

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

Belén López-Pérez and Antonio Zuffianò

ChildLab, Department of Psychology, Liverpool Hope University, UK

Correspondence should be addressed at Belén López-Pérez (lopezpb@hope.ac.uk) or Antonio Zuffianò (zuffiaa@hope.ac.uk). ChildLab, Faculty of Science, Liverpool Hope University; Taggart Avenue, L16 9JD, Liverpool, UK.

“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
4
5 school (e.g., Boniwell, Osin, & Martinez, 2016; Suldo, 2016).
6
7

8
9 The study of happiness or well-being at school has been conducted from a
10
11 quantitative approach focusing on the outcomes or the possible determinants of
12
13 happiness. Concerning the outcomes, most studies have linked happiness with academic
14
15 achievement, since schools put a big emphasis on students' performance (Mega,
16
17 Ronconi, & De Beni, 2014). Although initial research did not find any link (Huebner,
18
19 1991; Huebner & Alderman, 1993), other studies found a significant positive
20
21 relationship (Cheng & Furnham, 2002; McCullough, Huebner, & Laughlin, 2000), as
22
23 well as reciprocal links between happiness and academic achievement (Quinn &
24
25 Duckworth, 2007). More recent works have highlighted the mediating role of happiness
26
27 on the link between school variables (e.g., students' perception of teachers or class
28
29 climate) and school performance (López et al., 2017). Besides academic achievement,
30
31 happiness is also reciprocally related to school belongingness (Tian, Zhang, Huebner,
32
33 Zhen, & Liu, 2016), higher intrinsic motivation (Low, King, & Caleon, 2016), and
34
35 academic self-regulation (Villavicencio & Bernardo, 2016).
36
37
38
39
40
41
42
43

44 When looking at the possible determinants of happiness most studies have
45
46 emphasized the role that basic psychological needs can have in the experience of well-
47
48 being (*Self-determination theory*, Deci & Ryan, 2000, 2008). These basic psychological
49
50 needs are: autonomy (i.e., feeling one is mastering their life and can control their own
51
52 behaviour), competence (i.e., sense of dealing effectively with the demands from the
53
54 environment), and relatedness (i.e., having close and affectionate relationship with
55
56 others; Ryan & Deci, 2000). The satisfaction of these needs does not only depend on the
57
58
59
60
61
62
63
64
65

1 individual's competences but also on the affordances and demands of the environment
2
3
4 (Guay, Ratelle, & Chanal, 2008). Therefore, children's happiness at school may not
5
6 only depend on their own capacities but also on the contextual factors present in the
7
8 school setting such as teachers' style (Reeve, 2009) or deadlines (Deci & Ryan, 2000),
9
10 which may undermine students' intrinsic motivation (Deci, Vallerand, Pelletier, &
11
12 Ryan, 2011). Overall, different studies have shown that teaching practices that foster
13
14 students' autonomy, competence, and relatedness help students satisfy these
15
16 psychological needs while simultaneously increase their well-being (Deci & Ryan,
17
18 2002; Tsai, Kunter, Lüdtke, Trautwein, & Ryan, 2008; Wentzel & Wigfield, 2007).
19
20
21 Importantly, the satisfaction of those needs is affected and has an effect (cross-lagged
22
23 relationships) on self-reported happiness (Stiglbauer, Gnambs, Gmsjäger, & Batinic,
24
25 2013).
26
27
28
29
30

31 **What do Children and Adolescents Understand by Happiness?**

32
33
34

35 Although the previous studies have advanced our understanding of the possible
36
37 causes and consequences of happiness, they have investigated the role of happiness
38
39 strictly relying on quantitative data. However, other research has stressed the
40
41 importance of studying happiness from a qualitative point of view (e.g., Freire, Zenhas,
42
43 Tavares, & Iglésias, 2013) to obtain a more in depth understanding of what children and
44
45 adolescents comprehend what being happy at school is for them (López-Pérez &
46
47 Fernández-Castilla, 2018).
48
49
50
51

52 Investigating children's and adolescents' conceptualizations of happiness is
53
54 important for different reasons. First, people's cognitions play a role in shaping their
55
56 behavior (Ajzen, 2011). Hence, by looking at children's and adolescents' definitions of
57
58 what being happy at school is, researchers and educators can better understand how
59
60
61
62
63
64
65

1 students strive for happiness in that setting. Second, previous research with both adults
2
3
4 (Delle Fave, Brdar, Freire, Vella-Brodrick, & Wissing, 2011) and children (López-Pérez
5
6 & Fernández-Castilla, 2018) has found that quantitative measures of happiness did not
7
8 correlate significantly with all the happiness conceptualizations mentioned by
9
10 participants; therefore, a qualitative approach can add valuable information by capturing
11
12 a richer perspective not predefined by the researcher. Finally, research in psychology
13
14 and sociology has highlighted the importance of placing children and adolescents at the
15
16 center of the study (Ben-Arieh et al., 2001), rather than assuming an adultcentric
17
18 perspective (Fattore, Mason, & Watson, 2006), which may not enable us to truly
19
20 understand what happiness means for them.
21
22
23
24
25

26 Initial research on children's and adolescents' conceptualizations of happiness at
27
28 school conducted with Spanish children and adolescents found that seven
29
30 conceptualizations emerged in both age groups (i.e., being with friends, being praised,
31
32 getting good grades, learning, leisure, enjoyment, and helping). The conceptualization
33
34 of happiness as 'being with friends' was mostly reported by children, whereas 'helping'
35
36 was mentioned mostly by adolescents. Furthermore, whereas for adolescents some of
37
38 the conceptualizations (e.g., leisure, being praised, and helping) were linked to their
39
40 quantitative self-reports of happiness, this was not true for children.
41
42
43
44
45

46 Findings from this study as well as initial research on general happiness
47
48 conceptualizations in children and adolescents identified clear age differences and
49
50 mixed results in regards to gender (Fattore et al., 2006; Freire et al., 2013; López-Pérez,
51
52 Sanchez, & Gummerum, 2016). Potential developmental differences in the happiness
53
54 conceptualizations may be due to the different cognitive, emotional, and social changes
55
56 that occur in the transition from childhood to adolescence.
57
58
59
60
61
62
63
64
65

1 At a cognitive level, whereas children use concrete terms to define abstract
2
3 concepts (Maio, 2010), adolescents can reason at a more abstract level compared to
4
5 children (Kruger, 2005; Marini & Case, 1994); it is not surprising then that in the
6
7 studies focused on general happiness and at school, adolescents have mentioned more
8
9 abstract categories related to eudaimonic conceptualizations (e.g., ultimate purpose in
10
11 life or prosocial behaviour) (López-Pérez et al., 2016; López-Pérez & Fernández-
12
13 Castilla, 2018).
14
15
16
17

18
19 At an emotional level, children and adolescents experience changes in their
20
21 emotion expression, understanding and regulation (Izard et al., 2011; Yurgelun-Todd,
22
23 2007). In detail, although adolescents exhibit more advanced emotion understanding
24
25 they also present more difficulties to regulate their own emotions (Zeman, Cassano,
26
27 Perry-Parrish, Carisa, & Stegall, 2006). These emotional changes could potentially have
28
29 an effect in how children and adolescents appraise happiness (Coffey, 2019) and
30
31 ultimately explain the previous age differences found in conceptualizations.
32
33
34
35
36

37 At a social level, identity becomes more prevalent for adolescents, as they think
38
39 more frequently than children who they want to be (Lerner & Steinberg, 2009). This is
40
41 also congruent with the findings on general conceptualizations on happiness, as
42
43 adolescents mentioned more categories related to autonomy and experience of freedom,
44
45 which may correspond to a eudaimonic approach.
46
47
48
49

50 Concerning gender, previous research provided mixed results concerning
51
52 possible differences in the conceptualizations of happiness between boys and girls
53
54 (Freire et al. 2013; Giacomoni et al. 2014; López-Pérez & Fernández-Castilla, 2018).
55
56 Hence, further studies are needed to better understand if there are differences in the way
57
58 boys and girls conceptualize happiness.
59
60
61
62
63
64
65

The Present Research

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65

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
2
3 (hedonic) whereas older children mentioned both hedonic (e.g., positive feelings) and
4
5 eudaimonic (e.g., positive relationships with friends) elements in their definitions. On
6
7 the other hand, we expected preadolescents to mention more eudaimonic
8
9 conceptualizations (e.g., related to autonomy; López-Pérez et al., 2016) than children, as
10
11 they can reason at a more abstract level (Adams & Berzonsky, 2013). However, we also
12
13 expected preadolescents to mention hedonic conceptualizations in their definitions, as
14
15 this was found in previous research with adolescents (Freire et al., 2013; Keyes, 2006).
16
17 Since previous research found mixed results concerning possible gender differences
18
19 (Freire et al. 2013; Giacomoni et al. 2014; López-Pérez & Fernández-Castilla, 2018),
20
21 we also explored it.
22
23
24
25
26

27
28 Second, concerning quantitative self-reports of autonomy, competence, and
29
30 relatedness, we expected children to score significantly higher than preadolescents, as
31
32 previous research comparing primary and secondary schools has found that (1) children
33
34 reported significantly higher happiness than adolescents (Natvig, Albrektsen, &
35
36 Qvarnstrøm, 2003) and (2) secondary schools tend to promote educational practices
37
38 based on competition (Demetriou, Goalen, & Rudduck, 2000) and achievement
39
40 (Brenner & Graham, 2009), which may undermine their autonomy, competence, and
41
42 relatedness (Niemic & Ryan, 2009).
43
44
45
46

47
48 Finally, we did explore if children and preadolescents could be grouped in latent
49
50 classes (LCA) depending on their happiness conceptualizations and tested whether these
51
52 possible classes did differ in their levels of autonomy, competence, and autonomy,
53
54 which can help us to gain not only a better understanding of the development of
55
56 happiness conceptualizations but also a comprehension as to what extent they may
57
58 reflect differences in distinct well-being domains, which is a gap that needs to be
59
60
61
62
63
64
65

1 addressed (Bojanowska & Zalewska, 2016; Delle Fave et al., 2001). Given that no
2
3
4 previous research had taken a similar stance, we conducted these analyses from an
5
6 exploratory approach without having *a priori* hypotheses.
7

8 Method

9 Participants

10
11
12
13 Seven-hundred and forty-four children and preadolescents from eight different
14
15 public schools (i.e., six primary and two secondary schools) in a medium-sized urban
16
17 city of England participated in this study. Children were 9 to 11 years of age ($n= 421$;
18
19 $M_{\text{age}} = 10.75$; $SD = 0.52$; 53% girls) and preadolescents were 12 to 14 years of age ($n=$
20
21 323 ; $M_{\text{age}} = 13.37$; $SD = 0.94$; 48% girls). All participants were from schools located in
22
23 middle-class areas. In regard to the ethnicity, most children and adolescents were
24
25 Caucasian (98%), and very few Asian or African (2%).
26
27
28
29
30

31 Ethics Statement

32
33
34 The study received ethical clearance by the ethics committee of [name of the
35
36 university deleted for revision] with code S 23-11-2016 FREC 001. Parents of
37
38 participating children received a consent form to sign. Only children who got consent
39
40 from their parents took part in the study. Furthermore, children did assent before taking
41
42 part.
43
44
45
46

47 Measures

48
49 **Students' Basic Psychological Needs at School (SBPNS).** To measure
50
51 students' needs at school we used the SPBNS (Tian, Han, & Huebner, 2014). This 15-
52
53 item questionnaire evaluates students' psychological needs satisfaction at school in a 5-
54
55 point Likert scale (1 = strongly disagree to 5 = strongly agree). The questionnaire has
56
57 two reverse-scored items that were recoded before computing the three different scales:
58
59
60
61
62
63
64
65

1 autonomy (i.e., the experience of support and self-volition at school; e.g., I can decide
2
3 for myself how to do things at school; $\alpha = .75$), relatedness (i.e., sense of school
4
5 belonging with positive relationships with teachers and classmates; e.g., I get along well
6
7 with my teachers and classmates at school; $\alpha = .73$), and competence (i.e., to be able to
8
9 interact effectively at school and have opportunities to develop; e.g., I am capable of
10
11 learning new knowledge at school; $\alpha = .75$).
12
13
14
15

16
17 **Conceptualizations of happiness at school.** Participants were asked to answer
18
19 the following question: “Please define in your own words what it means to you to be
20
21 happy in the school”. This procedure has been successfully used before to investigate
22
23 children’s and preadolescents’ beliefs about general happiness (e.g., Freire et al., 2013;
24
25 Giacomoni et al., 2014; López-Pérez et al., 2015) and happiness in the school context
26
27 (López-Pérez & Fernández-Castilla, 2018). There was no maximum word limit and
28
29 children/adolescents had ten minutes to complete this part.
30
31
32
33

34 **Procedure**

35
36
37 Permission was obtained from the school principals and teachers. Only children
38
39 who consented and obtained their parents’ consent were included (98%). Testing was
40
41 conducted at the schools. After being briefed about the aim of the project (i.e., knowing
42
43 more about children’s and adolescents’ happiness at school), participants completed
44
45 some demographic questions. After that, participants completed in randomized order the
46
47 measures described. Once participants finished they were debriefed. In detail,
48
49 participating children and preadolescents were explained we wanted to understand
50
51 better what happiness at school meant for them and whether this was linked to how they
52
53 felt at school. They were also provided with an information sheet to take home for their
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100
101
102
103
104
105
106
107
108
109
110
111
112
113
114
115
116
117
118
119
120
121
122
123
124
125
126
127
128
129
130
131
132
133
134
135
136
137
138
139
140
141
142
143
144
145
146
147
148
149
150
151
152
153
154
155
156
157
158
159
160
161
162
163
164
165
166
167
168
169
170
171
172
173
174
175
176
177
178
179
180
181
182
183
184
185
186
187
188
189
190
191
192
193
194
195
196
197
198
199
200
201
202
203
204
205
206
207
208
209
210
211
212
213
214
215
216
217
218
219
220
221
222
223
224
225
226
227
228
229
230
231
232
233
234
235
236
237
238
239
240
241
242
243
244
245
246
247
248
249
250
251
252
253
254
255
256
257
258
259
260
261
262
263
264
265
266
267
268
269
270
271
272
273
274
275
276
277
278
279
280
281
282
283
284
285
286
287
288
289
290
291
292
293
294
295
296
297
298
299
300
301
302
303
304
305
306
307
308
309
310
311
312
313
314
315
316
317
318
319
320
321
322
323
324
325
326
327
328
329
330
331
332
333
334
335
336
337
338
339
340
341
342
343
344
345
346
347
348
349
350
351
352
353
354
355
356
357
358
359
360
361
362
363
364
365
366
367
368
369
370
371
372
373
374
375
376
377
378
379
380
381
382
383
384
385
386
387
388
389
390
391
392
393
394
395
396
397
398
399
400
401
402
403
404
405
406
407
408
409
410
411
412
413
414
415
416
417
418
419
420
421
422
423
424
425
426
427
428
429
430
431
432
433
434
435
436
437
438
439
440
441
442
443
444
445
446
447
448
449
450
451
452
453
454
455
456
457
458
459
460
461
462
463
464
465
466
467
468
469
470
471
472
473
474
475
476
477
478
479
480
481
482
483
484
485
486
487
488
489
490
491
492
493
494
495
496
497
498
499
500
501
502
503
504
505
506
507
508
509
510
511
512
513
514
515
516
517
518
519
520
521
522
523
524
525
526
527
528
529
530
531
532
533
534
535
536
537
538
539
540
541
542
543
544
545
546
547
548
549
550
551
552
553
554
555
556
557
558
559
560
561
562
563
564
565
566
567
568
569
570
571
572
573
574
575
576
577
578
579
580
581
582
583
584
585
586
587
588
589
590
591
592
593
594
595
596
597
598
599
600
601
602
603
604
605
606
607
608
609
610
611
612
613
614
615
616
617
618
619
620
621
622
623
624
625
626
627
628
629
630
631
632
633
634
635
636
637
638
639
640
641
642
643
644
645
646
647
648
649
650
651
652
653
654
655
656
657
658
659
660
661
662
663
664
665
666
667
668
669
670
671
672
673
674
675
676
677
678
679
680
681
682
683
684
685
686
687
688
689
690
691
692
693
694
695
696
697
698
699
700
701
702
703
704
705
706
707
708
709
710
711
712
713
714
715
716
717
718
719
720
721
722
723
724
725
726
727
728
729
730
731
732
733
734
735
736
737
738
739
740
741
742
743
744
745
746
747
748
749
750
751
752
753
754
755
756
757
758
759
760
761
762
763
764
765
766
767
768
769
770
771
772
773
774
775
776
777
778
779
780
781
782
783
784
785
786
787
788
789
790
791
792
793
794
795
796
797
798
799
800
801
802
803
804
805
806
807
808
809
810
811
812
813
814
815
816
817
818
819
820
821
822
823
824
825
826
827
828
829
830
831
832
833
834
835
836
837
838
839
840
841
842
843
844
845
846
847
848
849
850
851
852
853
854
855
856
857
858
859
860
861
862
863
864
865
866
867
868
869
870
871
872
873
874
875
876
877
878
879
880
881
882
883
884
885
886
887
888
889
890
891
892
893
894
895
896
897
898
899
900
901
902
903
904
905
906
907
908
909
910
911
912
913
914
915
916
917
918
919
920
921
922
923
924
925
926
927
928
929
930
931
932
933
934
935
936
937
938
939
940
941
942
943
944
945
946
947
948
949
950
951
952
953
954
955
956
957
958
959
960
961
962
963
964
965
966
967
968
969
970
971
972
973
974
975
976
977
978
979
980
981
982
983
984
985
986
987
988
989
990
991
992
993
994
995
996
997
998
999
1000

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
6
7 hierarchical log-linear (hi-log-linear) procedure was run to find the most parsimonious
8
9 final model in which main effects and all interactions (3-way and 2-way interactions)
10
11 were considered at the same time in the model. A final model having a non-significant
12
13 probability value is considered to be the best fitting, as this indicates there are no
14
15 differences between the observed and the expected frequencies (Wickens, 1989). The
16
17 model fit (χ^2) of the hi-log-linear procedure is presented in the text. To estimate single
18
19 parameters (z values), a log-linear model was computed to better understand where the
20
21 difference underlies.
22
23
24
25
26
27

28
29 To evaluate different profiles in children's and adolescents' happiness
30
31 conceptualizations, we conducted a LCA in *Mplus 7.4* (Muthén & Muthén, 1998-2012)
32
33 considering the different conceptualizations emerged from the coding of the qualitative
34
35 responses. LCA is based on a person-centered approach, which allows the identification
36
37 of differences across individuals by grouping them in a finite number of mutually
38
39 exclusive and exhaustive classes (Bergman & Magnusson, 1997; Ruscio & Ruscio,
40
41 2008). Hence, we thought this method would be the most appropriate in order to
42
43 identify possible subgroups based on their happiness conceptualizations, as it has been
44
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
48
49 (ranging from 2 to 6 classes). The best model was chosen considering the smallest
50
51 Akaike and Bayesian information criteria (AIC and BIC, respectively), and the highest
52
53 possible entropy index (Nyuland, Asparouhov, & Muthén, 2007). Finally, the resulting
54
55
56
57
58
59
60
61
62
63
64
65

1 classes were compared in their different frequencies of happiness conceptualizations via
2
3 Chi-square analyses; and in their mean levels of autonomy, competence, and relatedness
4
5 via ANOVAs.
6
7
8

9 Results

10 Age and Gender Differences in Children's and Preadolescents' Conceptualizations 11 12 of Happiness at School 13 14 15 16

17 Most children and adolescents mentioned one to four different
18
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
38
39 displays the frequency of the thirteen happiness conceptualizations at school by age and
40
41 gender.
42
43
44
45
46
47
48
49

50 Regarding the conceptualizations of competence, positive relationship with
51
52 teachers, and emotional support, the hi-log-linear analyses produced the final models of
53
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
57
58 relationship with teachers \times gender and positive relationship with teachers \times age, $\chi^2 =$
59
60
61
62
63
64
65

1 4.49, $df = 2$, $p = .11$; and emotional support \times age and emotional support \times gender, ($\chi^2 =$
2
3 1.74, $df = 2$, $p = .42$). However, considering the Bonferroni correction, only the last two
4
5 can be considered significant. Hence, the log-linear analyses showed that preadolescents
6
7 mentioned the conceptualization of positive relationship with the teachers
8
9 significantly more than children. Furthermore, girls mentioned the conceptualization of
10
11 emotional support more than boys (Tables 1, 2).
12
13
14
15

16
17 For the conceptualizations positive feelings, harmony/balance, learning, and
18
19 good grades the hi-log-linear analyses produced the final model of the interaction
20
21 between the main category and age (positive feelings \times age, $\chi^2 = 3.436$, $df = 4$, $p = .77$;
22
23 harmony/balance \times age, $\chi^2 = 4.57$, $df = 4$, $p = .77$; good grades \times age, $\chi^2 = 1.57$, $df = 4$,
24
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
28
29 showed that preadolescents mentioned the conceptualizations of positive feelings,
30
31 harmony, and good grades significantly more than children (Table 1). There was not a
32
33 significant interaction with gender (Table 2).
34
35
36
37
38
39

40 Concerning the conceptualizations friends and autonomy, the hi-log-linear
41
42 analyses produced the final models of friends \times gender, $\chi^2 = 4.80$, $df = 3$, $p = .19$ and
43
44 autonomy \times gender, $\chi^2 = 4.72$, $df = 3$, $p = .19$, respectively. When applying the
45
46 Bonferroni correction, these are no longer significant. Furthermore, there was not a
47
48 significant interaction of the conceptualizations with age (Table 2).
49
50
51
52

53 For the conceptualizations leisure, non-violence, moral actions, and purpose, the
54
55 hi-log-linear analyses did not produce a significant model for any interaction, only the
56
57 main effect of the category was significant (leisure, $\chi^2 = 1.63$, $df = 5$, $p = .90$; non-
58
59
60
61
62
63
64
65

1 violence, $\chi^2 = 3.18$, $df = 5$, $p = .67$; Moral actions, $\chi^2 = 5.71$, $df = 5$, $p = .34$; and
2
3
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).
7
8

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
17 different classes based on their happiness conceptualizations, we ran a LCA. We
18
19 computed different models (i.e., 2, 3, 4, 5, and 6 classes) to evaluate which one had the
20
21 best fit. To that aim, we considered (1) the information criterion indices such as Akaike
22
23 Information Criterion (AIC, Akaike, 1973) and the Bayesian Information Criterion
24
25 (BIC; Schwartz, 1978), with lower values indicating a better model fit; (2) a value of
26
27 entropy (i.e., appropriate separation between the classes) higher than .06 to be
28
29 considered acceptable (Asparouhov & Muthén, 2013); (3) the percentage of each
30
31 profile to be at least 5% (Speece, 1994); and (4) the interpretability of each profile
32
33
34
35
36
37 (Wang & Wang, 2012).
38
39

40
41 As reported in Table 3, considering the aforementioned criteria, the best model
42
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
54
55 sample) comprises children and preadolescents whose conceptualizations are concerned
56
57 with experiencing autonomy, competence, and having positive relationships. The
58
59
60
61
62
63
64
65

1 second class (n = 149, 20%) includes children and preadolescents whose
 2
 3 conceptualizations are focused on the experience of positive feelings and harmony. The
 4
 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
 8
 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
 12
 13 (n = 126, 17%) comprises children and preadolescents who mentioned less
 14
 15 conceptualizations linked to the satisfaction of psychological needs at school, as well as
 16
 17 learning and positive affect as compared to the other latent classes.
 18
 19
 20
 21
 22
 23

24 **Do the Classes Differ in their Levels of Autonomy, Competence and Relatedness?**

25
 26
 27 To test whether we could differentiate the five classes based on students' level of
 28
 29 Autonomy, Competence, and Relatedness, we ran three ANOVAs in which students'
 30
 31 classes (1, 2, 3, 4, and 5), age group (children versus adolescents), and gender (boys
 32
 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
 36
 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-
 40
 41 determination; class 2, positive feelings; class 3, emotional needs; class 4, learning; and
 42
 43 class 5, disengagement.
 44
 45
 46
 47
 48
 49

50 **Autonomy.** The effects of gender ($F(1, 713) = 0.2, p = .87, \eta^2_p = .001$), class (F
 51
 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
 57
 58 significantly higher autonomy than preadolescents did ($d = .45, SE = .09, p = .001$). Yet,
 59
 60
 61
 62
 63
 64
 65

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 ($ps > .90$).

6
7 However, for preadolescents, those in class 5 (disengagement) did report lower levels of
8
9 autonomy as compared to those in class 1 (self-determination; $d = -.75, SE = .21, p =$
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100
101
102
103
104
105
106
107
108
109
110
111
112
113
114
115
116
117
118
119
120
121
122
123
124
125
126
127
128
129
130
131
132
133
134
135
136
137
138
139
140
141
142
143
144
145
146
147
148
149
150
151
152
153
154
155
156
157
158
159
160
161
162
163
164
165
166
167
168
169
170
171
172
173
174
175
176
177
178
179
180
181
182
183
184
185
186
187
188
189
190
191
192
193
194
195
196
197
198
199
200
201
202
203
204
205
206
207
208
209
210
211
212
213
214
215
216
217
218
219
220
221
222
223
224
225
226
227
228
229
230
231
232
233
234
235
236
237
238
239
240
241
242
243
244
245
246
247
248
249
250
251
252
253
254
255
256
257
258
259
260
261
262
263
264
265
266
267
268
269
270
271
272
273
274
275
276
277
278
279
280
281
282
283
284
285
286
287
288
289
290
291
292
293
294
295
296
297
298
299
300
301
302
303
304
305
306
307
308
309
310
311
312
313
314
315
316
317
318
319
320
321
322
323
324
325
326
327
328
329
330
331
332
333
334
335
336
337
338
339
340
341
342
343
344
345
346
347
348
349
350
351
352
353
354
355
356
357
358
359
360
361
362
363
364
365
366
367
368
369
370
371
372
373
374
375
376
377
378
379
380
381
382
383
384
385
386
387
388
389
390
391
392
393
394
395
396
397
398
399
400
401
402
403
404
405
406
407
408
409
410
411
412
413
414
415
416
417
418
419
420
421
422
423
424
425
426
427
428
429
430
431
432
433
434
435
436
437
438
439
440
441
442
443
444
445
446
447
448
449
450
451
452
453
454
455
456
457
458
459
460
461
462
463
464
465
466
467
468
469
470
471
472
473
474
475
476
477
478
479
480
481
482
483
484
485
486
487
488
489
490
491
492
493
494
495
496
497
498
499
500
501
502
503
504
505
506
507
508
509
510
511
512
513
514
515
516
517
518
519
520
521
522
523
524
525
526
527
528
529
530
531
532
533
534
535
536
537
538
539
540
541
542
543
544
545
546
547
548
549
550
551
552
553
554
555
556
557
558
559
560
561
562
563
564
565
566
567
568
569
570
571
572
573
574
575
576
577
578
579
580
581
582
583
584
585
586
587
588
589
590
591
592
593
594
595
596
597
598
599
600
601
602
603
604
605
606
607
608
609
610
611
612
613
614
615
616
617
618
619
620
621
622
623
624
625
626
627
628
629
630
631
632
633
634
635
636
637
638
639
640
641
642
643
644
645
646
647
648
649
650
651
652
653
654
655
656
657
658
659
660
661
662
663
664
665
666
667
668
669
670
671
672
673
674
675
676
677
678
679
680
681
682
683
684
685
686
687
688
689
690
691
692
693
694
695
696
697
698
699
700
701
702
703
704
705
706
707
708
709
710
711
712
713
714
715
716
717
718
719
720
721
722
723
724
725
726
727
728
729
730
731
732
733
734
735
736
737
738
739
740
741
742
743
744
745
746
747
748
749
750
751
752
753
754
755
756
757
758
759
760
761
762
763
764
765
766
767
768
769
770
771
772
773
774
775
776
777
778
779
780
781
782
783
784
785
786
787
788
789
790
791
792
793
794
795
796
797
798
799
800
801
802
803
804
805
806
807
808
809
810
811
812
813
814
815
816
817
818
819
820
821
822
823
824
825
826
827
828
829
830
831
832
833
834
835
836
837
838
839
840
841
842
843
844
845
846
847
848
849
850
851
852
853
854
855
856
857
858
859
860
861
862
863
864
865
866
867
868
869
870
871
872
873
874
875
876
877
878
879
880
881
882
883
884
885
886
887
888
889
890
891
892
893
894
895
896
897
898
899
900
901
902
903
904
905
906
907
908
909
910
911
912
913
914
915
916
917
918
919
920
921
922
923
924
925
926
927
928
929
930
931
932
933
934
935
936
937
938
939
940
941
942
943
944
945
946
947
948
949
950
951
952
953
954
955
956
957
958
959
960
961
962
963
964
965
966
967
968
969
970
971
972
973
974
975
976
977
978
979
980
981
982
983
984
985
986
987
988
989
990
991
992
993
994
995
996
997
998
999
1000

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; $d = -.62$,
4
5 $SE = .18$, $p = .007$). There were no significant differences between the other classes for
6
7 adolescents ($ps > .58$).
8
9

10 11 12 **Discussion**

13
14
15 Previous research on children's and adolescents' conceptualizations of happiness
16
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
26
27 profiles could be identified and be characterized by different scores in autonomy,
28
29 competence, and relatedness. Importantly, this study extends previous research by
30
31 looking at a different country (the UK) and evaluating if the conceptualizations are
32
33 different from prior research in Spain.
34
35
36
37
38
39

40 **Children's and Preadolescents' Happiness at School**

41
42
43 Concerning their conceptualizations of happiness at school, the topics that
44
45 emerged were similar to the ones obtained in previous research (López-Pérez &
46
47 Fernández-Castilla, 2018) but other new categories emerged in the analysis (e.g., non-
48
49 violence, emotional support, moral actions, autonomy, etc.). We anticipated other
50
51 categories could be mentioned as previous evidence was captured in different cultural
52
53 contexts (i.e., more collectivistic cultures) and previous research already noted
54
55
56
57
58
59
60
61
62
63
64
65

1 differences in the conceptualizations across cultures was found in previous research
2
3
4 with adults (e.g., Delle Fave et al., 2011; Joshanloo et al., 2016).
5

6
7 **Age Differences.** Regarding age differences, our findings showed that
8
9 preadolescents not only mentioned more conceptualizations than children but they also
10
11 specifically reported the categories ‘positive feelings’, and ‘getting good grades’ (for
12
13 similar findings in Spanish preadolescents and adolescents, see López-Pérez &
14
15 Fernández-Castilla, 2018). Furthermore, preadolescents in this study also mentioned
16
17 more than children the categories ‘competence’, ‘harmony’ and ‘positive relationships
18
19 with teachers’. Most of these conceptualizations include elements of a eudaimonic
20
21 approach to well-being as they refer to basic psychological needs (i.e., competence and
22
23 relatedness; Deci & Ryan, 2001) as well as the experience of balance which has been
24
25 linked to eudaimonia (Fowers, 2016). However, as previously found with Spanish
26
27 adolescents, UK preadolescents did also mention more ‘positive feelings’. This might
28
29 be potentially explained by adolescents being more prone to increased reward-seeking
30
31 behaviour (Steinberg, 2010). As in previous research, the conceptualization ‘getting
32
33 good grades’ was significantly more mentioned by adolescents. Secondary schools put a
34
35 higher emphasis on the evaluation process, since this may determine adolescents’
36
37 performance in different certificates and their likelihood to get to university. Hence,
38
39 intrinsic motivation could be undermined during this school period (Gillet, Vallerand, &
40
41 Lafrenière, 2012).
42
43
44
45
46
47
48
49
50

51 **Gender Differences.** In regards to gender differences, girls mentioned
52
53 significantly more the conceptualizations of ‘emotional support’. These results are
54
55 different from previous research where gender differences emerged, as they found that
56
57 girls did mention more conceptualizations related to feelings whereas boys more related
58
59
60
61
62
63
64
65

1 to leisure (Giacomoni et al., 2015). However, it is important to note that this study was
2
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
8
9 fact that girls put a higher emphasis on intimacy in relationships and therefore friends
10
11 may be more salient in their conceptualizations (Williams, Connolly, & Segal, 2001).
12
13
14
15

16 **Happiness Conceptualizations and its Link with Psychological Needs**

17
18
19
20 Children reported experiencing higher autonomy, competence, and relatedness at
21
22 school. These findings are in line with previous literature showing that secondary school
23
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
27
28 Certificate of Secondary Education (GCSE) exams, which can alter teaching practices
29
30 and learning experience (Gu & Day, 2007) and well-being of adolescents (Denscombe,
31
32 2000). Therefore, it is not surprising that preadolescents in our sample reported lower
33
34 satisfaction of their psychological needs at school.
35
36
37
38
39

40
41 Results from the LCA identified five different profiles depending on the
42
43 conceptualizations children and adolescents did mention. For autonomy and relatedness,
44
45 results showed that for children there were no differences in the scores between the
46
47 classes. The fact that the different classes did not make a difference for children’s scores
48
49 on autonomy, competence and relatedness is in line with previous research on happiness
50
51 conceptualizations as they were not linked to children’s self-reported happiness or
52
53 academic achievement (López-Pérez & Fernández-Castilla, 2018). This may be due to
54
55 the fact that children have been described as exhibiting a positive bias in which they see
56
57 their life in very positive light due to their cognitive limitations to compare between real
58
59
60
61
62
63
64
65

1 and ideal situations (Harter, 2012). However, for preadolescents those in class 5
2
3
4 (disengagement) were significantly different from the ones in class 1 (self-
5
6 determination). Class 5 was characterized as mentioning less topics related to the
7
8 fulfillment of psychological needs, learning, and experiencing positive affect.
9
10 Therefore, this group could be described as disengaged with the school experience and
11
12 it is not surprising that their scores in autonomy and relatedness were lower as
13
14 compared to the class more concerned with the satisfaction of basic psychological
15
16 needs.
17
18
19
20

21 These findings suggest that happiness conceptualizations can reflect whether
22
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
26
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
40
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
44
45 happiness.
46
47
48
49
50
51

52 Although we cannot know what comes first (conceptualizations or satisfaction of
53
54 psychological needs), it is worth considering both in the evaluation of happiness as it
55
56 can help to better understand how it is promoted at the school and potentially guiding
57
58
59
60
61
62
63
64
65

1 future education policies (Dror, 1989). Given that those preadolescents with
2
3 “eudaimonic” conceptualizations indicated higher satisfaction of psychological needs,
4
5 schools (especially secondary) may consider engaging in practices that foster those
6
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
10
11 instance, schools may want to emphasise eudaimonic elements of well-being such as
12
13 helping students to find meaning in attending school and participating in the different
14
15 school activities or by promoting students’ feelings of autonomy and competence and
16
17 fostering positive social relationships. As highlighted by Suldo, Bateman, and Gelley
18
19 (2014), children and adolescents’ school satisfaction and performance is highly linked
20
21 to their happiness, hence, its promotion is vital in this context.
22
23
24
25
26
27

28 **Limitations and Future Research**

29
30
31
32 Despite a number of strengths (e.g., a large sample, a mixed method approach
33
34 that combines both qualitative and quantitative data, etc.), we acknowledge some
35
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
43
44 happiness as true developmental changes. Hence, future longitudinal studies are needed
45
46 to evaluate possible changes in the developmental trajectories of the different happiness
47
48 conceptualizations to study how they may change and how they may relate to other
49
50 measures of happiness (e.g., self-reports). Third, although the themes were indicative of
51
52 both hedonic and eudaimonic components of students' happiness, our open-ended
53
54 question was only designed to capture what was the meaning of "being at happy at
55
56
57
58
59
60
61
62
63
64
65

1 school". Hence, future studies should adopt specific ad-hoc questions to better evaluate
2
3 the dualistic nature of happiness. Last, we only relied on students' reports. Given that
4
5 teachers are key in shaping students' happiness at school, future research may benefit
6
7 from the inclusion of teachers' reports to understand what they think is important for
8
9 students' happiness at school. Namely, future studies could evaluate whether possible
10
11 discrepancies between teachers' and students' conceptualizations of happiness may
12
13 account for low levels of well-being within the school setting. Furthermore, other
14
15 measures in key variables for well-being such as children and preadolescents' emotional
16
17 experience or internalising and externalising symptoms should be evaluated in future
18
19 research to determine if differences can be found between the different classes
20
21 identified. Finally, our LCA results were exploratory in nature and therefore caution
22
23 must be taken before generalizing them. To this aim, future studies would also benefit
24
25 from collecting data among students from different socio-economic areas.
26
27
28
29
30
31

32 33 34 **Conclusions**

35
36
37 Overall our findings highlight the differences in how children and adolescents
38
39 understand of what being happy at school is and how these conceptualizations can
40
41 inform about children's psychological needs in that context. From a theoretical point of
42
43 view, our findings inform on the importance of considering both quantitative and
44
45 qualitative methods in the study of happiness, addressing a need highlighted in the study
46
47 of happiness. Furthermore, they also signal important developmental differences in the
48
49 link between happiness conceptualizations and the satisfaction of basic psychological
50
51 needs that deserves further investigation. Finally, our results expand previous research
52
53 on the satisfaction of basic psychological needs by pointing at possible differences in
54
55 the conceptualizations of happiness depending on whether these needs are met.
56
57
58
59
60
61
62
63
64
65

1 From a practical perspective, our findings concerning developmental differences
2
3 may inform the design of developmentally appropriate school-based intervention
4
5 programs to promote students' emotional wellbeing aimed at fostering students' basic
6
7 psychological needs and the promotion not only of hedonic elements of happiness (e.g.,
8
9 experience of positive feelings in the school context) but also eudaimonic aspects (e.g.,
10
11 finding meaning in attending school). Finally, this can enhance the evaluations
12
13 conducted currently at schools to assess their climate (e.g., Long, Huebner, Wedell, &
14
15 Hills, 2012) and their improvement plans (Cleveland & Sink, 2018) in order to get a
16
17 wider picture of children's and preadolescents' wellbeing in this context in order to
18
19 improve their education practices.
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65

References

- 1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
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
4 *of Child Psychology and Psychiatry*, 37, 3-12. doi: 10.1111/j.1469-
5
6 7610.1996.tb01377.x
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 Cheng, H., & Furnham, A. (2002). Personality, peer relations, self-confidence as
24
25 predictors of happiness and loneliness. *Journal of Adolescence*, 25, 327–339. doi:
26
27 10.1006/jado.2002.0475
28
29
- 30 Coffey, J. K. (2019). Cascades of infant happiness: Infant positive affect predicts
31
32 childhood IQ and adult educational attainment. *Emotion*. doi:
33
34 10.1037/emo0000640
35
36
- 37 Deci, E.L., & Ryan, R.M. (2000). The “what” and “why” of goal pursuits: Human needs
38
39 and the self-determination of behaviour. *Psychological Inquiry*, 11, 227–268. doi:
40
41 10.1207/S15327965PLI1104_01
42
43
- 44 Deci, E. L., & Ryan, R. M. (Eds.). (2002). *Handbook of self-determination theory*
45
46 *research*. Rochester, NY: University of Rochester Press.
47
48
- 49 Deci, E. L., & Ryan, R. M. (2008). Facilitating optimal motivation and psychological
50
51 well-being across life's domains. *Canadian Psychology*, 49, 14 –23. doi:
52
53 10.1037/0708-5591.49.1.14
54
55
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
63
64
65

- 1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
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 Lanza, S. T., & Cooper, B. R. (2016). Latent class analysis for developmental research.
46
47 *Child Development Perspectives*, 10, 59–64. doi: 10.1111/cdep.12163.
48
49
- 50 Lerner, R. M., & Steinberg, L. (2009). *Handbook of adolescent psychology*. New York:
51
52 Wiley.
53
54
- 55 Lewis, M., & Michalson, L. (1983). The socialization of emotion. In *Children's*
56
57 *emotions and moods* (pp. 193-230). Springer, Boston, MA.
58
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 *Orthopsychiatry*, 82, 50-60. doi:10.1111/j.1939-0025.2011.01130.x
6
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 *Frontiers in Psychology*. doi: 10.3389/fpsyg.2017.01189
15
16
- 17 López-Pérez, B., Sanchez, J., & Gummerum, M. (2016). Children's and adolescents'
18
19 conceptualizations of happiness. *Journal of Happiness Studies*, 17, 2431–2455.
20
21 doi:10.1007/s10902-015-9701-1
22
23
- 24 López-Pérez, B., & Fernández-Castilla, B. (2018). Children's and Adolescents'
25
26 conceptions of happiness at school and its relation with their own happiness and
27
28 their academic performance. *Journal of Happiness Studies*, 19, 1811–1830. doi:
29
30 10.1007/s10902-017-9895-5
31
32
- 33 Lu, L., & Gilmour, R. (2004). Culture and conceptions of happiness: Individual oriented
34
35 and social oriented SWB. *Journal of Happiness Studies*, 5, 269–291.
36
37
38 <http://dx.doi.org/10.1007/s10902-004-8789-5>
39
40
- 41 Maio, G. R. (2010). Mental representations of social values. *Advances in Experimental*
42
43 *Social Psychology*, 42, 1-43. doi: 10.1016/S0065-2601(10)42001-8
44
45
- 46 Marini, Z., & Case, R. (1994). The development of abstract reasoning about the
47
48 physical and social world. *Child Development*, 65, 147–159. doi: 10.1111/j.1467-
49
50 8624.1994.tb00741.x
51
52
- 53 McCullough, G., Huebner, E. S., & Laughlin, J. E. (2000). Life events, self-concept,
54
55 and adolescents' positive subjective well-being. *Psychology in the Schools*, 37,
56
57
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 doi:10.1037/a0033546
21
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 10.22230/ijep.2014v9n2a483
28
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 Niemiec, 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
54
55
56
57
58
59
60
61
62
63
64
65

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
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65

- 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
64
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
59
60
61
62
63
64
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
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65

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
2
3
4 best fitting model is highlighted in bold.
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65

16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65

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%)	$\chi^2 = 4.17, df = 4, p = .38$

16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65

HAPPINESS AT SCHOOL

42

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.

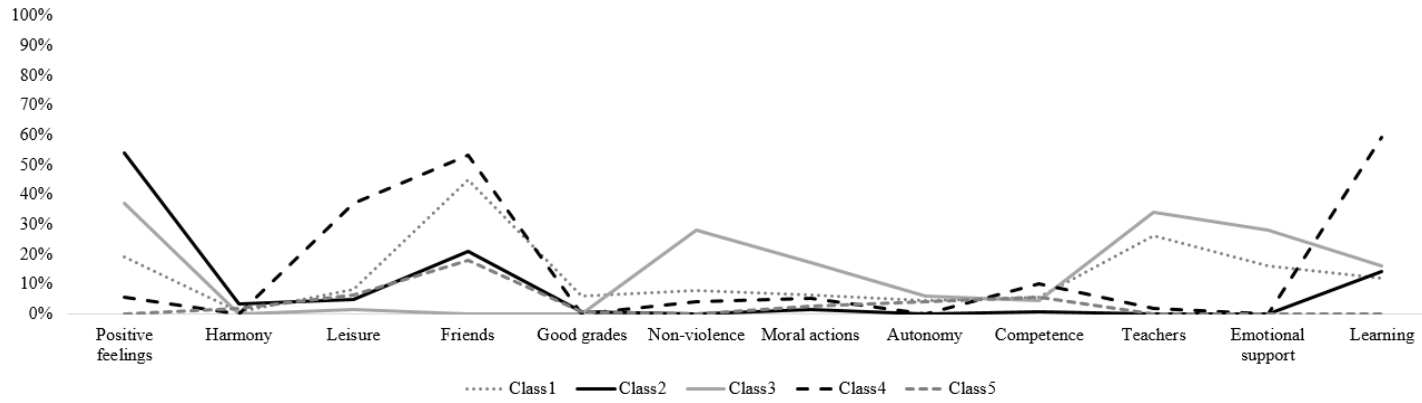
Table 5

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)

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65

(a)



(b)

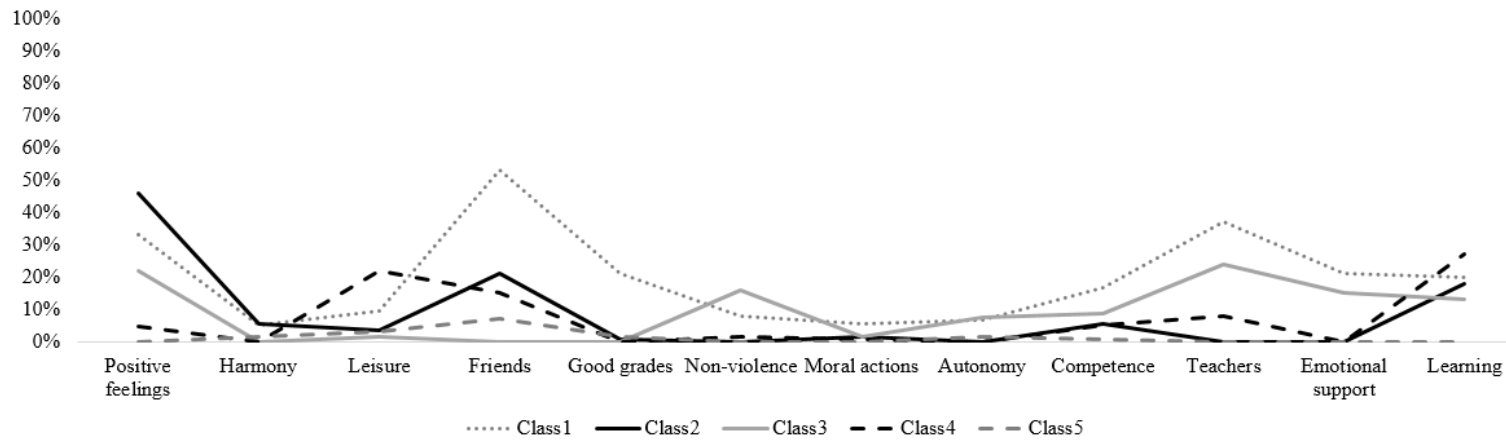


Figure 1. Differences in the Happiness Conceptualization in (a) Children and (b) Adolescents in the Different Classes

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>
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
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>
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			
32			
33			
34			
35			
36			
37			
38			
39			
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>
41			
42			
43			
44			
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55			
56			
57			
58			
59			
60			
61			
62			
63			
64			
65			

1 Non-Violence
2

3 The lack of
4 quarrels/not being
5 bullied/not being
6 called names
7

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

17 Moral Actions

18 Social desirable
19 actions such as
20 helping or respecting
21 others
22

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

33 Purpose

34 Happiness as the
35 supreme goal in life
36

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

45 Autonomy

46 Freedom to be oneself
47

- 48 a. "For me to be happy I believe
49 that I should feel free, and
50 unpressured in excess amounts. I
51 would like to be comfortable in
52 myself and in my surroundings. I
53 would like to feel like an
54 individual, not just a small spec
55 that is part of an adult's job."
56 (*Girl, 14 years old*)
57
58 b. "To be happy at school you
59 should make your own choices
60 without somebody forcing you to
61 make a decision that you don't
62 believe in or don't want to"
63 (*Girl, 12 years old*)
64
65

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65

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

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65

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*)
-