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The Socially Differentiated Impact of School-related Factors on Children's Life Satisfaction: The French Example

Authors: Kevin Diter, Claude Martin, Julia Buzaud, Zoé Perron

Affiliations: CNAF-EHESP, Childhood, Well-being and Parenthood Chair, France, and member of CNRS, Univ-Rennes, EHESP, Arènes (Diter); CNAF-EHESP, Childhood, Well-being and Parenthood Chair, France, and Chairholder, CNRS, Univ-Rennes, EHESP, Arènes, UMR (Martin); CNAF-EHESP, Childhood, Well-being and Parenthood Chair, France (Buzaud); CNAF-EHESP, Childhood, Well-being and Parenthood Chair, France (Perron)

Corresponding author/address: Kevin Diter, Childhood, Well-being and Parenting Chair, Ecole des hautes études en Santé Publique (EHESP), 15 avenue du Professeur Léon Bernard, 35043 CedexRennes, France; email: kevin.diter@ehesp.fr

Abstract

Over the past fifty years, the topic of children's well-being has garnered attention in political and academic debates. In recent decades, the extensive literature on the topic has documented the numerous determinants of children's life satisfaction, as well as their relative importance according to cultural contexts. This increasing attention paid to children's subjective well-being includes consideration of school environments (see for example the ISCWeB study, HBSC study, the advancements of Positive Education, World Happiness Report 2015, etc). Until recently, the Program for International Student Assessment (PISA) surveys were mainly focused on well-being as linked with academic and professional achievement. Since 2015, PISA has documented ongoing levels of children's well-being, and how well-being is influenced by school environments, the quality of children's relationships with their peers and teachers at school, as well as parental involvement in the lives of their children. This article aims to highlight the impact of school-related determinants on children's life satisfaction and its variations across social classes. Based on the French part of the PISA 2015 Survey (n=4804), we have identified a two steps expression of inequalities. We begin by showing that class differences influence children's probability of having both a school environment and peer and parental relationships that enhance their level of life satisfaction. We go on to point out that social inequalities also appear when examining the impact of school-related factors on children's overall life satisfaction. It seems that school bullying, anxiety and parental involvement in school impact children differently depending on their social background.

Keywords

Well-being, children's overall life satisfaction, school environment, PISA

1. INTRODUCTION

In recent decades, children's well-being has become a political and academic issue that has gained importance both in public policies and in social sciences (Pollock et al. 2018). During this time, the literature on child well-being has continued to expand, rapidly becoming a vast research field, with numerous systematic reviews and handbooks across disciplines, countries and time (Amerijckx and Humblet 2014; Ben-Arieh et al. 2014; Pollard and Lee 2003).

1.1 Children's well-being: a large literature base

Children's well-being has historically been associated with a number of different social and political issues: parenting practices and parental investment; participation in the labor force; quality of family life; schooling experiences, etc. (Sandin 2014: 31). The notion of children's well-being, therefore, appears to be polysemic and abstruse, or at the very least multidimensional and complex. It covers a diversity of areas, from material living conditions to children's cultural and extra-curricular activities, by examining the quality and frequency of communication with parents and peers (Ben-Arieh et al. 2014).

Initially defined as an absence of health problems, illness or failure, well-being has gone on to become a more positive concept, following the findings and achievements of the new sociology of childhood, which insists on perceiving the child as a "being" rather than one who is "becoming" (Corsaro 2014; James et al. 1998). The first measures of well-being were based on economic and health indicators, intended to gauge the wealth of the families in which children lived and their physical health (Ben-Arieh 2008; Ben-Arieh and Goerge 2001). These were later referred to as "objective" dimensions of well-being, as opposed to new measures of well-being integrating more subjective aspects, such as life-satisfaction or perceived quality of life (Axford et al. 2014; Bradshaw and Richardson 2009, 2011; Rees et al. 2010).One of the first research challenges was to estimate the differences between adults and children as far as measuring well-being. Another challenge was estimating the best way to measure subjective well-being (SWB) and how it relates to a number of components and variables. When considering children's SWB, another main challenge was to understand the link between SWB and performance at school (Amerijckx and Humblet 2014).

In order to go beyond the relatively elementary measurement of SWB based on a life satisfaction scale, many researchers have developed new instruments over the decades. These include, for example, the School Children's Happiness Inventory (SCHI) (Ivens 2007); the Children's Overall Satisfaction with Schooling Scale (COSSS) tested in Finnish and Dutch samples (Randolph et al. 2009); and the 'How I Feel About Myself and School' questionnaire tested in England (McLellan and Steward 2015) and the developments of the International Survey of Children's Well-being (ISCWeB).

Within this research, the French configuration constitutes an interesting case study. For a number of years, the OECD has indicated that French students' well-being is particularly low. France ranks 40th out of 64 OECD countries in the PISA study concerning the percentage of pupils who "feel good" at school. Many researchers have thus tried to understand the interactions between a series of factors in the SWB scores of children at school to clarify this situation. For some authors, the key determinant

concerns motivation and self-efficacy, with an important interaction in terms of set goals: learning or performance (Masson and Fenouillet 2019). Other authors insist on the importance of creativity (Fanchini et al. 2019).

According to these studies, parental involvement, behaviors and attitudes, and more precisely parenting styles, represent major factors in understanding the SWB variations (Flaquer 2014; Hartas 2014; Newland 2014; Rodrigo et al. 2014). Most of the research shows that family and parent-child relationships significantly affect the levels of children's life satisfaction and remain major predictors of well-being in many countries, even after adjusting for country-specific variables (Lee and Yoo 2015).

1.2 Role of school climate in determining the level of children's SWB

Past research on school and well-being has mainly focused on its link to students' academic and professional achievements, with less attention paid to how SWB is influenced by interactions with peers and teachers. Researchers generally focus on two key topics: parental involvement in school matters for academic success, and school bullying by peers.

A large part of the literature (Powell et al. 2010; Steinmayr et al. 2018) indicates that parental involvement in children's school activities is a significant predictor of school success and therefore children's subjective well-being. By helping children with their homework and teaching them school-related knowledge, or interacting with school organizations, mothers and fathers help their children achieve better grades, which contributes to their well-being as students (Wang and Sheikh-Khalil 2013). The second element that has received research attention is school bullying (by peers). Scholars (Goswami 2012; Olweus 1994; Rigby 2003, 2005; Zullig et al. 2011) have described how social support at school is important for children's success and well-being. Being bullied by peers or unfair treatment by teachers decreases well-being levels at school. Løhre and colleagues (2010) have shown that the determinants with the strongest impact on children's well-being at school relate more to what takes place with adults (teachers) in the classroom than the influence of other children.

A significant body of research concerns student-teacher relationships, but also the caring role of teachers and their impact on wellbeing at school (Løhre et al. 2010; Philippo et al. 2017; Tichnor-Wagner and Allen 2016). Within this body of research, some studies focus on the context of these interactions or the role of schools' organizational structures and practices, demonstrating that school characteristics have a significant impact in determining the quality of these relationships (Van Maele and Van Houtte 2011; Cucchiara 2013). School climate may facilitate trust or, on the contrary, generate tension and lead to conflicts (Bryk and Schneider 2002; Noddings 2005). School climate is crucial in many respects. First, it is essential in facilitating a sense of belonging and in particular in facilitating interactions with teachers who can develop a caring attitude and second, to improve academic outcomes for disadvantaged and minority students (Cucchiara in press).

As interesting as these various studies are, few have looked at class-based inequalities in students' subjective well-being and how they may accumulate, considering that many determinants of subjective well-being are socially situated (Bradley and Corwyn 2002; Conger et al. 2010; Sweeting and Hunt 2014; von Rueden et al. 2006). This article aims to highlight and assess the role of school-related determinants in children's overall life satisfaction (OLS), and their variations across class. More specifically, we seek to highlight the phenomenon of accumulating inequalities in terms of OLS, which we will demonstrate in two steps. First, based on a multivariate analysis, we found that strong class differences can be observed in the differential likelihood of students having a school environment and

relationships with peers and parents that increase their level of OLS. Then, by using a multilevel and mediation analysis, we emphasize that social inequalities also appear when estimating the impact of school-related determinants on children's OLS. It seems that bullying at school, anxiety and parental involvement in school have significantly different impacts on children depending on their social background. In other words, the accumulation of inequalities in terms of OLS appears when (1) school-related factors that positively and negatively affect life satisfaction level are not experienced with the same likelihood by children according to their social background, and when (2) children's OLS level is not impacted equally by positive or negative school-related factors, depending on whether they come from upper, middle or working-class backgrounds.

2. DATA AND METHOD

2.1 The PISA 2015 survey

The data used in this article come from the PISA international survey (*Programme for International Student Assessment).* This survey has been carried out and published since 2000 by the Organisation for Economic Cooperation and Development (OECD) in the OECD's 36 member states and about 30 non-member countries. It is repeated every three years in all participating countries. Its aim is to evaluate the academic level and skills of 15-year-old students in mathematics, written comprehension, science, etc. More precisely, it aims to measure all of the competencies designated under the term "literacy", which "refers to the capacity of students to apply knowledge and skills in key subject areas and to analyze, reason and communicate effectively as they pose, interpret and solve problems in a variety of situations" (OECD 2010: 17).

2.2 Sampling strategy

The PISA survey is an international survey that represents students attending educational institutions in grades 7 or higher. Most of the PISA samples, including the French sample, are based on a two-stage stratified sampling design (OECD 2017a). The first-stage sampling units consist of schools attended by 15-year-old students. The schools were systematically sampled based on probabilities proportional to their size, which was a function of the estimated number of eligible students. In each country, including France, a minimum of 150 schools were selected, although in many cases a larger sample was put together to carry out a national analysis. Replacement schools were identified when sampled schools chose not to take part in the PISA 2015 survey. A minimum response rate of 85% was required for the schools initially selected. If the initial school response rate fell below 85%, an acceptable school response rate could still be reached by using replacement schools that had the same socio-demographic characteristics than the initial school and belonging to the same explicit stratum.

Once the schools were selected, a complete list of the students aged 15-year-old was drawn up, excluding intellectually disabled students or students with insufficient assessment language experience (OECD 2017a: 67). From this list, 42 students were randomly selected with equal probability. In schools with multiple classes, the participating students could come from different classes in order to have a better representation. If the list featured less than 42 students, all 15-year-olds were selected to participate. The number of students ranged from 20 to 42 from each school.

For the purposes of this article, we used the database collected for the 2015 survey of 15-year-old children in France. This database was selected because this questionnaire provided more information

than the 2018 survey on academic context and relationships with friends and teachers at school, as well as the level of parental involvement in children's school and extracurricular activities.

2.3 A representative survey of French high school students

This two-stage stratified sampling design described above was implemented in France. A total of 5290 students responded to questions on subjective well-being or quality of relationships with parents, teachers and peers. However, while the students included in the sample were chosen randomly, the selection probabilities of the students vary (Lopez-Agudo et al. 2017; OECD 2017a) insofar as:

- Some classes and schools may have been intentionally under- or over-represented due to political or practical considerations (especially in small towns or villages);
- School and/or student non-responses may have led to under-representation of these populations in the sample.

To allow adjustment for the oversampling of schools/students, and to provide some correction for any remaining selection bias due to the two-stage stratified sampling design, weights, and more precisely replicate weights, were created (for further information, see *Technical Report* OCED 2017a and OECD 2009). As recommended by these reports, all analyses were weighted with the final student weight and the 80 replicate weights, using the balanced repeated replication (BRR) method with Fay's modification (OECD 2009; see below).

The sample used in the article is slightly smaller (n=4808) than the initial sample due to students' non-responses to the open-ended questions on their father's and mother's occupations[1]. However, it remains representative of the 15-year-old student population in France (Table 1); 50.4 % of students are girls, and 49.6 % are boys while 42.4 % come from working-class families, 37.1 % from middle-class families and 20.5 % from upper-class families. These proportions are close to those highlighted in the French Ministry of Education reports (DEPP 2019), namely: 51.3% of girls and 48.7% of boys; 42.7% of working-class students *versus* 35.8 % and 21.5% of middle- and upper-class students respectively[2].

[1] These non-responses do not affect the analyses presented below insofar as their responses to the main variables examined (such as OLS, parental involvement, level of anxiety, etc.) are not significantly different from those of the respondents. After creating a two-modality variable (students who answered questions about their parents' occupations, and those who did not**)**, we cross-tabulated it with each of our variables of interest, with the results that all Pearson's chi-square tests had a p-value>0.05.

[2] The exception is the educational level of the parents. While the proportions of fathers and mothers with a level of education lower or equal to "Lower secondary education" are close to the figures indicated by the Census data (17.6% in our data versus 16.7% in the census), the proportion of parents with a "Master, Doctoral level" is higher than in the census (29.9% and 27.9% in our data *versus* around 18% in the census) (INSEE, 2016). This difference can be explained by the fact that the former French degree called "Maîtrise" (which is between the Bachelor and Master levels) has been added to the Master level, which has increased the proportion of Master degrees by around 7 points. This can also be explained by the fact that the parents of the middle-class children surveyed are more highly educated than those of the French population (37% have a master's degree in our data versus 29% in France). As a result, middle-class families with degrees are slightly over-represented in our data.

Table 1 – Description of the French students (PISA 2015)

	Description of the French Sample
Gender	
Girls	50.4
Boys	49.6
Children's Social background	
Working-class family	42.4
Middle-class family	37.1
Upper-class family	20.5
Father's level of education	
No education	1.2
Primary education	1.2
Lower secondary education	15.2
Upper secondary education	20.7
Short-cycle tertiary education *(Advanced technician's certificate, Higher national Diploma,*	12.8
Bachelor's or equivalent level	19.0
Master, Doctoral or equivalent level	29.9
Mother's level of education	
No education	1.0
Primary education	1.2
Lower secondary education	12.3
Upper secondary education	16.2
Short-cycle tertiary education *(Advanced technician's certificate, Higher national Diploma,*	17.7
Bachelor's or equivalent level	23.7
Master, Doctoral or equivalent level	27.9
School location	
A village, hamlet or rural area (fewer than 3 0	4.6
A small town (3 000 to about 15 000 people)	24.8
A town (15 000 to about 100 000 people)	40.9
A city (100 000 to about 1 000 000 people)	20.5
A large city (with over 1 000 000 people)	9.2
Is your school a public or a private school?	
A public school	79.0
A private school	21.0
School size, mean (sd)	879.3 (19.8)
Class size, mean (sd)	29.3 (0.3)

Source: PISA 2015, French data
Scope: High school students aged 15 (n=4804)

2.4 The variables employed and their construction

Although the PISA survey does not focus primarily on students' subjective well-being and related factors, several questions allow us to assess how boys and girls perceive their level of life satisfaction, in particular according to the OLS scale.

Indicator of well-being: The Overall Life Satisfaction (OLS) Scale

Our variable of interest, the OLS scale, was built from the following question: "On a scale from 0 to 10, where 0 means you feel 'not at all satisfied' and 10 means 'completely satisfied', how satisfied are you with your life as a whole these days"? We considered children's level of life satisfaction to be high when it was ranked either 9 or 10 on this scale. This threshold has previously been used by the OECD (2017b) as an indicator of a high level of subjective well-being among students. It was used to highlight inequalities between countries and across genders, as well as according to the economic and cultural resources of parents. An additional motivation for choosing this threshold was to select a group of students that would be large enough, but not too large, to be able to distinguish the different determinants

of a high level of OLS among children, and to highlight the extent to which the effect of these determinants varies by gender and social class. Only 15% of French students report an OLS score of 10 out of 10, while more than 60% report a score of 8 or above. The threshold of 9 out of 10, corresponding to 36.1% of French students, thus seemed appropriate in underlining social inequalities in terms of subjective well-being, and their accumulation. The OLS variable has three ranges: a "low level of OLS" includes scores between 0 and 6; a "middle level" includes scores of 7 and 8; and, a "high level of OLS" includes scores of 9 or 10 out of 10.

The school-related determinants of Children's OLS

In order to highlight the role played by school context, peer and teacher relationships, and parental involvement in children's level of OLS, several score variables were created (Table 2):

- **1. Children's sense of school belonging, linked closely to life satisfaction** (Suldo et al., 2013). This score was created from the following five variables ("I feel like an outsider at school"; "I make friends easily at school"; "I feel like I belong at school"; "I feel awkward and out of place in my school"; "I feel lonely at school"). For each question children needed to specify either "Strongly agree", "Agree", "Disagree", or "Strongly disagree". The total scores ranged from 0 to 15, since each item was ranked from 0 to 3, with 0 indicating a poor sense of belonging at school and 3 a high sense of belonging. The score was divided into terciles to distinguish children with a high sense of belonging to the school from those with a low sense of belonging. The first tercile, "low sense of belonging", is made up of children with a total score below 8. The second tercile includes those with a total score between 8 and 11. The last tercile, "high sense of belonging", includes children with a total score of 12 or more. This score presents an acceptable level of reliability (Cronbach's alpha: 0. 7102; McDonald's omega: 0.7307) and is therefore a confident measure of children's sense of belonging to the school.

- **2. Anxiety levels about academic performance.** This scale was created from the five following variables ("I often worry that it will be difficult for me taking a test"; "I worry that I get poor grades at school"; "I get very tense when I study for a test"; "I get nervous when I don't know how to solve a task at school"; "Even if I am well prepared for a test I feel very anxious"). For each question children were asked to indicate how much they agreed ("Strongly agree", "Agree", "Disagree", or "Strongly disagree"). The scores ranged from 0 to 15, since each item was ranked from 0 (low level of anxiety) to 3 (high level of anxiety). Then, the scores were divided into terciles to distinguish the most anxious children from the others. The first tercile, "low anxiety score", includes children with a score of 7 or less. The second tercile, "middle anxiety score", includes those who have a score between 8 and 11. The last tercile, "high anxiety score", includes children with a total score of 12 or more. This scale presents a (very) good level of reliability (Cronbach's alpha: 0. 8304; McDonald's omega: 0.8341) and is therefore a robust measure of children's anxiety.

- **3. The peer bullying at school scale** includes the following six variables ("other students leave me out of things on purpose"; "other students made fun of me"; "I was threatened by other students"; "other students took away or destroyed things that belong to me"; "I got hit or pushed around by other students"; "other students spread nasty rumors about me") for which the children had to stipulate how often these events occurred ("never or almost never", " a few times a year", "a few times a month", or "Once a week or more"). The total scores ranged from 0 to 18. Given that almost 56 % of students report never or almost never having experienced peer

bullying, using terciles was deemed irrelevant. We therefore attributed scores as follows: children with a score of 0 were considered as being rarely/never bullied, a score of 8 or below indicated a moderate bullying, while a score of 9 or more meant a high level of bullying. This scale presents a (very) good level of reliability (Cronbach's alpha: 0. 8063; McDonald's omega: 0.8238) and is therefore a viable measure of children's level of peer bullying.

- **4. The teacher bullying at school scale** was created in the same way as in the previous scale. The variables taken into account here are: "teachers make me feel that they think I am less smart than I really am"; "teachers discipline me more harshly than other students"; "teachers ridicule me in front of others"; and "teachers have said something insulting to me in front of others". Students were presented the same prompts and items as they were in questions on peer bullying at school. Given the fact that children were rarely bullied by their teachers, we chose not use terciles. We attributed scores as follows: children with a total score of 0 were considered as rarely/never bullied, those with a score between 1 and 4 as moderately bullied, and those with 5 or more as significantly bullied. This scale presents an acceptable level of reliability (Cronbach's alpha: 0. 7631; McDonald's omega: 0.7873) and is therefore a robust measure of children's level of teacher bullying.

- **5. Parental involvement levels in children's everyday activities.** This scale is composed of the following variables: "parents spend time simply talking to their child"; "parents sit down to eat main meals with their child"; "my parents encourage me to be confident"; "my parents support me when I am facing difficulties". For the first two questions, parents were asked to indicate the frequency ("never", "once or twice a month", "once or twice a week", "every day") of these events. For the other two questions, children had to stipulate how strongly they agreed with statement. The scores ranged from 0 to 12, since each item was ranked from 0 (low level of parental involvement) to 3 (high level of parental involvement). Here again, we used terciles to distinguish children whose parents were the most and the least involved. The first tercile, "a low level of parental involvement in children's everyday activities", includes children with a score of 8 or less. The second tercile, "a middle parental involvement", includes those who have a score between 8 and 10. The last tercile, "a high level of parental involvement", includes children with a total score of 11 or 12. This scale presents an acceptable level of reliability (Cronbach's alpha: 0. 6963; McDonald's omega: 0.7136) and is therefore a valid measure of parental involvement level in children's activities.

- **6. Parental involvement levels in children's school activities.** This scale was created in the same way as the parental involvement levels in children's everyday activities and included the following five questions: **"**How often do parents discuss their child's performance at school?"; "How often do they discuss their child's schoolwork?", "How often do they help their children with homework?"; how strongly do children agree with the statement "my parents are interested in my school activities?"; or with the statement "my parents are supportive of my efforts and achievements at school?" The scores ranged from 0 to 18, since each item was ranked from 0 (low level of parental involvement) to 3 (for children's agreement) or 4 (for parental frequency) (high level of parental involvement). Once again, terciles were used to distinguish children whose parents are the most and least involved in their school activities. The first tercile, "a low level of parental involvement in children's school activities", includes children with a score of 11 or less. The second tercile, "a middle parental involvement", includes those who have a score between 12 and 14. The last tercile, "a high level of parental involvement", includes children with a total score of 15 or more. If the scale presents an acceptable level of reliability

(Cronbach's alpha: 0.7007; McDonald's omega: 0.7325), it tends to give more importance to the parental frequency variables because of the greater number of modalities (5 *versus* 4). This is not an issue insofar as the purpose of the score is to capture the role of parenting practices.

7. Children's socioeconomic background/social class was created by reconstructing the French nomenclature of "professions and socio-professional categories" (PCS) from the International Standard Classification of Occupation (ISCO) variable. The advantage of using the PCS is that it is adapted to the French context and makes it easier to highlight social differentiations since it takes into account both parents' education level, their relative social status and income (Desrosières and Thevenot 1990). Once the PCS variable was recreated from the ISCO variable, we grouped it into three categories: the upper class, which includes executives, managing directors, administrative and business executives/professionals, and higher intellectual professions (engineers, researchers, physicians, etc.); the middle class

Table 2 – Description of school-related variables associated to students' OLS score

	Description of the main independant variables
Children's sense of belonging to school	
Low	38.8
Middle	28.7
High	32.5
Score of anxiety about school	
Low	38.1
Middle	33.4
High	28.5
Level of school bullying by peers	
Low	54.3
Middle	38.4
High	7.3
Level of school bullying by teachers	
Low	37.8
Middle	54.0
High	8.2
Level of parental involvement in children's everyday activities	
Low	34.8
Middle	30.4
High	34.8
Level of parental involvement in children's school activites	
Low	35.0
Middle	39.0
High	26.0

Source: PISA 2015, French data
Scope: High school students aged 15 (n=4804)

the middle class, which group together teachers, nurses, small team managers, technicians and associate-level professionals, foremen, craftsmen and storekeepers; and working class, which brings together

clerical support workers, service and sales workers, care workers, farm workers, construction workers and people with tenuous employment (see Table 1 for the distribution of social classes).

2.5 Methodology

To grasp the unequal impact of school-related determinants in children's OLS, two types of statistical processing were implemented. We employed multilevel binary analyses that took children's social background into account, then stratified multilevel models on children's social background.

Multilevel (binary) regressions

Due to the clustered nature of PISA data, multilevel analyses should be used (Heck and Thomas 2015; OECD 2009; Rabe-Hesketh and Skrondal 2008). These methods allow us to avoid overestimating the effects of social class and school-related factors (such as sense of belonging to school or bullying) on children's OLS by acknowledging the fact that students are situated within schools, i.e., by taking into account that the effects of these key determinants could arise from schools' characteristics, and more precisely from the way in which students are assigned to schools or to classrooms within schools. In other words, by defining schools as a random effect (and adjusting the analyses on this higher level), multilevel models help to discern the effects of social class, peer and teachers bullying from the schools' (own) effect, and thus provide unbiased coefficients and standard errors for these key determinants of OLS.

As recommended by the *PISA Data Analysis Manual SPSS* (OECD 2009), replicated weights were used for all statistical analyses to correct the bias of student selection and "to calculate appropriate estimates of sampling error, and to make valid estimates and inferences" (OECD 2014: 108).

Stratified by social class

In recent times, (multilevel) regression models have been stratified on children's socioeconomic background in order to investigate whether the same practice, experience or behavior could have socially differentiated impacts on a social phenomenon (Héran 1996). This methodological stance is based on a specific theoretical framework that perceives the social world in a relational, hierarchical way and postulates, or at least hypothesizes the existence of **multiple structural causalities** (Bourdieu 1966; Lebaron and Le Roux 2015; Le Roux and Rouanet 2004; Lenoir 2004). According to these researchers, a social phenomenon cannot be explained by a single, isolated factor, but rather by the conjunction or combination of several factors. These factors do not have the same importance or influence and do not interconnect in the same way depending on the historical, cultural and social contexts in which they emerged. In other words, the authors who adopt these relational approaches to the social world tend to reject the idea that a variable or group of variables will or could have a "specific" or "pure" effect that exists independently from the other (social) variables considered in a statistical model operating on the principle of all other things being equal (Bourdieu 1966). More precisely, they challenge the view widely shared in econometrics and epidemiology that **a single factor (or single effect) acts in an identical way with the same intensity at all times, in all places, and on all people**. They call for greater caution and care and make a more or less convincing case for re-contextualizing and re-historicizing the links or effects of a representation, belief or disposition on a particular practice or attitude.

The idea of configurations and variations of explanatory factors is made clear in the concept of "structural causality", which was defined by Pierre Bourdieu (1966) and his colleagues (Lenoir 2004). According to these academics, structural causality refers to a relational manner of analyzing the social world "that does not look for the effectiveness of a particular independent variable on another dependent variable, but rather the effectiveness of a constellation of variables on a dependent variable through the mediation of other variables, i.e., through the structure of the constellation of variables" (Lenoir 2004: 392). Put more simply, structural causality as described by Bourdieu involves several ideas:

> - First, *a variable does not have its own specific effectiveness, it never acts alone, but according to the context in which it emerges* and depending on the place that it occupies in the "constellation of explanatory variables". In other words, depending on the connections that the variable maintains with the other variables at the origin of, or associated with a given social behavior;
> - Second, *all variables do not have the same explanatory influence in a given social phenomenon,* some are more structuring than others insofar as they attribute an effectiveness, importance or role to the other variables – for example, variables that result in relationships of power and domination, such as age, gender, race and class;
> - Third, structural causality considers *the irregularity of the effects of a variable and its importance for a given behavior or attitude*. The influence of the variable in question depends not only on the structure and configuration of its factors, but also on the material conditions of its existence and of all the related social experiences.

In this case, we note that structural causality allows us to consider that the same level of parental involvement or peer bullying may not have the same role, or the same importance, in children's life satisfaction depending on their socioeconomic background. Put simply, it depends on the social characteristics of the parents and the styles of emotional education involved. In other words, it leads us to systematically re-contextualize the effects, associations and up-to-date statistical differences, and place them in the configuration of factors in which these effects, associations and differences emerge. Doing so leads us to investigate and highlight all of the social conditions that activate, reinforce, diminish or even void their importance and influence in the explanation of a specific phenomenon.

In summation, we will first show that students do not have the same likelihood of experiencing various determinants of overall life satisfaction: sense of belonging in school, level of parental investment in their children's (school) life, or level of peer or teacher bullying at school. Then, by using multilevel binary regressions stratified on social class, we emphasize in a more original way that the effects of these different school-related factors do not have the same impact on children's OLS depending on their social background. While those factors that are positively associated with children's OLS more significantly benefit upper-class children, those negatively associated factors (such as anxiety and bullying) have a more significantly negative impact on OLS levels of working-class children than upper-class children.

3. FINDINGS

3.1 Unequal childhoods and overall life satisfaction: the importance of socioeconomic background

Table 2 shows that French students report a high level of life satisfaction: on average, their OLS score is 7.6 out of 10. Around 22% of them report a low OLS level, being an average score of 6 or under out of 10. The proportion is even lower when considering children who reported a score below 5 out of 10 (7%).

However, in terms of subjective well-being, children are far from equal. Their scores of life satisfaction vary according to socioeconomic background, ranging from 7.5 working-class children to 7.9 for upper-class children (T-test, $p<0.001$). Middle-class children fall in between with an average score of 7.7 out of 10. This class-differentiated distribution of OLS is even more marked when examining those children who declare low (score below 6 out of 10) or very low (score below 4 out of 10) levels of OLS. While almost 25% of teenagers from working-class families indicate a low OLS level, this is only the case for 19% of upper and middle-class children (Pearson's Chi-squared, $p<0.001$). Working-class children are nearly 1.5 times more likely to indicate a level of OLS below 4 than their peers from other socioeconomic backgrounds (8.3% vs 5.7%).

Table 3. Children's OLS level according to their socioeconomic background

		Children's social background						
	All children	*Working-Class*	*Middle-class*	*Upper-class*	*pvalue*	*pvalue upper-class vs. middle-class*	*pvalue upper-class vs. working-class*	*pvalue middle-class vs. working-class*
Children's Overall Life Satisfaction (OLS Scale from 0 to 10)					+++	+++	+++	+++
Mean (sd)	7.6 (1.9)	7.5 (2.0)	7.7 (1.9)	7.9 (1.8)				
Children's level of OLS (% col)					+++	NS	+++	+++
Low *(score between 0 and 6 out of 10)*	21.7	24.7	19.5	19.3				
Middle *(7 or 8 out of 10)*	42.2	40.3	43.8	43.0				
High *(9 or 10 out of 10)*	36.1	35.0	36.7	37.7				
Having a very low level of OLS *(score between 0 and 4 out of 10)*	7.4	8.3	5.9	5.7	+++	NS	+++	+++

Pearson's Chi-squared tests were used for categorical variables; T-test for Children's OLS.
Source: PISA 2015, French data
Scope: Children aged 15 (n=4804)

3.2 School-related determinants of children's OLS

Table 4 shows the different determinants of children's OLS. More precisely, it demonstrates the crucial role of school context (or climate) in students' life satisfaction. The sense of belonging to school, anxiety levels about school work, bullying by teachers and/or other students, and the degree of parents' involvement in their children's school and everyday activities, are all strongly associated with children's OLS. For all of these indicators, as the level of "positive" variables increases and as the level of "negative" variables decreases, we observe a sharp increase in the proportion of children who declare a high level of life satisfaction. More precisely, children who have a low sense of belonging to school are much less likely to specify a high score of OLS than children with an average score of school belonging. The latter are also much less likely to declare a high level of OLS than students who indicate a high sense of belonging to school (Pearson's Chi-squared, $p<0.001$).

It is interesting to note the strong impact of bullying by both teachers and peers on children's overall life satisfaction. Teenagers who say they are never or rarely bullied by their teachers are more likely to declare a high level of OLS than those who say they have been moderately or frequently bullied at school (44% versus 31% and 34% respectively). Bullying by peers has an even more significant impact on children's perception of their OLS. Boys and girls who have rarely or never been teased, ridiculed or subjected to physical or psychological violence from their schoolmates are about twice as likely to state a high level of overall life satisfaction than those who have frequently undergone such bullying (43% compared to 22% respectively). In addition, the latter category constitutes the group with the smallest proportion of children who report a high OLS level, far behind those who report a high stress level about school work (28%) or a moderate level of bullying by teachers (31%). Only those teenagers with a low sense of belonging to school report a similar proportion of high OLS (26%).

Last, Table 4 looks at parental involvement in children's school and everyday activities and its positive association with children's overall life satisfaction. The more time children's parents spent with them and the more encouragement and support they received from their parents, the higher likelihood that those children were to report a high life satisfaction. About 41% of 15-year-olds who responded that

Table 4. School-related determinants of high OLS level among children (% row)

	Level of Overall Life Satisfaction among children		
	Low & Middle (score between 0 and 8 out of 10)	*High (9 or 10 out of 10)*	*pvalue*
Children's sense of belonging to school			+++
Low	74.1	25.9	
Middle	61.0	39.0	
High	48.3	51.7	
Score of anxiety about school			+++
Low	54.3	45.7	
Middle	65.4	34.6	
High	72.0	28.0	
Level of school bullying by peers			+++
Low	56.8	43.2	
Middle	70.3	29.7	
High	77.8	22.2	
Level of school bullying by teachers			+++
Low	56.3	43.7	
Middle	68.7	31.3	
High	65.5	34.5	
Level of parental involvement in children's everyday activities			+++
Low	74.0	26.0	
Middle	65.5	34.5	
High	51.6	48.4	
Level of parental involvement in children's school activites			+++
Low	68.6	31.4	
Middle	61.6	38.4	
High	58.9	41.1	

Pearson's Chi-squared tests were used in this table.
+ p-value<0.05; ++ p-value<0.01; +++ p-value<0.001; NS not (statistically) significant (p-value>0.10);
Source: PISA 2015, French Data
Scope: Children aged 15 (n=4804)

their parents are very involved in their everyday lives declare a high score of overall OLS. This is only the case for 32% of boys and girls who reported moderate parental involvement, and 27% of those who reported low involvement (Pearson's Chi-squared, $p<0.001$).

This trend is also observable in parental involvement in children's school activities. The more frequently parents discuss the quality of school work and academic results with their children, help them with homework, and encourage them in their efforts at school, the more likely those children are to declare a high level of OLS. While 31% of children whose parents are not very involved in their school activities report that they are very satisfied with their life, the same is true for 38% of children whose parents are moderately involved, and over 41% for those whose parents are very involved (Pearson's Chi-squared, $p<0.001$).

In other words, parental support is positively related to children's' life satisfaction, whether it concerns school or everyday activities. However, the degree of parental involvement does not have an identical impact on children's OLS: involvement in children's everyday lives appears to be more impactful than involvement in school activities. While they are almost equally likely to report a high OLS level when parents are highly involved in their school or daily life (over 40%), children whose parents are the least involved in their everyday activities are the least likely to report a high life satisfaction score (26%). This finding is significantly lower than for those children whose parents are the least involved in school activities (31%).

3.3 School-related determinants of OLS unequally distributed among social class

The school-related factors of children's OLS are not randomly distributed, but rather socially situated. So-called positive factors, i.e., those whose increase in score appears to increase the likelihood that children will indicate a high score of overall life satisfaction (such as sense of belonging to school, degree of parental involvement in school or everyday activities) are more present in children from upper class families (Table 5). These children are in fact more likely than their peers from other socioeconomic backgrounds to declare a high sense of belonging to school, or that their parents are highly involved in their lives. While 28% of children from working-class families feel comfortable at school and are happy to attend, this is the case for around 37% of boys and girls from upper- or middle-class families. Similarly, while 32% of children situated towards the bottom of the socioeconomic scale declare that their parents are highly involved in their everyday lives, around 39% of upper-class children say the same.

In contrast, so-called negative factors, those that tend to reduce the proportion of children who are very satisfied with their lives (e.g., stress levels about school or degree of bullying from peers or teachers) are more represented by working-class children. Thus, while around 5% of upper- or middle-class children say that they have frequently been bullied by their peers, this is the case for almost 9% of working-class children. Students from working classes are therefore respectively 1.8 times as likely to be frequently bothered or mistreated by their peers than children from the middle and upper classes. Similarly, while 26% of upper and middle-class children declare a high score of anxiety about school work, 31% of working-class children do so (Table 5).

In other words, class-based inequalities in children's OLS initially seem to stem from the fact that middle- and upper-class children do not have the same opportunities/the same probability as working-class children to experience factors that positively or negatively contribute to their life satisfaction. The former groups are more likely than the latter to report a strong feeling of belonging and a high level of

parent involvement (factors that foster OLS), while working-class children report higher levels of anxiety and bullying by their peers and teachers (which reduce children's OLS).

Table 5. The key determinants of children's high OLS score according to their socioeconomic background (% row)

	Score of anxiety about school				*Level of school bullying by peers*				*Level of school bullying by teachers*			
Negative factors	Low	Middle	High	pvalue	Low	Middle	High	pvalue	Low	Middle	High	pvalue
Children's social background				++				+++				++
Working-Class	35.7	33.4	30.9		54.3	36.8	8.9		38.5	52.6	8.9	
Middle-Class	40.6	32.9	26.5		54.5	40.7	4.8		38.5	54.9	6.6	
Upper-class	37.6	36.3	26.2		54.0	40.4	5.5		36.1	57.3	6.6	

	Children's sense of belonging to school				*Level of parental involvement in children's everyday activities*				*Level of parental involvement in children's school activites*			
Positive factors	Low	Middle	High	pvalue	Low	Middle	High	pvalue	Low	Middle	High	pvalue
Children's social background				+++				+++				+++
Working-Class	43.4	28.5	28.1		38.5	29.7	31.8		38.6	30.0	31.3	
Middle-Class	34.7	28.6	36.7		31.8	31.5	36.8		31.6	31.3	37.1	
Upper-class	32.2	31.0	36.8		32.1	29.2	38.7		31.8	30.9	37.3	

Pearson's Chi-squared tests

+ p-value<0.05; ++ p-value<0.01; +++ p-value<0.001; NS not (statistically) significant (p-value>0.10);

Source: PISA 2015, French Data

Scope: Children aged 15 (n=4804)

Table 6 reflects the idea that class differences in students' OLS levels can be explained in part by their unequal chance of experiencing both positive and negative school-related factors of life satisfaction. When integrating the different factors associated with OLS into a multilevel binary analysis along with the class variable, we note that the effect of class tends to disappear[3]. Differences between socioeconomic backgrounds are no longer significant. Coming from middle-class or upper-class backgrounds does not make children more likely to indicate a high OLS level than coming from a working-class background: the OR are respectively 1.09 and 1.16 (not statistically significant).

In contrast, so-called negative factors, which relate to different difficulties that children may face at school, remain closely associated to the children's OLS levels. Thus, regardless of socioeconomic background, being highly anxious about school work, or having frequently experienced bullying (by their peers) significantly decreases (almost by half) the likelihood of reporting a high life satisfaction (OR = 0.46 and 0.59 respectively, Wald test, $p<0.001$). Similarly, the impact of factors positively associated with children's life satisfaction remain even after being adjusted to children's socioeconomic background and other determinants. It would seem, in fact, that these have the greatest impact on a high level of life satisfaction for youths. Students with a high sense of belonging to school or who declare a high level of parental involvement in their lives are more than twice as likely to declare a high OLS

[3] We chose to dichotomize the dependent variable and to oppose « High Overall Life Satisfaction Score (9 or 10 out of 10) » to « Low and Middle scores » in order to analyze the effects of school-related determinants on achieving high level of OLS among children, and in order to grasp how these determinants vary across social classes. Interestingly, the results presented here and in the rest of the paper remain similar when the dependent variable is analyzed as a continuous variable or as a three-modality variable. The only difference is that the effect of social class appears slightly stronger (although still not statistically significant) in the full multilevel multinomial logistic regression than in the multilevel binary logistic regression, and this even when we take « Low score » as base and we analyze the results for children who have a high OLS score. Therefore, the results highlighted in the article are robust and consistent.

score than students with a low sense of belonging or whose parents are not very involved in their everyday activities (OR=2.72 and OR=2.36 respectively Wald test, p<0.001).

Table 6. Multilevel binary logistic regression on High Overall Life Satisfaction Score among children

	High score of OLS among children (9 or 10 out of 10)		High score of OLS among children (9 or 10 out of 10)	
Fixed effects	OR [CI95%]	p	OR [CI95%]	p
Children's social background				
Working-class	**Ref.**		Ref	
Middle-class	**1.16 [1.01;1.34]**	+	1.09 [0.94;1.27]	***NS***
Upper-class	**1.25 [1.05;1.49]**	++	1.16 [0.94;1.44]	NS
pvalue of the variable	++		***NS***	
Children's sense of belonging to school				
Low			Ref	
Middle			1.80 [1.55;2.09]	+++
High			2.72 [2.22;3.32]	+++
pvalue of the variable			+++	
Score of anxiety about school				
Low			Ref	
Middle			0.72 [0.61;0.86]	+++
High			0.59 [0.48;0.73]	+++
pvalue of the variable			+++	
Level of school bullying by peers				
Low			Ref	
Middle			0.62 [0.53;0.72]	+++
High			0.46 [0.33;0.65]	+++
pvalue of the variable			+++	
Level of school bullying by teachers				
Low			Ref	
Middle			0.73 [0.64;0.84]	+++
High			0.91 [0.67;1.23]	NS
pvalue of the variable			+++	
Level of parental involvement in children's everyday activities				
Low			Ref	
Middle			1.36 [1.12;1.64]	+++
High			2.36 [1.99;2.79]	+++
pvalue of the variable			+++	
Level of parental involvement in children's school activites				
Low			Ref	
Middle			1.13 [0.97;1.32]	NS
High			1.18 [0.95;1.48]	NS
pvalue of the variable			NS	
Random-effect :	*Coef(SE)*		*Coef(SE)*	
Level-two variance : ***Children's School***	0.60(0.17)		1.45(0.44)	

Wald tests were used.

+ p-value<0.05; ++ p-value<0.01; +++ p-value<0.001; NS not (statistically) significant (p-value>0.10) ***NS*** almost statistically significant (i.e. p>0.05 & p<0.09)

Source: PISA 2015, French Data

Scope: Children aged 15 (n=4804)

For this table, the variance between schools account for 26.7 % of total variance, and the variance at individual level accounts for 9.4 % of total variance.

However, this does not mean that the impact of social class does not continue to play a role in children's OLS, or that children's socioeconomic background is only a confounding effect that disappears when

we take into account students' sense of belonging to school, the difficulties they encounter at school, and their parents' involvement in school and everyday activities.

The reason that the impact of social class decreases considerably in the multilevel binary logistic regression is that the variable is adjusted to factors with which it is closely associated, or that it determines.

Indeed, Table 7 shows that the social class of children's families is strongly associated with most of those variables that are (positively or negatively) associated with life satisfaction, such as having a strong sense of belonging to school, strong parental involvement in school and everyday activities, or declaring a high frequency of bullying by peers or teachers. For example, middle-class children are almost half as likely as working-class children to declare a high level of bullying by their peers (OR=0.57, Wald test, $p<0.001$). In contrast, upper and middle-class students are much more likely than working-class children to indicate a strong sense of belonging to school (OR=1.36 and 1.37 respectively, Wald test, $p<0.001$)[4]. In other words, the effect of the social class variable on children's OLS tends to be less visible due to the school-related factors. This is precisely because all school-related factors are also strongly correlated with social class. One might think that this is a confusion bias, however this is not the case We are then faced with a mediation effect (as defined by Baron and Kenny (1986) since (1) the independent variable (social class) affects the dependent variable (Student's high level of OLS) (Table 6) ; (2) the independent variable (social class) affects the mediator (school-related factors) (Table 7) ; (3) the mediators (school-related factors) strongly affect the dependent variable (Student's high level of OLS) (Table 6) ; and (4) the independent variable's effect on dependent variable is diminished or disappears if mediator is included (Table 6)[5].

[4] We also chose to dichotomize the school-related factors and to contrast "high levels" with "low and middle levels" insofar as it is the "high levels" of these different factors that most increase children's probability of having a high score of OLS. Here again the results remain similar when the school-related variables are analyzed as continuous variables or as three-modality variables. The only difference is that the effect of social class seems to be slightly stronger in the multilevel multinomial logistic regressions than in the multilevel binary logistic regressions, especially when we take « Low score » as base and we analyze the results for children who have a high OLS score. The effects of the other variables included in the models remain the same. Results are not presented and can be requested from the authors.

[5] The mediation analysis (in Annex 1) clearly shows that the effect of social class remains very important (OR=2.10) and that it is mainly due to school-related factors. The main mediators are, in descending order, the level of peer bullying, the level of sense of belonging to school, and the level of parental involvement in children's everyday activities.

Table 7. Multilevel binary logistic regressions on the school-related determinants of Overall Life Satisfaction including social class

	High sense of belonging to school among children		High score of anxiety about school		High level of school bullying by peers		High level of school bullying by teachers		High level of parental involvement in children's ordinary activities	
Fixed effects	OR [CI95%]	p	OR [CI95%]	p	OR [CI95%]	p	OR [CI95%]	p	OR [CI95%]	p
Children's social background										
Working-classes	**Ref**		**Ref**		**Ref**	NS	**Ref**		**Ref**	
Middle-classes	**1.37 [1.16;1.63]**	+++	**0.81 [0.68;0.97]**	+	**0.57 [0.42;0.76]**	+++	**0.89 [0.68;1.27]**	NS	**1.23 [1.07;1.42]**	++
Upper-classes	**1.36 [1.10;1.68]**	+++	**0.79 [0.65;0.96]**	+	**0.73 [0.49;1.06]**	***NS***	**0.87 [0.60;1.18]**	NS	**1.22 [1.03;1.46]**	+
pvalue variable	+++		++		+++		NS		+	
Children's sense of belonging to school										
Low	NI		Ref		Ref		Ref		Ref	
Middle	NI		0.80 [0.66;0.95]	+	0.25 [0.18;0.36]	+++	0.72 [0.55;0.93]	+	1.70 [1.45;1.99]	+++
High	NI		0.69 [0.55;0.88]	++	0.18 [0.10;0.32]	+++	0.53 [0.36;0.77]	++	2.53 [2.09;3.05]	+++
pvalue variable			++		+++		++		+++	
Score of anxiety about school										
Low	Ref		NI		Ref		Ref		Ref	
Middle	0.65 [0.55;0.77]	+++	NI		1.63 [1.05;2.52]	+	0.68 [0.51;0.90]	++	1.22 [1.03;1.43]	+
High	0.62 [0.49;0.77]	+++	NI		3.16 [1.98;5.05]	+++	1.15 [0.83;1.59]	NS	1.56 [1.27;1.91]	+++
pvalue variable	+++				+++		+++		++	
Level of school bullying by peers										
Low	Ref		Ref		NI		Ref		Ref	
Middle	0.66 [0.56;0.77]	+++	1.82 [1.54;2.14]	+++	NI		1.37 [1.05;1.78]	+	0.88 [0.76;1.02]	***NS***
High	0.26 [0.16;0.42]	+++	2.63 [1.89;3.66]	+++	NI		4.43 [3.10;6.31]	+++	0.85 [0.63;1.12]	NS
pvalue variable	+++		+++				+++		***NS***	
Level of school bullying by teachers										
Low	Ref		Ref		Ref		NI		Ref	
Middle	0.78 [0.67;0.91]	+++	1.47 [1.24;1.74]	+++	1.95 [1.38;2.76]	+++	NI		0.73 [0.63;0.84]	+++
High	0.55 [0.38;0.79]	++	1.85 [1.32;2.60]	+++	6.20 [3.67;10.49]	+++	NI		0.65 [0.49;0.86]	++
pvalue variable	+++		+++		+++				+++	
Level of parental involvement in children's everyday activities										
Low	Ref		Ref		Ref		Ref		NI	
Middle	1.06 [0.88;1.29]	NS	1.10 [0.89;1.35]	NS	0.79 [0.56;1.12]	NS	0.79 [0.60;1.05]	NS	NI	
High	1.86 [1.56;2.22]	+++	1.42 [1.16;1.75]	+++	0.80 [0.57;1.12]	NS	0.73 [0.54;0.97]	+	NI	
pvalue variable	+++		++		NS		***NS***			
Level of parental involvement in children's school activites										
Low	Ref		Ref.		Ref		Ref		Ref	
Middle	1.19 [1.01;1.40]	+	1.09 [0.90;1.30]	NS	1.14 [0.86;1.51]	NS	0.93 [0.69;1.26]	NS	3.08 [2.59;3.66]	+++
High	1.08 [0.88;1.32]	NS	1.29 [1.03;1.62]	+	1.08 [0.77;1.52]	NS	0.99 [0.70;1.38]	NS	4.96 [4.06;6.06]	+++
pvalue of the variable	***NS***		***NS***		NS		NS		+++	
Random-effect :	*Coef(SE)*		*Coef(SE)*		*Coef(SE)*		*Coef(SE)*		*Coef(SE)*	
Level-two variance : ***Children's School***	0.15(0.04)		0.04 (0.04)		0.18 (0.11)		0.25(.11)		1.17 (0.36)	

Wald tests were used.

NI means Not included because of collinearity. The dependent and independent variables are almost identical, except that the first ones are dichotomous (High level *versus* Low/Middle levels) when the second ones are in three modalities (Low, Middle, High). The Cramer's V being equal to 1, the correlation between these dependent and independent variables is full. These variables are perfectly associated. It is therefore necessary to remove them from the models.

+ p-value<0.05; ++ p-value<0.01; +++ p-value<0.001; NS not (statistically) significant (p-value>0.10); ***NS*** almost statistically significant (i.e. p>0.05 & p<0.09)

Source: PISA 2015, French data

Scope: High school students aged 15 (n=4804).

3.4 School-related factors with different impacts on children's OLS according to social class

Finally, Table 8 shows that socioeconomic inequalities between children are not limited to an unequal likelihood of being subjected to factors that are positively or negatively related to OLS during childhood. The impact of these factors on OLS differs, or is even the opposite, depending on children's socioeconomic background. In other words, students are not only more or less likely to declare a strong level of parental involvement or a strong sense of belonging to school depending on whether they come from working, middle or upper classes, but some of these variables do not have the same impact on their level of OLS depending on the class background of the child.

Indeed, by stratifying the multilevel binary logistic regressions on class background, we observe the following three interesting and rather surprising results (Table 8):

- First, although the factors most closely associated with declaring a high level of life satisfaction are the same for children regardless of socioeconomic background, these factors do not seem to have the same amount of influence. For instance, the OR "high level of parental involvement in children's everyday activities" ranges from 2.66 for upper-class children to 1.82 in the working classes (Wald test, $p=0.05$)[6].

- Second, the level of teacher bullying experienced by children has a very different effect depending on their socioeconomic background. Whereas the fact of being teased, criticised and insulted by teachers decreases the probability that upper and middle-class children will declare a high level of OLS (OR=0.67 and 0.69 respectively), for working-class children it does not affect the reported life satisfaction level (Wald test, $p=0.04$).

- Last, close parental involvement in school activities (which did not seem to impact students' life satisfaction in the non-stratified multilevel binary logistic regression) does appear to be a determinant of OLS among working-class children (OR=1.58, $p<0.01$, compared to OR=0.89 (NS) for middle-class children, and 0R=1.19 (NS) for upper-class children) (Wald test, $p<0.01$).

[6] In order to compare the effects of school-related factors in each multilevel binary logistic regression, we used generalized structural equation modeling (GSEM) in which we included the multilevel model for each social class. Using Wald tests, we then compared the effects of all school-related factors. Significant results are presented in parentheses in the text.

Table 8. Multilevel binary logistic regressions on High Overall Life Satisfaction Score stratified by social class

	High score of OLS among children (>=9/10 out of 10)					
	Working-Class (n=1822)		*Middle-Class (n=1858)*		*Upper-Class (n=1031)*	
Fixed effects	OR [CI95%]	p	OR [CI95%]	p	OR [CI95%]	p
Children's sense of belonging to school						
Low	Ref		Ref		Ref	
Middle	1.65 [1.33;2.05]	+++	2.05 [1.64;2.56]	+++	1.34 [0.94;1.90]	***NS***
High	2.25 [1.67;3.02]	+++	2.84 [2.20;3.67]	+++	2.53 [1.60;4.00]	+++
pvalue of the variable	+++		+++		+++	
Score of anxiety about school						
Low	Ref		Ref		Ref	
Middle	0.69 [0.50;0.95]	+	0.69 [0.54;0.88]	+++	0.88 [0.58;1.35]	NS
High	0.63 [0.44;0.90]	+	0.49 [0.36;0.67]	+++	0.73 [0.44;1.20]	***NS***
pvalue of the variable	+		+++		NS	
Level of school bullying by peers						
Low	Ref		Ref		Ref	
Middle	0.50 [0.37;0.67]	+++	0.66 [0.54;0.80]	+++	0.81 [0.57;1.14]	+
High	0.35 [0.22;0.56]	+++	0.69 [0.40;1.19]	NS	0.50 [0.21;1.23]	***NS***
pvalue of the variable	+++		+++		NS	
Level of school bullying by teachers						
Low	Ref		Ref		Ref	
Middle	0.81 [0.66;1.02]	***NS***	0.69 [0.57;0.83]	+	0.67 [0.47;0.97]	++
High	1.00 [0.67;1.47]	NS	1.25 [0.83;1.89]	NS	0.55 [0.24;1.24]	***NS***
pvalue of the variable	NS		+++		+	
Level of parental involvement in children's everyday activities						
Low	Ref		Ref		Ref	
Middle	1.21 [0.92;1.60]	NS	1.48 [1.16;1.89]	+	1.77 [1.10;2.84]	+
High	1.82 [1.40;2.38]	+++	2.59 [2.02;3.32]	+++	2.66 [1.75;4.04]	+++
pvalue of the variable	+++		+++		+++	
Level of parental involvement in children's school activites						
Low	Ref		Ref		Ref	
Middle	1.15 [0.87;1.52]	NS	1.08 [0.87;1.34]	NS	1.01 [0.66;1.55]	NS
High	1.58 [1.04;2.41]	+	0.89 [0.65;1.22]	NS	1.19 [0.72;1.96]	NS
pvalue of the variable	+		NS		NS	
Random-effect :	*Coef(SE)*		*Coef(SE)*		*Coef(SE)*	
Level-two variance : ***Children's School***	0.11 (0.06)		5.94 (1.28)		0.01(0.12)	

Wald tests were used.

+ p-value<0.05; ++ p-value<0.01; +++ p-value<0.001; NS not (statistically) significant (p-value>0.10); ***NS*** almost statistically significant (i.e. p>0.05 & p<0.09)

Source: PISA 2015, French data

Scope: Children aged 15 (n=4804)

4. DISCUSSION

Several interesting and well-known results emerge from our research. First, the overall life satisfaction of French teenagers is higher than the averages of the European countries (OECD 2019). However, our analyses emphasize that not all children experience a high level of satisfaction. Upper-class children are more likely to declare that they are very satisfied with their lives than middle-class and working-class children. As numerous scholars have shown (Conger et al. 2010; Curry and Stabile 2003; Li et al. 2009; Pickett and Wilkinson 2007), our research highlights a strong connection between high socioeconomic status and a high OLS level. The better children's material and cultural living conditions, the happier they report being.

Beyond the importance of the socioeconomic background in which children live, our results emphasize that school-related factors play an essential role in children's OLS. First, having a strong sense of belonging to school, i.e. feeling at home at school and making friends easily at school, contributes to increased OLS levels (Li et al. 2009; McGiboney 2016; Wang and Degol 2016). Second, we note that the school social environment – for example, good relationships between students and teachers/peers –

is very important to children's life satisfaction. As previous studies have shown (Huebner 1991; Huebner et al. 2014; Rigby 2003, 2005; Zullig et al. 2011), the quality of relationships with peers and teachers has a significant influence on students' satisfaction with their lives as a whole. The more support they receive, the higher the level of OLS children tend to report. Conversely, the more bullying (such as insults, teasing, and gossip) children experience from their teachers and schoolmates, the lower their life satisfaction. Third, the last school-related factor seems to be a very important element in understanding students' life satisfaction levels and their variations: school pressure. Children are less likely to report a high score of overall life satisfaction as their level of anxiety about school increases. These findings echo those of the OECD report (2017a) and Pascoe et al. (2020), which show that self-reported levels of stress at school are associated with poorer quality of life and well-being as well as being linked to the development of more serious mental health issues such as anxiety and depression (Kessler 1997).

Aside from school-related factors, we underline how parent-child relationships are important to students' life satisfaction. Children for whom both parents are very involved in their school and daily lives reported higher levels of life satisfaction than other children report. Hair, Moore and colleagues found similar results in their study on teenagers aged 12 to 15 (Hair et al. 2005; Moore et al. 2011). They emphasize that the quality of parent-child relationships is central to children's subjective well-being, and more important than all other characteristics of the family environment, such as parental income, family make-up and ethnic group. In addition, a great deal of past research (Dew and Huebner 1994; El Nokali et al 2010; Gilman and Huebner 2003; Knoester 2003) has shown that children with the lowest scores of OLS or subjective well-being came from families in which parent-child relationships were reported as being "not very happy" (by the children or by the parents).

The results also suggest that an accumulation of OLS inequalities takes place during childhood, since the impact of social class *acts on two levels*. The first level is the probability that children will experience those main school-related factors that positively and negatively affect their level of life satisfaction. The second level is the intensity of the effects of school-related factors on students' OLS. A (strong) sense of belonging to school and a (high) frequency of bullying by teachers and peers do not have the same impact on children's OLS depending on whether they come from working-class, middle-class or upper-class backgrounds.

The connections between class and the main school-related determinants of subjective well-being have been frequently explored in the literature on the subject. Several studies (Bornstein and Bradley 2012; Currie and Stabile 2003; Li et al. 2009) point to a strong association between school climate, parent-child relationships (concerning school) and children's social background, or more specifically their parents' financial and cultural resources. As parents' class status increases, so does their involvement in their children' school and daily lives, this in turn leads to children reporting a more positive school situation and thus developing a strong sense of belonging at school. This sense of belonging boosts their school and, later, professional success and therefore life satisfaction. The association between social class and bullying at school has also been identified in previous research (Tippett and Wolke 2014). Children from working classes are subject to bullying by their peers more often than children from other backgrounds. These social inequalities can be explained less by the varying definition of "bullying" according to social class and the possibility of a social bias in self-reports of bullying (Due et al. 2003; 2009)[7] than by the material living conditions of these children. Working-class students are more likely

[7] Studies by these researchers show that the physical symptoms related to bullying by peers are also more present in the working classes than in the middle and upper classes, pointing to a weak role of social bias in evaluating bullying.

to be rejected and teased because of their lifestyle: either because they bear the stigma of their financial situation (for example being judged as filthy or overweight), or because they do not have the latest fashionable games/clothes/accessories (Thornberg 2010). That is to say that bullying is both the reflection of social structure and a means to reaffirm it by delegitimizing working-class children that do not respect the established social rules due to lack of (financial and cultural) means (Adler and Adler 1998). This bullying has consequences since it in turn contributes to social inequalities by increasing the risks of depression and dropping out of school (Cornell et al. 2013).

Next, we found that social inequalities between children are not restricted to an unequal probability of experiencing factors that are positively or negatively related to OLS during childhood. They are also apparent at a second level, in the multilevel binary regressions and the mediation analysis, when students experience these school/family-related factors at the same level or frequency. Their impact on children's life satisfaction differs depending on children's socioeconomic background. For instance, a high level of parental involvement appears to have a greater impact on OLS for children from middle-class and upper-class backgrounds than for those from working-class backgrounds. Conversely, high levels of peer bullying seem to affect working-class children more than middle-class and upper-class children. These differentiated effects can be explained by class differences in terms of the relative importance of peers, parents and teachers in children's socialization and sociability during adolescence (Bourdieu 1994; Chamboredon 2015; Lepoutre 2001). Children from working-class backgrounds are often more independent from adults (and school) and spend more time with their peers during youth. This youth is more likely to be shorter than that of children from other socioeconomic backgrounds, insofar as working-class youth are more likely to drop out of school and enter early into an (working-class) adult life full of difficulties and precariousness. This unequal importance of peers and parents can also be explained by the different parenting styles across social classes. Working class parents are generally less present and less involved in their children's lives because of their more difficult living and working conditions (Hoff et al 2002; Lareau, 2011). This lower level of parental investment is not neutral in its effect on children's OLS, since they are less likely to intervene in cases of school problems and are therefore less able to reduce the negative effect of bullying (López-Castro and Priegue 2019).

The most surprising result of our study is the socially differentiated effect of teacher bullying levels on children's OLS. While a high or a moderate level of bullying tends to reduce life satisfaction among upper-class and middle-class children, it appears to have no effect on OLS for working-class children. While this finding goes against most quantitative surveys on children's well-being – which generally highlight a negative association between children's life satisfaction and poor teacher-student relationships – it echoes the seminal work by Paul Willis, *Learning to Labour* (Willis 1977). In this study, the author shows that working-class children share a counter-school culture that is in opposition to academic goals, ethos and rules at school. Playing up to teachers, avoiding doing school work, and being disruptive in class result in boosting the reputation and status of working-class students among their peers. If this is the case, it would explain why problematic relationships with their teachers do not affect working-class children's subjective well-being. To validate this assumption will require long-term ethnographic work.

Finally, our research has three main limitations. First, it only takes into account one dimension of children's subjective well-being, namely the overall life satisfaction scale. It would have been interesting to assess whether the socially-differentiated effect of school-based factors remains when multidimensional SWB scales are included. Unfortunately, there are no other indicators for children's well-being in the PISA survey. By combining several objective and subjective indicators of children's well-being (at school) (see Gilman and Huebner [2003] for more information), these scales allow for

higher sensitivity to differences in specific areas that may be shrouded by overall self-reports (such as the OLS scale), and help to counter the social desirability bias of the unidimensional indicator. This approach could thus help to more precisely grasp how and where (i.e., in which areas) social inequalities appear and increase (Bornstein and Bradley 2012; Gilman and Huebner 2003). Further research could replicate these analyses in order to confirm, moderate or criticize the socially-differentiated impact of school climate on children's OLS or other indicators of SWB.

The second limitation is the absence of longitudinal data, which would have allowed us to more carefully describe the accumulation of inequalities in terms of children's OLS. First, because they make it possible to point out the influence of social, family and health transitions that take place throughout a lifetime. Second, because they can grasp exactly when class differentiations emerge, in what circumstances, and in what social contexts (Lelièvre et al. 2017). Further research employing a longitudinal database would be very helpful to capture the trajectories of inequality in terms of children's subjective well-being.

The last limitation, which is also an invitation to go further and produce a specific analysis, concerns gender differences in these results. As established in many studies (OECD 2017b), girls report a lower level of life satisfaction than boys, regardless of their age and/or socioeconomic background. We could explore these structural variations further taking into account the perspective adopted in this paper.

5. CONCLUSION

In conclusion, the present findings suggest that school context, including parental involvement in children's academic activities, do not affect students' life satisfaction in the same way according to class. Not only are working-class children more likely than upper-class and middle-class children to experience those school factors that negatively affect their OLS – such as anxiety about school performance, or high levels of peer and teacher bullying– but they are also less likely to experience those factors that positively impact their life satisfaction –such as a strong sense of belonging to school or a high level of parental involvement in their (school) life. The effects of positive and negative school-related factors benefit upper-class and middle-class children more than working-class children. On the one hand, parental investment level and the feeling of school belonging increase children's probability of having a very high level of life satisfaction. On the other hand, anxiety and being bullied decrease of the probability of a child having a high OLS level, though to a lesser extent.

These results, which are only valid for France, warrant being replicated and tested in other countries to understand to what extent the socially differentiated effects of school-related determinants can be generalized. These findings are important for public policy insofar as they can help capture the main determinants of children's OLS according to social contexts, and help decision-makers to better adjust political action to correspond to different social and class situations.

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Annex 1: Mediation analysis on high score of overall life satisfaction (taking into account the random effect on school). The direct and indirect effect of social class.