers as different categories emerged when comparing adults in different countries that differed in their levels of individualism-collectivism (e.g., Delle Fave, Brdar, Freire, Vella-Brodrick, & Wissing, 2011; Lu & Gilmore, 2004).

Furthermore, based on previous studies, we expected that regardless of the number of themes identified, children may mention more hedonic conceptualizations, as their reasoning is more concrete and less abstract (e.g., Berndt & Savin-Williams, 1993). In fact, previous research (Giacomoni, Souza, & Hutz, 2014) looking at

1 children's conceptualizations found that younger children defined happiness as leisure
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3 (hedonic) whereas older children mentioned both hedonic (e.g., positive feelings) and
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5 eudaimonic (e.g., positive relationships with friends) elements in their definitions. On
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7 the other hand, we expected preadolescents to mention more eudaimonic
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9 conceptualizations (e.g., related to autonomy; López-Pérez et al., 2016) than children, as
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11 they can reason at a more abstract level (Adams & Berzonsky, 2013). However, we also
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13 expected preadolescents to mention hedonic conceptualizations in their definitions, as
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15 this was found in previous research with adolescents (Freire et al., 2013; Keyes, 2006).
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17 Since previous research found mixed results concerning possible gender differences
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19 (Freire et al. 2013; Giacomoni et al. 2014; López-Pérez & Fernández-Castilla, 2018),
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21 we also explored it.
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28 Second, concerning quantitative self-reports of autonomy, competence, and
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30 relatedness, we expected children to score significantly higher than preadolescents, as
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32 previous research comparing primary and secondary schools has found that (1) children
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34 reported significantly higher happiness than adolescents (Natvig, Albrektsen, &
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36 Qvarnstrøm, 2003) and (2) secondary schools tend to promote educational practices
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38 based on competition (Demetriou , Goalen, & Rudduck, 2000) and achievement
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40 (Brenner & Graham, 2009), which may undermine their autonomy, competence, and
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42 relatedness (Niemic & Ryan, 2009).
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48 Finally, we did explore if children and preadolescents could be grouped in latent
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50 classes (LCA) depending on their happiness conceptualizations and tested whether these
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52 possible classes did differ in their levels of autonomy, competence, and autonomy,
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54 which can help us to gain not only a better understanding of the development of
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56 happiness conceptualizations but also a comprehension as to what extent they may
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58 reflect differences in distinct well-being domains, which is a gap that needs to be
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1 addressed (Bojanowska & Zalewska, 2016; Delle Fave et al., 2001). Given that no
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4 previous research had taken a similar stance, we conducted these analyses from an
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6 exploratory approach without having *a priori* hypotheses.
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8 Method

9 Participants

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13 Seven-hundred and forty-four children and preadolescents from eight different
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15 public schools (i.e., six primary and two secondary schools) in a medium-sized urban
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17 city of England participated in this study. Children were 9 to 11 years of age ($n= 421$;
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19 $M_{\text{age}} = 10.75$; $SD = 0.52$; 53% girls) and preadolescents were 12 to 14 years of age ($n=$
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21 323 ; $M_{\text{age}} = 13.37$; $SD = 0.94$; 48% girls). All participants were from schools located in
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23 middle-class areas. In regard to the ethnicity, most children and adolescents were
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25 Caucasian (98%), and very few Asian or African (2%).
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31 Ethics Statement

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34 The study received ethical clearance by the ethics committee of [name of the
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36 university deleted for revision] with code S 23-11-2016 FREC 001. Parents of
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38 participating children received a consent form to sign. Only children who got consent
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40 from their parents took part in the study. Furthermore, children did assent before taking
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42 part.
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47 Measures

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49 **Students' Basic Psychological Needs at School (SBPNS).** To measure
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51 students' needs at school we used the SPBNS (Tian, Han, & Huebner, 2014). This 15-
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53 item questionnaire evaluates students' psychological needs satisfaction at school in a 5-
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55 point Likert scale (1 = strongly disagree to 5 = strongly agree). The questionnaire has
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57 two reverse-scored items that were recoded before computing the three different scales:
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1 autonomy (i.e., the experience of support and self-volition at school; e.g., I can decide
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3 for myself how to do things at school; $\alpha = .75$), relatedness (i.e., sense of school
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5 belonging with positive relationships with teachers and classmates; e.g., I get along well
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7 with my teachers and classmates at school; $\alpha = .73$), and competence (i.e., to be able to
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9 interact effectively at school and have opportunities to develop; e.g., I am capable of
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11 learning new knowledge at school; $\alpha = .75$).
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17 **Conceptualizations of happiness at school.** Participants were asked to answer
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19 the following question: “Please define in your own words what it means to you to be
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21 happy in the school”. This procedure has been successfully used before to investigate
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23 children’s and preadolescents’ beliefs about general happiness (e.g., Freire et al., 2013;
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25 Giacomoni et al., 2014; López-Pérez et al., 2015) and happiness in the school context
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27 (López-Pérez & Fernández-Castilla, 2018). There was no maximum word limit and
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29 children/adolescents had ten minutes to complete this part.
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34 **Procedure**

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37 Permission was obtained from the school principals and teachers. Only children
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39 who consented and obtained their parents’ consent were included (98%). Testing was
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41 conducted at the schools. After being briefed about the aim of the project (i.e., knowing
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43 more about children’s and adolescents’ happiness at school), participants completed
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45 some demographic questions. After that, participants completed in randomized order the
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47 measures described. Once participants finished they were debriefed. In detail,
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49 participating children and preadolescents were explained we wanted to understand
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51 better what happiness at school meant for them and whether this was linked to how they
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53 felt at school. They were also provided with an information sheet to take home for their
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Coding

Qualitative thematic analysis of children's and preadolescents' conceptualizations of happiness at school was conducted by six researchers (one of the main investigators and five research assistants). Thematic analysis (TA) allows identifying patterns of meaning or themes across large datasets (Braun & Clarke, 2006). TA is useful to examine similarities and differences between participants and capture unanticipated topics (King, 2004). Importantly, it is a very structured process that helps to handle large datasets (as the one of this study) in a very rigorous way (Nowell, Norris, White, & Moules, 2017). Following the TA procedure, responses were coded using an iterative process in which themes were generated and then refined based on multiple revisions of transcripts. The first step consisted in open coding wherein one of the main investigators and two research assistants proposed an initial set of possible themes based on their independent review of 40 responses, taken as a random sample. In the second step, the main investigator and another research assistant reviewed the initial themes to test their fit with the data and to decide whether additional themes were needed. A preliminary coding manual (see Appendix A) was then created with definitions and examples of the thirteen conceptualizations mentioned by children and preadolescents in this study. After that, three research assistants, blinds to the aims of the research, coded the 744 responses based on the coding manual. As part of their training, coders coded twenty randomly selected answers and then met to discuss to reach consensus. Inter-rater agreement for the different categories identified was on average above 80%, ranging from 76% to 98%, with Kappas of Cohen above .82.

Data Analysis

Once the themes were identified, we aimed to explore whether participants' conceptualizations of happiness at school were different depending on age and/or

1 gender. Hence, we computed a set of log-linear analyses as we wanted to test the
2
3 interaction of three categorical variables (see Wickens, 1989). First, the automatic
4
5 model search of the Statistical Package for the Social Sciences (SPSS 24.0) saturated
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7 hierarchical log-linear (hi-log-linear) procedure was run to find the most parsimonious
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9 final model in which main effects and all interactions (3-way and 2-way interactions)
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11 were considered at the same time in the model. A final model having a non-significant
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13 probability value is considered to be the best fitting, as this indicates there are no
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15 differences between the observed and the expected frequencies (Wickens, 1989). The
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17 model fit (χ^2) of the hi-log-linear procedure is presented in the text. To estimate single
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19 parameters (z values), a log-linear model was computed to better understand where the
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21 difference underlies.
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29 To evaluate different profiles in children's and adolescents' happiness
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31 conceptualizations, we conducted a LCA in *Mplus 7.4* (Muthén & Muthén, 1998-2012)
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33 considering the different conceptualizations emerged from the coding of the qualitative
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35 responses. LCA is based on a person-centered approach, which allows the identification
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37 of differences across individuals by grouping them in a finite number of mutually
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39 exclusive and exhaustive classes (Bergman & Magnusson, 1997; Ruscio & Ruscio,
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41 2008). Hence, we thought this method would be the most appropriate in order to
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43 identify possible subgroups based on their happiness conceptualizations, as it has been
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45 extensively used before in developmental research (Lanza & Cooper, 2016). To identify
46
47 the best solution of profiles of happiness conceptualizations, we ran several models
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49 (ranging from 2 to 6 classes). The best model was chosen considering the smallest
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51 Akaike and Bayesian information criteria (AIC and BIC, respectively), and the highest
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53 possible entropy index (Nyuland, Asparouhov, & Muthén, 2007). Finally, the resulting
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1 classes were compared in their different frequencies of happiness conceptualizations via
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3 Chi-square analyses; and in their mean levels of autonomy, competence, and relatedness
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5 via ANOVAs.
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9 Results

10 Age and Gender Differences in Children's and Preadolescents' Conceptualizations 11 12 of Happiness at School 13 14 15

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17 Most children and adolescents mentioned one to four different
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19 conceptualizations ($n = 581$; 78%) and only few mentioned five to nine
20
21 conceptualizations ($n = 96$; 13%). Furthermore, sixty-seven children did not mention
22
23 any conceptualization in their definitions, as their text was completely unrelated to
24
25 happiness (9%). Interestingly, we found that preadolescents ($M = 3.13$, $SD = 1.71$, range
26
27 = 9) mentioned more conceptualizations than children ($M = 2.29$, $SD = 1.41$, range = 7),
28
29 $t(742) = 7.31$, $p < .001$, $d = 0.54$. We also found that girls ($M = 2.92$, $SD = 1.60$, range =
30
31 8) mentioned more conceptualizations than boys ($M = 2.41$, $SD = 1.54$, range = 9),
32
33 $t(742) = 4.37$, $p < .001$, $d = 0.32$. Importantly the length of the text of children ($M =$
34
35 55.25 words, $SD = 8.10$) was not significantly different from the one written by
36
37 adolescents ($M = 56.10$ words, $SD = 6.15$; $t(742) = 1.57$, $p = .11$, $d = .12$), Table 1
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39 displays the frequency of the thirteen happiness conceptualizations at school by age and
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41 gender.
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50 Regarding the conceptualizations of competence, positive relationship with
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52 teachers, and emotional support, the hi-log-linear analyses produced the final models of
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54 the interaction between the main category and gender and the main category and age
55
56 (competence \times gender and competence \times age, $\chi^2 = 3.15$, $df = 2$, $p = .21$; positive
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58 relationship with teachers \times gender and positive relationship with teachers \times age, $\chi^2 =$
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1 4.49, $df = 2$, $p = .11$; and emotional support \times age and emotional support \times gender, ($\chi^2 =$
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3 1.74, $df = 2$, $p = .42$). However, considering the Bonferroni correction, only the last two
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5 can be considered significant. Hence, the log-linear analyses showed that preadolescents
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7 mentioned the conceptualization of positive relationship with the teachers
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9 significantly more than children. Furthermore, girls mentioned the conceptualization of
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11 emotional support more than boys (Tables 1, 2).
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17 For the conceptualizations positive feelings, harmony/balance, learning, and
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19 good grades the hi-log-linear analyses produced the final model of the interaction
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21 between the main category and age (positive feelings \times age, $\chi^2 = 3.436$, $df = 4$, $p = .77$;
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23 harmony/balance \times age, $\chi^2 = 4.57$, $df = 4$, $p = .77$; good grades \times age, $\chi^2 = 1.57$, $df = 4$,
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25 $p = .82$; and learning \times age, $\chi^2 = 5.11$, $df = 4$, $p = .28$). Considering again, the
26
27 Bonferroni correction only the first three were significant. The log-linear analyses
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29 showed that preadolescents mentioned the conceptualizations of positive feelings,
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31 harmony, and good grades significantly more than children (Table 1). There was not a
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33 significant interaction with gender (Table 2).
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40 Concerning the conceptualizations friends and autonomy, the hi-log-linear
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42 analyses produced the final models of friends \times gender, $\chi^2 = 4.80$, $df = 3$, $p = .19$ and
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44 autonomy \times gender, $\chi^2 = 4.72$, $df = 3$, $p = .19$, respectively. When applying the
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46 Bonferroni correction, these are no longer significant. Furthermore, there was not a
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48 significant interaction of the conceptualizations with age (Table 2).
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53 For the conceptualizations leisure, non-violence, moral actions, and purpose, the
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55 hi-log-linear analyses did not produce a significant model for any interaction, only the
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57 main effect of the category was significant (leisure, $\chi^2 = 1.63$, $df = 5$, $p = .90$; non-
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1 violence, $\chi^2 = 3.18$, $df = 5$, $p = .67$; Moral actions, $\chi^2 = 5.71$, $df = 5$, $p = .34$; and
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4 purpose, $\chi^2 = 3.08$, $df = 5$, $p = .69$). Therefore, there were no age or gender differences
5
6 in these conceptualizations (Tables 1, 2).
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9 **Can Children and Preadolescents Be Grouped in Different Classes Depending on** 10 11 **their Happiness Conceptualizations?** 12 13

14
15 In order to explore whether we could group children and preadolescents' in
16 different classes based on their happiness conceptualizations, we ran a LCA. We
17
18 computed different models (i.e., 2, 3, 4, 5, and 6 classes) to evaluate which one had the
19
20 best fit. To that aim, we considered (1) the information criterion indices such as Akaike
21
22 Information Criterion (AIC, Akaike, 1973) and the Bayesian Information Criterion
23
24 (BIC; Schwartz, 1978), with lower values indicating a better model fit; (2) a value of
25
26 entropy (i.e., appropriate separation between the classes) higher than .06 to be
27
28 considered acceptable (Asparouhov & Muthén, 2013); (3) the percentage of each
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30 profile to be at least 5% (Speece, 1994); and (4) the interpretability of each profile
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32 (Wang & Wang, 2012).
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41 As reported in Table 3, considering the aforementioned criteria, the best model
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43 was found to be the 5-class model. In order to understand the differences between
44
45 classes, we conducted a number of Chi-square analyses to evaluate how the different
46
47 classes may differ in their conceptualizations. As it can be seen in Table 4, identified
48
49 classes differed for all the conceptualizations, except for the conceptualization of
50
51 purpose, as this was hardly mentioned by any children and adolescents. Looking at the
52
53 differences between the different classes (Figure 1), the first class ($n = 276$, 37% of the
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55 sample) comprises children and preadolescents whose conceptualizations are concerned
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57 with experiencing autonomy, competence, and having positive relationships. The
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1 second class (n = 149, 20%) includes children and preadolescents whose
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3 conceptualizations are focused on the experience of positive feelings and harmony. The
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5 third class (n = 68, 9%) encompasses children and preadolescents whose
6
7 conceptualizations are centered on the satisfaction of emotional needs. The fourth class
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9 (n = 124; 16%) includes children and preadolescents whose conceptualizations are
10
11 concerned on learning and engaging in extracurricular activities. Finally, the fifth class
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13 (n = 126, 17%) comprises children and preadolescents who mentioned less
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15 conceptualizations linked to the satisfaction of psychological needs at school, as well as
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17 learning and positive affect as compared to the other latent classes.
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24 **Do the Classes Differ in their Levels of Autonomy, Competence and Relatedness?**

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27 To test whether we could differentiate the five classes based on students' level of
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29 Autonomy, Competence, and Relatedness, we ran three ANOVAs in which students'
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31 classes (1, 2, 3, 4, and 5), age group (children versus adolescents), and gender (boys
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33 versus girls) were included as between-subject factors. A Bonferroni correction was
34
35 applied to all pairwise comparisons. The descriptive of the different psychological needs
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37 by age group and gender can be found in Table 5. For the sake of facilitating the
38
39 understanding of the following analyses, we labeled the classes as follows: class 1, self-
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41 determination; class 2, positive feelings; class 3, emotional needs; class 4, learning; and
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43 class 5, disengagement.
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50 **Autonomy.** The effects of gender ($F(1, 713) = 0.2, p = .87, \eta^2_p = .001$), class (F
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52 (1, 713) = 2.19, $p = .07, \eta^2_p = .012$) and gender \times class interaction, ($F(4, 713) = 1.47, p$
53
54 = .21, $\eta^2_p = .008$) were not significant. We found a main effect of age group, ($F(1, 713)$
55
56 = 27.54, $p = .001, \eta^2_p = .04$) and pairwise comparisons showed that children did report
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58 significantly higher autonomy than preadolescents did ($d = .45, SE = .09, p = .001$). Yet,
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1 the interaction age group \times class was significant ($F(4, 713) = 2.62, p = .03, \eta^2_p = .02$).

2
3 When looking at the different classes, pairwise comparisons showed that for children
4
5 there were no differences between classes in the levels of autonomy ($ps > .90$).

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7 However, for preadolescents, those in class 5 (disengagement) did report lower levels of
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9 autonomy as compared to those in class 1 (self-determination; $d = -.75, SE = .21, p =$
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Competence. The effects of gender ($F(1, 713) = 0.78, p = .38, \eta^2_p = .001$), and age group \times class ($F(4, 713) = 1.52, p = .19, \eta^2_p = .009$) and gender \times class interactions ($F(4, 713) = 0.65, p = .63, \eta^2_p = .004$) were not significant. There was a main effect of class ($F(4, 713) = 4.75, p = .001, \eta^2_p = .03$) with pairwise comparisons showing that children and preadolescents in class 5 (disengagement) reported the lowest levels of competence as compared to those in class 1 (self-determination; $d = -.45, SE = .11, p = .001$). There was also a significant effect of age group ($F(1, 713) = 59.46, p = .001, \eta^2_p = .03$) with children reporting higher levels of competence as compared to adolescents ($d = .61, SE = .08, p = .001$).

Relatedness. The effects of gender ($F(1, 713) = 1.60, p = .21, \eta^2_p = .002$) and gender \times class interaction ($F(4, 713) = 1.65, p = .16, \eta^2_p = .009$) were not significant. There was a main effect of class ($F(4, 713) = 3.07, p = .02, \eta^2_p = .017$), with class 1 (self-determination) reporting higher relatedness than class 5 (disengagement; $d = .33, SE = .11, p = .04$). There were no differences between the other classes ($ps > .32$). There was also a main effect of age group ($F(1, 713) = 132.34, p = .001, \eta^2_p = .16$) with children reporting higher relatedness than preadolescents ($d = .84, SE = .07, p = .001$). Finally, there was a significant age group \times class interaction ($F(4, 713) = 2.34, p = .04, \eta^2_p = .013$) such that whereas for children there were no differences between the

1 different classes ($ps > .90$), for preadolescents those in class 5 (disengagement) did
2
3 report significantly lower relatedness than those in class 1 (self-determination; $d = -.62$,
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5 $SE = .18$, $p = .007$). There were no significant differences between the other classes for
6
7 adolescents ($ps > .58$).
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10 11 Discussion

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15 Previous research on children's and adolescents' conceptualizations of happiness
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17 was either focused on general happiness (Freire et al., 2013; Giacomoni et al., 2014) or
18
19 did not consider the link between psychological needs and conceptualizations of
20
21 happiness at school (López-Pérez & Fernández-Castilla, 2018). Hence, the present
22
23 research aimed to address this gap by extending previous studies on children's and
24
25 preadolescents' happiness conceptualizations at school and evaluating whether different
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27 profiles could be identified and be characterized by different scores in autonomy,
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29 competence, and relatedness. Importantly, this study extends previous research by
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31 looking at a different country (the UK) and evaluating if the conceptualizations are
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33 different from prior research in Spain.
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40 Children's and Preadolescents' Happiness at School

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43 Concerning their conceptualizations of happiness at school, the topics that
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45 emerged were similar to the ones obtained in previous research (López-Pérez &
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47 Fernández-Castilla, 2018) but other new categories emerged in the analysis (e.g., non-
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49 violence, emotional support, moral actions, autonomy, etc.). We anticipated other
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51 categories could be mentioned as previous evidence was captured in different cultural
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53 contexts (i.e., more collectivistic cultures) and previous research already noted
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1 differences in the conceptualizations across cultures was found in previous research
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4 with adults (e.g., Delle Fave et al., 2011; Joshanloo et al., 2016).
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7 **Age Differences.** Regarding age differences, our findings showed that
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9 preadolescents not only mentioned more conceptualizations than children but they also
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11 specifically reported the categories ‘positive feelings’, and ‘getting good grades’ (for
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13 similar findings in Spanish preadolescents and adolescents, see López-Pérez &
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15 Fernández-Castilla, 2018). Furthermore, preadolescents in this study also mentioned
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17 more than children the categories ‘competence’, ‘harmony’ and ‘positive relationships
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19 with teachers’. Most of these conceptualizations include elements of a eudaimonic
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21 approach to well-being as they refer to basic psychological needs (i.e., competence and
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23 relatedness; Deci & Ryan, 2001) as well as the experience of balance which has been
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25 linked to eudaimonia (Fowers, 2016). However, as previously found with Spanish
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27 adolescents, UK preadolescents did also mention more ‘positive feelings’. This might
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29 be potentially explained by adolescents being more prone to increased reward-seeking
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31 behaviour (Steinberg, 2010). As in previous research, the conceptualization ‘getting
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33 good grades’ was significantly more mentioned by adolescents. Secondary schools put a
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35 higher emphasis on the evaluation process, since this may determine adolescents’
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37 performance in different certificates and their likelihood to get to university. Hence,
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39 intrinsic motivation could be undermined during this school period (Gillet, Vallerand, &
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41 Lafrenière, 2012).
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51 **Gender Differences.** In regards to gender differences, girls mentioned
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53 significantly more the conceptualizations of ‘emotional support’. These results are
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55 different from previous research where gender differences emerged, as they found that
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57 girls did mention more conceptualizations related to feelings whereas boys more related
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1 to leisure (Giacomoni et al., 2015). However, it is important to note that this study was
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3 only conducted with children from Brazil and our data included both children and
4
5 adolescents from the UK, which may explain the obtained differences. The fact that
6
7 girls did mention more the conceptualization of ‘emotional support’ could be due to the
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9 fact that girls put a higher emphasis on intimacy in relationships and therefore friends
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11 may be more salient in their conceptualizations (Williams, Connolly, & Segal, 2001).
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16 **Happiness Conceptualizations and its Link with Psychological Needs**

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20 Children reported experiencing higher autonomy, competence, and relatedness at
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22 school. These findings are in line with previous literature showing that secondary school
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24 students are under higher pressure (Chapman & Harris, 2004). For instance, in the
25
26 United Kingdom, adolescents between 14 to 16 years of age have to take their General
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28 Certificate of Secondary Education (GCSE) exams, which can alter teaching practices
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30 and learning experience (Gu & Day, 2007) and well-being of adolescents (Denscombe,
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32 2000). Therefore, it is not surprising that preadolescents in our sample reported lower
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34 satisfaction of their psychological needs at school.
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41 Results from the LCA identified five different profiles depending on the
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43 conceptualizations children and adolescents did mention. For autonomy and relatedness,
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45 results showed that for children there were no differences in the scores between the
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47 classes. The fact that the different classes did not make a difference for children’s scores
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49 on autonomy, competence and relatedness is in line with previous research on happiness
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51 conceptualizations as they were not linked to children’s self-reported happiness or
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53 academic achievement (López-Pérez & Fernández-Castilla, 2018). This may be due to
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55 the fact that children have been described as exhibiting a positive bias in which they see
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57 their life in very positive light due to their cognitive limitations to compare between real
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1 and ideal situations (Harter, 2012). However, for preadolescents those in class 5
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4 (disengagement) were significantly different from the ones in class 1 (self-
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6 determination). Class 5 was characterized as mentioning less topics related to the
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8 fulfillment of psychological needs, learning, and experiencing positive affect.
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10 Therefore, this group could be described as disengaged with the school experience and
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12 it is not surprising that their scores in autonomy and relatedness were lower as
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14 compared to the class more concerned with the satisfaction of basic psychological
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16 needs.
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21 These findings suggest that happiness conceptualizations can reflect whether
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23 some of the psychological needs are satisfied for that concept. Hence, this provides
24
25 further support to the need of looking at well-being not only from a quantitative
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27 approach but also from a qualitative perspective, putting children and preadolescents in
28
29 the center of the assessment process (Ben-Arieh et al., 2001). Furthermore, this
30
31 highlights the importance of considering measures of happiness beyond objective
32
33 indicators when evaluating subjective well-being as this provides additional valuable
34
35 information (Oishi & Diener, 2014). In addition, the obtained results can inform not
36
37 only future research on children's and adolescents' happiness at school but also the
38
39 evaluation of school climate and the improvement plans in the school setting (Cleveland
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41 & Sink, 2018). Finally, our results also suggest that adolescents who feel their basic
42
43 psychological needs are met are more likely to have "eudaimonic" conceptions of
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45 happiness.
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52 Although we cannot know what comes first (conceptualizations or satisfaction of
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54 psychological needs), it is worth considering both in the evaluation of happiness as it
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56 can help to better understand how it is promoted at the school and potentially guiding
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1 future education policies (Dror, 1989). Given that those preadolescents with
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3 “eudaimonic” conceptualizations indicated higher satisfaction of psychological needs,
4
5 schools (especially secondary) may consider engaging in practices that foster those
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7 needs (Rathunde, 2014) given the alarming rates of low subjective wellbeing and
8
9 increase of self-harming in the school context (The Children’s Society, 2018). For
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11 instance, schools may want to emphasise eudaimonic elements of well-being such as
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13 helping students to find meaning in attending school and participating in the different
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15 school activities or by promoting students’ feelings of autonomy and competence and
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17 fostering positive social relationships. As highlighted by Suldo, Bateman, and Gelley
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19 (2014), children and adolescents’ school satisfaction and performance is highly linked
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21 to their happiness, hence, its promotion is vital in this context.
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28 **Limitations and Future Research**

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32 Despite a number of strengths (e.g., a large sample, a mixed method approach
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34 that combines both qualitative and quantitative data, etc.), we acknowledge some
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36 limitations. First, our design was correlational and, therefore, prevented us to establish
37
38 causal links between students' happiness conceptualizations and the satisfaction of their
39
40 basic needs at school. Second, we also recognize that our cross-sectional design partly
41
42 limited the interpretation of age-related differences in the conceptualization of
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44 happiness as true developmental changes. Hence, future longitudinal studies are needed
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46 to evaluate possible changes in the developmental trajectories of the different happiness
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48 conceptualizations to study how they may change and how they may relate to other
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50 measures of happiness (e.g., self-reports). Third, although the themes were indicative of
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52 both hedonic and eudaimonic components of students' happiness, our open-ended
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54 question was only designed to capture what was the meaning of "being at happy at
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1 school". Hence, future studies should adopt specific ad-hoc questions to better evaluate
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3 the dualistic nature of happiness. Last, we only relied on students' reports. Given that
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5 teachers are key in shaping students' happiness at school, future research may benefit
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7 from the inclusion of teachers' reports to understand what they think is important for
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9 students' happiness at school. Namely, future studies could evaluate whether possible
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11 discrepancies between teachers' and students' conceptualizations of happiness may
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13 account for low levels of well-being within the school setting. Furthermore, other
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15 measures in key variables for well-being such as children and preadolescents' emotional
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17 experience or internalising and externalising symptoms should be evaluated in future
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19 research to determine if differences can be found between the different classes
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21 identified. Finally, our LCA results were exploratory in nature and therefore caution
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23 must be taken before generalizing them. To this aim, future studies would also benefit
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25 from collecting data among students from different socio-economic areas.
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32 33 34 **Conclusions**

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37 Overall our findings highlight the differences in how children and adolescents
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39 understand of what being happy at school is and how these conceptualizations can
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41 inform about children's psychological needs in that context. From a theoretical point of
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43 view, our findings inform on the importance of considering both quantitative and
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45 qualitative methods in the study of happiness, addressing a need highlighted in the study
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47 of happiness. Furthermore, they also signal important developmental differences in the
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49 link between happiness conceptualizations and the satisfaction of basic psychological
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51 needs that deserves further investigation. Finally, our results expand previous research
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53 on the satisfaction of basic psychological needs by pointing at possible differences in
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55 the conceptualizations of happiness depending on whether these needs are met.
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1 From a practical perspective, our findings concerning developmental differences
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3 may inform the design of developmentally appropriate school-based intervention
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5 programs to promote students' emotional wellbeing aimed at fostering students' basic
6 psychological needs and the promotion not only of hedonic elements of happiness (e.g.,
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8 experience of positive feelings in the school context) but also eudaimonic aspects (e.g.,
9 finding meaning in attending school). Finally, this can enhance the evaluations
10 conducted currently at schools to assess their climate (e.g., Long, Huebner, Wedell, &
11 Hills, 2012) and their improvement plans (Cleveland & Sink, 2018) in order to get a
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13 wider picture of children's and preadolescents' wellbeing in this context in order to
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15 improve their education practices.
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References

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46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
- Ajzen, I. (2001). Nature and operations of attitudes. *Annual Review of Psychology*, *52*, 27–58. doi:10.1146/annuev.psych.52.1.27
- Akaike, H. (1973). Maximum likelihood identification of Gaussian autoregressive moving average models. *Biometrika*, *60*, 255-265. doi: 10.2307/2334537
- Asparouhov, T., & Muthén, B. (2013). *Auxiliary variables in mixture modeling: 3-step approaches using Mplus*. *Mplus Web Notes: No. 15*. Retrieved from www.statmodel.com.
- Bergman, L. R., & Magnusson, D. (1997). A person-oriented approach in research on developmental psychopathology. *Development and Psychopathology*, *9*, 291–319. doi: 10.1017/S095457949700206X
- Bojanowska, A., & Zalewska, A. M. (2016). Lay understanding of happiness and the experience of wellbeing: Are some conceptions of happiness more beneficial than others? *Journal of Happiness Studies*, *17*, 793–815. doi:10.1007/s10902-015-9620-1
- Ben-Arieh, A., Hevener Kaugman, N., Bowers Andrews, A., Goerge, R.M., Joo Lee, B., & Lawrence, A.J. (2001). *Measuring and monitoring children's well-being*. Dordrecht, the Netherlands: Kluwer Academic Publishers.
- Boniwell, I., Osin, E. N., & Martinez, C. (2016). Teaching happiness at school: Non-randomised controlled mixed-methods feasibility study on the effectiveness of Personal Well-Being Lessons. *The Journal of Positive Psychology*, *11*, 85-98. doi: 10.1080/17439760.2015.1025422
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*, 77–101. doi:10.1191/1478088706qp063oa

- 1 Cantwell, D. P. (1996). Classification of child and adolescent psychopathology. *Journal*
2
3 *of Child Psychology and Psychiatry*, 37, 3-12. doi: 10.1111/j.1469-
4
5 7610.1996.tb01377.x
6
7
- 8 Chaplin, L. N. (2009). Please may I have a bike? Better yet, may I have a hug? An
9
10 examination of children's and adolescents' happiness. *Journal of Happiness*
11
12 *studies*, 10(5), 541-562. doi: 10.1007/s10902-008-9108-3
13
14
15
- 16 Chapman, C., & Harris, A. (2010). Improving schools in difficult and challenging
17
18 contexts: strategies for improvement. *Educational Research*, 46, 219–228. doi:
19
20 10.1080/0013188042000277296
21
22
23
- 24 Cheng, H., & Furnham, A. (2002). Personality, peer relations, self-confidence as
25
26 predictors of happiness and loneliness. *Journal of Adolescence*, 25, 327–339. doi:
27
28 10.1006/jado.2002.0475
29
30
- 31 Coffey, J. K. (2019). Cascades of infant happiness: Infant positive affect predicts
32
33 childhood IQ and adult educational attainment. *Emotion*. doi:
34
35 10.1037/emo0000640
36
37
38
- 39 Deci, E.L., & Ryan, R.M. (2000). The “what” and “why” of goal pursuits: Human needs
40
41 and the self-determination of behaviour. *Psychological Inquiry*, 11, 227–268. doi:
42
43 10.1207/S15327965PLI1104_01
44
45
46
- 47 Deci, E. L., & Ryan, R. M. (Eds.). (2002). *Handbook of self-determination theory*
48
49 *research*. Rochester, NY: University of Rochester Press.
50
- 51 Deci, E. L., & Ryan, R. M. (2008). Facilitating optimal motivation and psychological
52
53 well-being across life's domains. *Canadian Psychology*, 49, 14 –23. doi:
54
55 10.1037/0708-5591.49.1.14
56
57
58
59
60
61
62
63
64
65

- 1 Delle Fave, A., Brdar, I., Freire, T., Vella-Brodrick, D., & Wissing, M. P. (2011). The
2
3 eudaimonic and hedonic components of happiness: Qualitative and quantitative
4
5 findings. *Social Indicators Research*, *100*, 158–207. doi: 10.1007/s11205-010-
6
7 9632-5
8
9
- 10 Denscombe, M. (2000). Social conditions for stress: young people's experience of
11
12 doing GCSEs. *British Educational Research Journal*, *26*, 259–374. doi:
13
14 10.1080/713651566
15
16
- 17 Dew, T., & Huebner, E. S. (1994). Adolescents' perceived quality of life: An
18
19 exploratory investigation. *Journal of School psychology*, *32*(2), 185-199. doi:
20
21 10.1016/0022-4405(94)90010-8
22
23
24
25
- 26 Diener, E., Lucas, R. E., & Oishi, S. (2002). Subjective well-being: The science of
27
28 happiness and life satisfaction. In C. R. Snyder & S. Lopez (Eds.), *Handbook of*
29
30 *positive psychology* (pp. 463-473). London: Oxford University Press.
31
32
- 33 Eccles, J. S., & Roeser, R. W. (2011). Schools as developmental contexts during
34
35 adolescence. *Journal of Research on Adolescence*, *21*, 225–241. doi:
36
37 10.1111/j.1532-7795.2010.00725.x
38
39
40
- 41 Fattore, T., Mason, J., & Watson, E. (2007). Children's conceptualisation(s) of their
42
43 well-being. *Social Indicators Research*, *80*, 5–29. doi:10.1007/ s11205-006-9019.
44
45
- 46 Freire, T., Zenhas, F., Tavares, D., & Iglésias, C. (2013). Felicidade hedónica e
47
48 eudaimónica: um estudo com adolescents portugueses. *Análise Psicológica*, *4*,
49
50 329–342. doi: hdl.handle.net/10400.12/3333
51
52
- 53 Giacomoni, C. H., Souza, L. K., & Hutz, C. S. (2014). O conceito de felicidad en
54
55 crianças [The concept of happiness in children]. *Psico-USF, Bragança Paulista*,
56
57 *19*, 143–153. doi: 10.1590/S1413-82712014000100014
58
59
60
61
62
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47
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49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
- Gillet, N., Vallerand, R. J., & Lafrenière, M.-A. K. (2012). Intrinsic and extrinsic school motivation as a function of age: The mediating role of autonomy support. *Social Psychology of Education, 15*, 77–95. doi: 10.1007/s11218-011-9170-2
- Gu, Q., & Day, C. (2007). Teachers' resilience: A necessary condition for effectiveness. *Teaching and Teacher Education, 23*, 1302-1316. doi: 10.1016/j.tate.2006.06.006
- Guay, F., Ratelle, C. F., & Chanal, J. (2008). Optimal learning in optimal contexts: The role of self-determination in education. *Canadian Psychology/Psychologie canadienne, 49*, 233-240. doi: 10.1037/a0012758
- Harter, S. (2012). *The construction of the self* (2nd ed.). New York: Guilford.
- Holder, M. D., & Coleman, B. (2008). The contribution of temperament, popularity, and physical appearance to children's happiness. *Journal of Happiness Studies, 9*(2), 279-302. doi: 10.1007/s10902-007-9052-7
- Holder, M. D., & Coleman, B. (2009). The contribution of social relationships to children's happiness. *Journal of happiness studies, 10*(3), 329-349. doi: 10.1007/s10902-007-9083-0
- Holder, M. D., & Coleman, B. (2015). Children's friendships and well-being. In M. Demir (Ed.), *Friendship and Happiness* (pp. 81-97). Dordrecht, Netherlands: Springer.
- Huebner, E. S. (1991). Initial development of the student's life satisfaction scale. *School Psychology International, 12*, 231–240. doi: 10.1177/0143034391123010
- Huebner, E. S., & Alderman, G. L. (1993). Convergent and discriminant validation of a children's life satisfaction scale: Its relationship to self- and teacher-reported psychological problems and school functioning. *Social Indicators Research, 30*, 71–82. doi: www.jstor.org/stable/27522711

- 1 Huebner, E. S., Suldo, S. M., & Gilman, R. (2006). Life Satisfaction. In G. G. Bear &
2
3 K. M. Minke (Eds.), *Children's needs III: Development, prevention, and*
4
5 *intervention* (pp. 357-368). Washington, DC, US: National Association of School
6
7 Psychologists.
8
9
- 10 Izard, C. E., Woodburn, E. M., Finlon, K. J., Krauthamer-Ewing, E. S., Grossman, S.
11
12 R., & Seidenfeld, A. (2011). Emotion knowledge, emotion utilization, and
13
14 emotion regulation. *Emotion Review*, 3(1), 44-52. doi:
15
16 10.1177/1754073910380972
17
18
19
- 20
21 Joshanloo, M., Rizwan, M., Khilji, I. A., Ferreira, M. C., Poon, W.-C., Sundaram, S., et
22
23 al. (2016). Conceptions of happiness and life satisfaction: An exploratory study in
24
25 14 national groups. *Personality and Individual Differences*, 102, 145–148. doi:
26
27 10.1016/j.paid.2016.06.065
28
29
30
- 31 Kim, S., & Esquivel, G. B. (2011). Adolescent spirituality and resilience: Theory,
32
33 research, and educational practices. *Psychology in the Schools*, 48, 755-765.
34
35 doi:10.1002/pits.20582
36
37
- 38 King, N. (2004). Using templates in the thematic analysis of text. In Cassell, C., Symon,
39
40 G. (Eds.), *Essential guide to qualitative methods in organizational research*
41
42 (pp. 257–270). London, UK: Sage.
43
44
- 45
46 Lanza, S. T., & Cooper, B. R. (2016). Latent class analysis for developmental research.
47
48 *Child Development Perspectives*, 10, 59–64. doi: 10.1111/cdep.12163.
49
50
- 51 Lerner, R. M., & Steinberg, L. (2009). *Handbook of adolescent psychology*. New York:
52
53 Wiley.
54
- 55
56 Lewis, M., & Michalson, L. (1983). The socialization of emotion. In *Children's*
57
58 *emotions and moods* (pp. 193-230). Springer, Boston, MA.
59
60
61
62
63
64
65

- 1 Long, R. F., Huebner, E. S., Wedell, D. H., & Hills, K. J. (2012). Measuring
2
3 schoolrelated subjective well-being in adolescents. *American Journal of*
4
5
6 *Orthopsychiatry*, 82, 50-60. doi:10.1111/j.1939-0025.2011.01130.x
7
- 8 López V., Oyanedel, J.C., Bilbao, M., Torres, J., Oyarzún, D., Morales, M., Ascorra
9
10 P., Carrasco, C. (2017). School achievement and performance in Chilean high
11
12 schools: the mediating role of subjective well-being in school-related evaluations.
13
14
15 *Frontiers in Psychology*. doi: 10.3389/fpsyg.2017.01189
16
17
- 18 López-Pérez, B., Sanchez, J., & Gummerum, M. (2016). Children's and adolescents'
19
20 conceptualizations of happiness. *Journal of Happiness Studies*, 17, 2431–2455.
21
22
23 doi:10.1007/s10902-015-9701-1
24
- 25 López-Pérez, B., & Fernández-Castilla, B. (2018). Children's and Adolescents'
26
27 conceptions of happiness at school and its relation with their own happiness and
28
29 their academic performance. *Journal of Happiness Studies*, 19, 1811–1830. doi:
30
31
32 10.1007/s10902-017-9895-5
33
34
- 35 Lu, L., & Gilmour, R. (2004). Culture and conceptions of happiness: Individual oriented
36
37 and social oriented SWB. *Journal of Happiness Studies*, 5, 269–291.
38
39
40 <http://dx.doi.org/10.1007/s10902-004-8789-5>
41
- 42 Maio, G. R. (2010). Mental representations of social values. *Advances in Experimental*
43
44 *Social Psychology*, 42, 1-43. doi: 10.1016/S0065-2601(10)42001-8
45
46
- 47 Marini, Z., & Case, R. (1994). The development of abstract reasoning about the
48
49 physical and social world. *Child Development*, 65, 147–159. doi: 10.1111/j.1467-
50
51
52 8624.1994.tb00741.x
53
54
- 55 McCullough, G., Huebner, E. S., & Laughlin, J. E. (2000). Life events, self-concept,
56
57 and adolescents' positive subjective well-being. *Psychology in the Schools*, 37,
58
59
60
61
62
63
64
65

1 281–290. doi: 10.1002/(SICI)1520-6807(200005)37:3<281::AID-
2
3
4 PITS8>3.0.CO;2-2

5
6 McMahan, E. A., & Estes, D. (2011). Hedonic versus eudaimonic conceptions of well-
7
8 being: Evidence of differential associations with self-reported well-being. *Social*
9
10 *Indicators Research*, 103, 93-108. doi:10.1007/s11205-010-9698-0

11
12
13 Mega, C., Ronconi, L., & De Beni, R. (2014). What makes a good student? How
14
15 emotions, self-regulated learning, and motivation contribute to academic
16
17 achievement. *Journal of Educational Psychology*, 106, 121-131.
18
19
20
21 doi:10.1037/a0033546

22
23 Mowen, T. J. (2013). Punishment in school: The role of school security measures.
24
25 *International Journal of Education Policy & Leadership*, 9, 1–12. doi:
26
27
28 10.22230/ijep.2014v9n2a483

29
30 Muthén, L.K., & Muthén, B.O. (1998-2007). *Mplus user guide*. 5th ed. Los Angeles
31
32 (CA): Muthén & Muthén.

33
34
35 Natvig, G. K., Albrektsen, G., & Qvarnstrøm, U. (2003). Associations between
36
37 psychosocial factors and happiness among school adolescents. *International*
38
39 *Journal of Nursing Practice*, 9, 166–175. doi: 10.1046/j.1440-172X.2003.00419.x

40
41
42 Niemic, C., & Ryan, R. (2009). Autonomy, competence, and relatedness in the
43
44 classroom. Applying self-determination theory to educational practice. *Theory*
45
46 *and Research in Education*, 7, 133-144. doi: 10.1177/1477878509104318

47
48
49 Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic analysis:
50
51 Striving to meet the trustworthiness criteria. *International Journal of Qualitative*
52
53 *Analysis*, 16(1), 1–13. doi:10.1177/1609406917733847

1 Nylund, K. L., Asparouhov, T., & Muthén, B. O. (2007). Deciding on the number of
2
3
4 classes in latent class analysis and growth mixture modeling: A Monte Carlo
5
6 simulation study. *Structural Equation Modeling, 14*, 535–569.
7
8 doi:10.1080/10705510701575396
9

10
11
12 Oishi, S., & Diener, E. (2014). Residents of poor nations have a greater sense of
13
14 meaning in life than residents of wealthy nations. *Psychological Science, 25*, 422-
15
16 430. doi:10.1177/0956797613507286
17
18

19
20
21 Peguero, A.A., & Bracy, N.L. (2014). School order, justice, and education: climate,
22
23 discipline practices, and dropping out. *Journal of Research on Adolescence, 25*,
24
25 412–426. doi: 10.1111/jora.12138
26
27

28
29
30 Quinn, P. D., & Duckworth, A. L. (2007). *Happiness and academic achievement:*
31
32 *Evidence for reciprocal causality*. Poster presented at the annual meeting of the
33
34 American Psychological Society, Washington, D.C. Retrieved May 5, 2018, from:
35
36 [https://www.researchgate.net/publication/237751866_Happiness_and_Academic](https://www.researchgate.net/publication/237751866_Happiness_and_Academic_Achievement_Evidence_for_Reciprocal_Causality)
37
38 [Achievement Evidence for Reciprocal Causality](https://www.researchgate.net/publication/237751866_Happiness_and_Academic_Achievement_Evidence_for_Reciprocal_Causality)
39
40

41
42
43 Rathunde, K. (2014). Understanding optimal school experience: Contributions from
44
45 Montessori education. In D. Shernoff & J. Bempechat (Eds.), *Engaging youth in*
46
47 *schools: Empirically-based models to guide future innovations* (pp. 255–274).
48
49 New York: NSSE/Teachers College Press.
50

51
52
53 Raufelder, D., Regner, N., Drury, K., & Eid, M. (2016). Does self-determination predict
54
55 the school engagement of four different motivation types in adolescence?
56
57 *Education Psychology, 36*, 1242–1263. doi: 10.1080/01443410.2015. 1008405
58
59
60
61
62
63
64
65

- 1 Reis, H. T., Sheldon, K. M., Gable, S. L., Roscoe, J., & Ryan, R. M. (2000). Daily well-
2 being: The role of autonomy, competence, and relatedness. *Personality and Social*
3 *Psychology Bulletin*, 26, 419–435. doi: 10.1177/0146167200266002
4
5
6
7
8 Richters, J. E. (1997). The Hubble hypothesis and the developmentalists' dilemma.
9 *Development and Psychopathology*, 9, 193-229.
10
11
12
13 Ruscio, J. and Ruscio, A. (2008). Advancing psychological science through the study of
14 latent structure. *Current Directions in Psychological Science*, 17, 203-207.
15
16
17
18 Ryan, R. M., & Brown, K. W. (2005). Legislating competence: High-stakes testing
19 policies and their relations with psychological theories and research. In A. J. Elliot
20 & C. S. Dweck (Eds.), *Handbook of competence and motivation* (pp. 354–372).
21 New York, NY: Guilford Press
22
23
24
25
26
27
28 Ryan, R.M., & Deci, E.L. (2000). Self-determination theory and the facilitation of
29 intrinsic motivation, social development, and well-being. *American Psychologist*,
30 55, 68–78. doi: 10.1037/0003-066X.55.1.68
31
32
33
34
35
36
37
38 Ryan, R. M., & Frederick, C. M. (1997). On energy, personality and health: Subjective
39 vitality as a dynamic reflection of well-being. *Journal of Personality*, 65, 529-
40 565. doi: 10.1111/j.1467-6494.1997.tb00326.x
41
42
43
44
45
46
47
48 Ryan, R. M., Huta, V., & Deci, E. L. (2008). Living well: A self-determination theory
49 perspective on eudaimonia. *Journal of Happiness Studies*, 9, 139–170. doi:
50 10.1007/s10902-006-9023-4
51
52
53
54
55
56
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58
59
60
61
62
63
64
65 Schwarz, G. (1978). Estimating the dimension of a model. *The Annals of Statistics*, 6,
461-464.
- Seligman, M. E. P. (2011). *Flourish: A visionary new understanding of happiness and well-being*. New York, NY: Free Press.

- 1 Silvia, P.J. (2008). Interest – the curious emotion. *Current Directions in Psychological*
2
3
4 *Science*, 17, 57–60. doi: 10.1111/j.1467-8721.2008.00548.x
5
- 6 Speece, D. L. (1994). Cluster analysis in perspective. *Exceptionality*, 5, 31-44. doi:
7
8 10.1207/s15327035ex0501_3
9
- 10 Steinberg, L. (2010). A dual systems model of adolescent risk-taking. *Developmental*
11
12 *Psychobiology*, 52, 216–224. doi: 10.1002/ dev.20445
13
14
- 15 Stiglbauer, B., Gnambs, T., Gamsjäger, M., & Batinic. B. (2013). The upward spiral of
16
17 adolescents' positive school experiences and happiness: Investigating reciprocal
18
19 effects over time. *Journal of School Psychology*, 51(2), 231-242. doi:
20
21 10.1016/j.jsp.2012.1
22
23
- 24 Suldo, S. M. (2016). *Promoting student happiness: Positive psychology interventions in*
25
26 *schools*. Guilford Publications.
27
28
- 29 Suldo, S. M., Bateman, L., & Gelly, C. D. (2014). Understanding and promoting school
30
31 satisfaction in adolescence. In M. J. Furlong, R. Gilman, E. S., & Huebner (Eds.),
32
33 *Handbook of positive psychology in schools* (2nd ed., pp. 365–380). New York:
34
35 Routledge.
36
37
- 38 Suldo, S. M., Savage, J. A., & Mercer, S. H. (2014). Increasing middle school students'
39
40 life satisfaction: Efficacy of a positive psychology group intervention. *Journal of*
41
42 *Happiness Studies*, 15(1), 19-42. doi: 10.1007/s10902-013-9414-2
43
44
45
- 46 Taylor, G., Jungert, T., Mageau, G. A., Schattke, K., Dedic, H., Rosenfield, S., et al.
47
48 (2014). A self-determination theory approach to predicting school achievement
49
50 over time: the unique role of intrinsic motivation. *Contemporary Education*
51
52 *Psychology*, 39, 342–358. doi: 10.1016/j.cedpsych.2014.08.002
53
54
55
- 56 The Children's Society. (2017). *The Good Childhood Report 2017*. London: The
57
58 Children's Society.
59
60
61
62
63
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65

- 1 Tian L., Han M., Huebner E. S. (2014). Preliminary development of the adolescent
2
3 students' basic psychological needs at school scale. *Journal of Adolescence*,
4
5 37, 257–267. doi: 10.1016/j.adolescence.2014.01.005
6
7
- 8 Triandis. H. C. (1995). *Individualism and collectivism*. Boulder, CO: Westview Press.
9
- 10 Tsai, Y.-M., Kunter, M., Lüdtke, O., Trautwein, U., & Ryan, R. M. (2008). What makes
11
12 lessons interesting? The role of situational and individual factors in three school
13
14 subjects. *Journal of Educational Psychology*, 100, 460-472. doi: 10.1037/0022-
15
16 0663.100.2.460
17
18
- 19 van de Wetering, E. J., van Exel, N. J. A., & Brouwer, W. B. (2010). Piecing the jigsaw
20
21 puzzle of adolescents' happiness. *Journal of Economic Psychology*, 31, 923–935.
22
23 doi: 10.1016/j.joep.2010.08.004
24
25
- 26 Wang, J., & Wang, X. (2012). *Structural equation modeling: Applications using Mplus*.
27
28 John Wiley & Sons.
29
30
- 31 Wentzel, K. R., & Wigfield, A. (2007). Motivational interventions that work: Themes
32
33 and remaining issues. *Educational Psychologist*, 42, 261 – 271. doi:
34
35 10.1080/00461520701621103
36
37
- 38 Wickens, T. D. (1989). *Multiway contingency tables analysis for the social sciences*.
39
40 Hillsdale, NJ: Erlbaum.
41
42
- 43 Williams, S., Connolly, J., & Segal, Z. V. (2001). Intimacy in relationships and
44
45 cognitive vulnerability to depression in adolescent girls. *Cognitive Therapy and*
46
47 *Research*, 25, 477–496. doi: 10.1023/A:100559072089.
48
49
- 50 Yurgelun-Todd, D. (2007). Emotional and cognitive changes during
51
52 adolescence. *Current Opinion in Neurobiology*, 17(2), 251-257. doi:
53
54 10.1016/j.conb.2007.03.009
55
56
57
58
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60
61
62
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65

1 Zeman, J., Cassano, M., Perry-Parrish, C., & Stegall, S. (2006). Emotion regulation in
2
3 children and adolescents. *Journal of Developmental & Behavioral*
4
5 *Pediatrics*, 27(2), 155-168.
6
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Table 1

Frequency of Conceptualizations of Happiness at School by Age and Gender

	Children n = 421			Preadolescents n = 328		
	Boys	Girls	Total	Boys	Girls	Total
Positive Feelings	73 (9%)	92 (12%)	165 (22%)	86 (11%)	94 (13%)	183 (24%)
Harmony/Balance	4 (0.5%)	5 (0.6%)	9 (1.2%)	8 (1%)	16 (2%)	24 (3.2%)
Leisure	39 (5.2%)	45 (6%)	84 (11%)	30 (4%)	32 (4.2%)	63 (8.4%)
Friends	108 (14%)	134 (18%)	242 (32%)	93 (12%)	108 (14%)	204 (27%)
Good Grades	9 (1.2%)	9 (1.2%)	18 (2.4%)	31 (4.1%)	31 (4.1%)	62 (8%)
Non-Violence	18 (2.4%)	27 (3.6%)	45 (6%)	16 (2%)	20 (2.6%)	36 (4.8%)
Moral Actions	16 (2%)	24 (3.2%)	40 (5.3%)	8 (1%)	12 (1.6%)	20 (2.6%)
Purpose	2 (0.3%)	4 (0.5%)	6 (0.8%)	1 (0.1%)	3 (0.4%)	4 (0.5%)
Autonomy	8 (1%)	13 (1.7%)	21 (2.8%)	7 (0.9%)	18 (2.4%)	25 (3.3%)
Competence	11 (1.5%)	27 (3.6%)	38 (5%)	30 (4%)	37 (4.9%)	67 (8.9%)
Teachers	32 (4%)	64 (8.5%)	96 (13%)	60 (8%)	67 (9%)	127 (17%)
Emotional Support	23 (3%)	41 (5.5%)	64 (8.5%)	24 (3.2%)	44 (5.8%)	68 (9%)
Learning	56 (7.4%)	81 (10.8%)	137 (18%)	66 (8.8%)	59 (7.8%)	126 (17%)

Table 2

Results of the Log-linear Analyses for each Happiness Conceptualization

Interactions by Gender	<i>df</i>	Partial χ^2	<i>p</i>	Z value
				Girls(r) Boys
Positive Feelings × Gender	1	1.25	.26	1.21
Harmony/Balance × Gender	1	2.43	.12	1.33
Leisure × Gender	1	.09	.75	.39
Friends × Gender	1	4.46	.04	2.10
Good grades × Gender	1	.007	.93	-.38
Non-violence × Gender	1	1.41	.24	1.28
Moral Actions × Gender	1	1.75	.19	1.45
Purpose × Gender	1	1.41	.24	1.17
Autonomy × Gender	1	5.30	.02	2.21
Competence × Gender	1	5.19	.023	2.07
Teachers × Gender	1	7.83	.005	2.50
Emotional Support × Gender	1	11.33	.001	3.29
Learning × Gender	1	.68	.41	.58

Interactions by Age	<i>df</i>	Partial	<i>p</i>	Z value
		χ^2		Adolescents(r)
				Children
Positive Feelings × Age	1	24.30	.001	4.84
Harmony/Balance × Age	1	13.14	.001	3.27
Leisure × Age	1	.004	.95	-.09
Friends × Age	1	3.48	.07	1.78
Good grades × Age	1	45.01	<.001	6.10
Non-violence × Age	1	.02	.89	.29
Moral Actions × Age	1	2.28	.13	-1.57
Purpose × Age	1	.02	.89	-.22
Autonomy × Age	1	2.94	.09	1.50
Competence × Age	1	22.9	<.001	4.57
Teachers × Age	1	27.54	.001	5.14
Emotional Support × Age	1	5.62	.02	2.11
Learning × Age	1	4.24	.04	2.08

Note. (*r*) denotes reference group; n.s. = non-significant. Statistical significant p values are highlighted in bold in the table. According to the Bonferroni correction, only p-values below .002 (α -level .05 divided by 26 tests = .0019, which we rounded to .002) were considered as statistically significant.

Table 3

Fit Indices for the different LCAs

Number of classes	AIC	BIC	Entropy	N within each		% within each	
				Class	Class	Class	Class
2	7975.42	8014.17	.52	320		43%	
				423		57%	
3	7939.71	7998.56	.53	310		42%	
				203		27%	
				230		31%	
				134		18%	
				92		12%	
4	7936.25	8015.19	.65	304		41%	
				213		29%	
				276		37%	
				149		20%	
				68		9%	
5	7934.01	8033.05	.71	124		17%	
				126		17%	
				14		1%	
				35		5%	
				262		35%	
6	7935.01	8054.15	.67	213		29%	
				209		29%	
				10		1%	

1 *Note.* AIC, Akaike Information Criterion; BIC, Bayesian Information Criterion. The
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4 best fitting model is highlighted in bold.
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Table 4

Frequencies of Conceptualizations Mentioned for the Different Classes

	Class 1	Class 2	Class 3	Class 4	Class 5	Chi-square
Positive feelings	145 (53%)	149 (100%)	40 (59%)	13 (11%)	0 (0%)	$\chi^2 = 353.59, df = 4, p = .001$
Harmony	16 (6%)	13 (9%)	0 (0%)	0 (0%)	4 (3%)	$\chi^2 = 17.04, df = 4, p = .002$
Leisure	48 (17%)	12 (8%)	2 (3%)	73 (10%)	12 (10%)	$\chi^2 = 153.80, df = 4, p = .001$
Friends	268 (97%)	61 (41%)	0 (0%)	84 (68%)	32 (25%)	$\chi^2 = 348.50, df = 4, p = .001$
Good grades	75 (27%)	2 (1.3%)	0 (0%)	0 (0%)	3 (2.4%)	$\chi^2 = 123.49, df = 4, p = .001$
Non-violence	43 (16%)	0 (0%)	30 (44%)	7 (5.6%)	0 (0%)	$\chi^2 = 121.94, df = 4, p = .001$
Moral actions	32 (12%)	4 (2.7%)	13 (19%)	7 (5.6%)	3 (2.4%)	$\chi^2 = 28.51, df = 4, p = .001$
Purpose	5 (1.8%)	2 (1.3%)	0 (0%)	3 (2.4%)	0 (0%)	$\chi^2 = 4.17, df = 4, p = .38$

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HAPPINESS AT SCHOOL

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Autonomy	30 (11%)	0 (0%)	9(13.2%)	0 (0%)	7 (5.6%)	$\chi^2 = 34.32, df = 4, p = .38$
Competence	61 (22%)	9 (6%)	9(13.2%)	18(14.5%)	8 (6.3%)	$\chi^2 = 28.84, df = 4, p = .001$
Teachers	174 (63%)	0 (0%)	39 (58%)	12 (9.7%)	0 (0%)	$\chi^2 = 308.29, df = 4, p = .001$
Emotional support	103 (37%)	0 (0%)	29 (43%)	0 (0%)	0 (0%)	$\chi^2 = 187.24, df = 4, p = .001$
Learning	87 (32%)	49 (33%)	20 (29%)	107 (86%)	0 (0%)	$\chi^2 = 212.78, df = 4, p = .001$

Note. Reported percentages are within class.

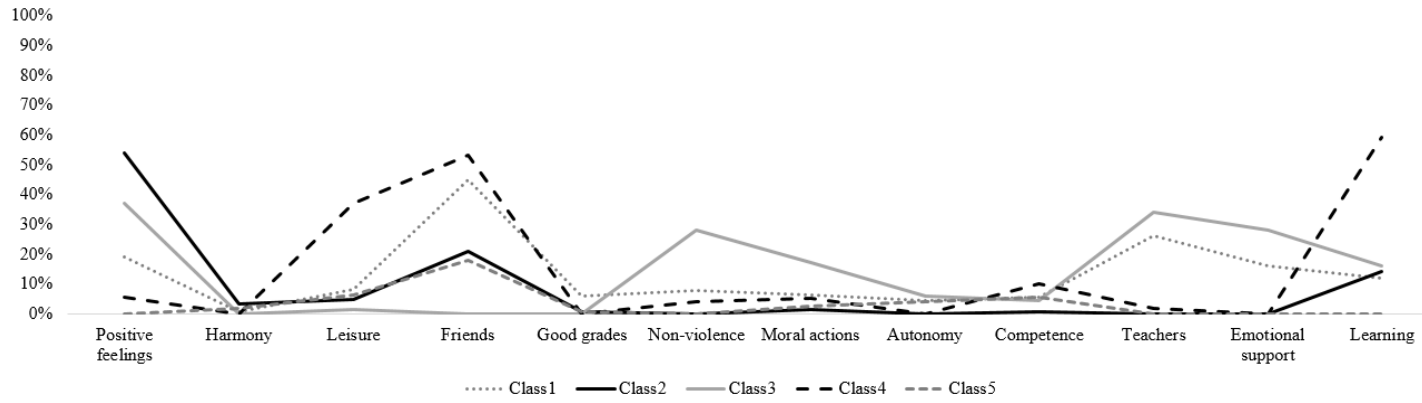
Table 5

Mean and (Standard deviation) in Autonomy, Competence, and Relatedness by Age and Gender

	Autonomy	Competence	Relatedness
Children	4.5 (0.98)	4.99 (0.91)	4.72 (0.88)
Adolescents	4.14 (0.95)	4.23 (0.80)	4.24 (0.92)
Boys	4.28 (0.92)	4.59 (0.90)	4.49 (0.90)
Girls	4.43 (1.03)	4.74 (0.96)	4.56 (0.93)

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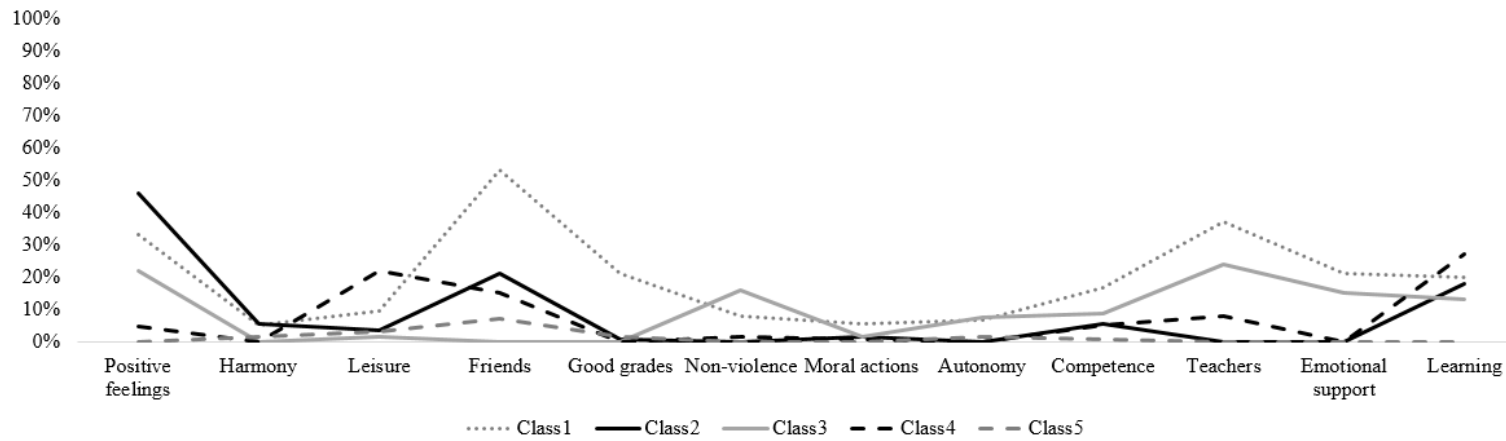


Figure 1. Differences in the Happiness Conceptualization in (a) Children and (b) Adolescents in the Different Classes

Appendix A

Coding Categories and Examples

Name of the Category	Definition	Example
Positive feelings	The experience of joy or contentment	a. “When I’m happy at school I have lots more confidence and an excited for what comes next.” <i>(Girl, 10 years old)</i> b. “To be happy at school I need to be relaxed but work hard all the same. I need to enjoy what I am learning, to be emotionally, mentally and physically well...” <i>(Boy, 13 years old)</i>
Harmony/Balance	Being tuned with the world, inner peace	a. “I feel happy at school when people around me are welcoming, friendly, and humorous and have a nice attitude around me. When I’m happy, all my worries are washed away in seconds.” <i>(Boy 10 years old)</i> b. “For me to be happy it means that I know what to do in lesson, I’m not worrying about anything and I can complete school tasks to the best of my ability.” <i>(Girl, 11 years old)</i>

1	Leisure	Taking part in fun activities such as sports, dancing or day trips.	<p>a. "I think for me to be happy at school it means [...], we have some of sports clubs or long breaks, and not having too much homework." (<i>Girl, 13 years old</i>)</p> <p>b. "To be happy there should be a mix of activities such as test-like and long studying lessons but there should also be a balance of fun extra-curricular activities which will offer a better social life." (<i>Boy, 12 years old</i>)</p>
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20	Friends	Making or being with friends	<p>a. "I feel loved by my friends which makes my time at school amazing and cheerful." (<i>Boy, 9 years old</i>)</p> <p>b. "For me to be happy at school, I need my friends. They keep me safe and always make me laugh. They always help me when I have a problem and have all of the qualities I want to have and share myself which encourages me." (<i>Girl, 12 years old</i>)</p>
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40	Good grades	Achieving at school	<p>a. "Been happy at school means that I can concentrate more and get high grades because of it" (<i>Girl, 13 years old</i>)</p> <p>b. "Being happy in school means doing well on classes and getting good grades. It is like I am proving to my family and myself that I deserve to be in this school and that I am trying really hard in classes." (<i>Girl 12 years old</i>)</p>
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1 Non-Violence

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3 The lack of
4 quarrels/not being
5 bullied/not being
6 called names

- 7 a. “Sometimes it is hard to fit in or
8 being happy at school because
9 there are a lot of people there
10 that can hurt your feelings and
11 body” (*Girl, 9 years old*)
12
13 b. “To be happy for me means not
14 being bullied by people in my
15 class” (*Boy, 9 years old*)

16 Moral Actions

17 Social desirable
18 actions such as
19 helping or respecting
20 others

- 21 a. “I think you need to have a good
22 work ethic but to be resilient
23 when things aren’t exactly
24 perfect for you” (*Girl, 13 years
25 old*)
26
27 b. “I feel happy at school when
28 people are kind to me and I can
29 be kind to them.” (*Boy, 9 years
30 old*)

31 Purpose

32 Happiness as the
33 supreme goal in life

- 34 a. “Feeling that I had improved
35 gives me purpose to try hard in
36 school” (*Girl, 10 years old*)
37
38 b. Being happy at school is [...],
39 feeling like you have a purpose
40 and you are important” (*Boy, 11
41 years old*)

42 Autonomy

43 Freedom to be oneself

- 44 a. “For me to be happy I believe
45 that I should feel free, and
46 unpressured in excess amounts. I
47 would like to be comfortable in
48 myself and in my surroundings. I
49 would like to feel like an
50 individual, not just a small spec
51 that is part of an adult’s job.”
52 (*Girl, 14 years old*)
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54 b. “To be happy at school you
55 should make your own choices
56 without somebody forcing you to
57 make a decision that you don’t
58 believe in or don’t want to”
59 (*Girl, 12 years old*)
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Competence Sense of being
capable to achieve
what it is asked in the
school

- a. “Happy in school is not wanting to hide before certain lessons, is being able to share and contrast opinions. It is the developing skills and it is leaving school knowing that you haven’t wasted a day of your life.”
(Girl, 13 years old)
- b. “For me being happy at school it means I feel like I am able to do all the work set at a good standard and that I am above the average. Classes would be fun and interactive mixed with hard work and concentration.”
(Girl 11 years old)

Teachers Having a positive
relationship with
teacher/s, head
teacher, and school
staff

- a. “Being happy at school means that you treat people with respect and they do the same. If I am physically or emotionally hurt or lonely, there is always a member of staff or teacher who is there to help” (Girl, 11 years old)
- b. “I feel happy about school because all the teachers are nice and I see it as the most strict teachers want you to succeed the most” (Girl, 9 years old)

Emotional Support Being supported and
endorsed in the school

- a. “Happy at school means you have lots of friends and teachers who support you when you are feeling sad so you always have someone you can trust and rely on to comfort you.” (Girl, 11 years old)
- b. “Everyone being nice, the teachers not being as mean toward individual students, no bullying and no one punt into a

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characteristic.” (Boy, 12 years old)

Learning

Having the opportunity to acquire new knowledge and participating in new activities

- a. “For me being happy at school is very important because I know if I were to be unhappy, I would find it difficult to concentrate and learn.” (*Girl, 9 years old*)
- b. “Being happy at school makes me focus so that I can learn everything I need to and I can live a good life later on. Being happy helps me achieving my standards and also exceed them.” (*Boy 12 years old*)

