



## **Data Dictionary Collection Wave 1 (Data collected in February 2016)**

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## Cognitive Measures Wave 1

COGNITIVE MEASURES WAVE 1						
Measure	Category	Variable name in database	N of items	Description of measure	Reference	Waves
Raven's Progressive Matrices	Cognitive test --Non verbal reasoning	aravens	30	This test consists of a series of incomplete patterns ("matrices"); in each case, participants are asked to identify the missing part of the pattern. Participants do this by clicking on one of 8 possible missing parts. The test is divided into 4 sub-tests or sections, labelled C, D, E and F. Sub-tests C, D and E each consist of 6 items, numbered 1, 3, 5, 7, 9 and 11 (even-numbered items from the original version of the test were dropped); sub-test F consists of all 12 original items (numbered 1 to 12). Hence there are 30 items in total. More information and items on the TEDS data dictionary page <a href="http://www.teds.ac.uk/datadictionary/studies/webtests/16yr_raven_test.htm">http://www.teds.ac.uk/datadictionary/studies/webtests/16yr_raven_test.htm</a>	Raven, J.C., Court, J.H., and Raven, J. (1996), Manual for Raven's Progressive Matrices and Vocabulary Scales, Oxford: Oxford University Press.	WAVE 1

Corsi Block	Cognitive test -- Spatial working memory	acorsi	12	<p>Programmed and adapted for online administration from the pen and paper version described in Pagulayan et al. (2006). An image, depicting a black rectangle with nine small cubes-blocks arranged inside is shown on the screen. The cubes light up, turning yellow for 1 second in a patterned sequence, with a 1-second interval between each cube. Participants have to reproduce the sequence by clicking on the cubes with the mouse. Six difficulty levels are administered, with two sequences within each level. The test starts with four cubes lighting up in sequence and increases in difficulty, terminating with two nine items in sequence. Immediately after the last item of the sequence is presented, participants are invited to start reproducing the sequence; and they do so by clicking on the blocks using the mouse or track pad. As participants click on each block, it turns yellow and remains yellow until the next block is clicked on. Responses are irreversible. After receiving instructions, participants go through two practice trials (each consisting of a sequence of three cubes lighting up consecutively) before the start the test. The test is terminated when both sequences in the same level are reproduced incorrectly. One point is assigned for each sequence correctly reproduced, with maximum score of 12. There is no time limit for response. The test records accuracy and reaction time for each trial.</p>	<p>Paper version: Pagulayan, K. F., Busch, R. M., Medina, K. L., Bartok, J. A., &amp; Krikorian, R. (2006). Developmental normative data for the Corsi Block-Tapping Task. <i>Journal of Clinical and Experimental Neuropsychology</i>, 28, 1043–1052.</p>	WAVE 1
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Italian Vocabulary Test (IVT)	Cognitive test -- Vocabulary	avocab	80	<p>The Italian Vocabulary test was developed by the MILES team as to our knowledge no self-administered vocabulary test in Italian was available to use or had ever been developed (most existing tests need to be administered by an experienced tester). The first version of the vocabulary test was administered during the first collection wave and included 80 items. Participants are presented with a word in the Italian language, and are then asked to select a synonym of that word out of six options. Items were selected on the basis of their frequency in the written Italian language, using ColFIS (<a href="http://linguistica.sns.it/esploracolfis/home.htm">http://linguistica.sns.it/esploracolfis/home.htm</a>), a freely available tool developed by the Italian Laboratory of linguistics Giovanni Nencioni (<a href="http://linguistica.sns.it/">http://linguistica.sns.it/</a>). Items were arranged progressively in order of frequency. The test started with items that had high frequency (commonly occurring in written Italian in the media and books), for example "Debole" and progressed to increasingly less frequent words, ending with low frequency words such as "Imbolsire" and "Pertugio". After the first collection wave the data from 1,100 participants were analysed and a reduced version of the Italian Vocabulary Test, including 35 items was created (see test description at wave 2).</p>	<p>Margherita Malanchini, Maddalena Malanchini, Nicholas Shakeshaft, Kerry Schofiled, &amp; Yulia Kovas (in preparation). The Italian Vocabulary Test: a self-administered test of verbal ability.</p>	WAVE 1 (+ WAVE 2 reduced version)
Self reported grades	Academic achievemnt	<p>asrgrades_ _qmaths (maths); asrgrades_ _qita (literacy); asrgrades_ _qforeignla ng (second language)</p>	3	<p>Participants are asked to report the grades that they obtained at the end of the first term (in Italy school is divided into two terms of 4 months each), the first term ended in January, not long before the WAVE 1 data collection. Participants are asked to report their grades in three subjects: mathematics; literacy and foreign language. If they studied ore than one foreign language, they were asked to report their grade in their first foreign language. Scores ranged from 4 (indicating a grade equivalent to 4 or less than 4) to 10 (indicating the highest possible grade).</p>	Not applicable	EVERY WAVE

Self-report of years of school failed	Academic achievement	asrgrades_ _qfailyear	1	Participants are asked to report whether they have ever failed and had to retake a school year. The answer is either YES (coded in the database as "y") or NO (coded as "n")	Not applicable	EVERY WAVE
Teacher-reported grades	Academic achievement	To be finalised	3	Grades in all subjects (not only maths, Italian and foreign language) provided by the teachers.	Not applicable	EVERY WAVE

## Self-report measures Wave 1

SELF-REPORT MEASURES WAVE 1						
Measure	Category	Variable name	N of items	Description of measure	Reference	Waves
<b>Academic self-concept and self-esteem scale</b>	non-cognitive	aselfcon	11	The measure assessed (1) academic self-concept (10 item scale, shortened from the 20-item scale developed by Burden (1998); and (2) Self-esteem with 1 item: 'I have high self-esteem'. Items are rated on a 5 point scale from 1 = not like me at all to 5 = very much like me. The 10 items assessing academic self-concept are: (1) I'm good at doing tests; (2) When I'm given new work to do, I usually feel confident I can do it; (3) I'm good at discussing things; (4) I need lots of help with my work; (5) I like having difficult work to do; (6) When I get stuck with my work I can usually work out what to do next (7) I'm not very good at solving problems; (8) I know the meaning of lots of words; (9) I find a lot of schoolwork difficult; (10) I'm clever. Item 11 assesses self-esteem: (11) 'I have high self-esteem'.	Adapted from: Burden (1998). Assessing children's perceptions of themselves as learners and problem solvers. School Psychology International, 19(4), 291-305.	WAVE1 and WAVE 2

<b>Attitude towards subject (mathematics/ literacy and L2)</b>	non-cognitive/ motivational	a subj	3	Participants are asked to rate on a scale from 1 = not at all to 4 = very much, how important do they think it is to do well in different school subjects. MILES asks this question about 3 specific subjects: Mathematics (item 1); Literacy (item 2) and foreign language (item3).	PISA (OECD Programme for International Student Assessment): <a href="http://www.pisa.oecd.org">www.pisa.oecd.org</a> .	WAVE1 and WAVE 2
<b>Intrinsic and extrinsic motivation scale</b>	Non-cognitive motivational	aintextmot	8 (+ 1 quality control item = item 6)	The scale was taken directly from the INVALSI student questionnaire ( <a href="http://www.invalsi.it">www.invalsi.it</a> ), which is part of the OECD PISA assessment. The measure includes 8 items (4 assessing intrinsic and 4 assessing extrinsic motivation). The scale asks participants to rate on a scale from 1 = not at all to 4 = a lot, how much they agree with the following statements about them in school: (1) One of my objectives in school is to learn new things; (2) It is important to me to show others that I am a good student; (3) My objective in school is to learn as much as I can; (4) It is important to me to show others that I can do well in oral assessments; (5) One of my objectives in school is to understand what I am studying; (7) It is important to me to show others that I can do well in written assessments; (8) One of my objectives in school is to improve my abilities and competences; (9) It is important to me to appear smarter than my classmates. <b>(ITEM 6 IS A QUALITY CONTROL ITEM)</b> . From PCA two clear factors emerged. Factor 1 (EXTRINSIC MOTIVATION) explained 36% of the variance and included items: 2,4,7,9. Factor 2 (INTRINSIC motivation) explained 30.2% of the variance and included items 1,3,5,and 8.	Invalsi student questionnaire ( <a href="http://www.invalsi.it">www.invalsi.it</a> )	WAVE 1 and 2

<b>time spent on mathematics</b>	non-cognitive/ environmental	<a href="#">atime maths</a>	3	<p>Participants are asked to rate how much time they have normally spent on a subject every week during the past academic year. The question asks: '<i>How much time did you typically spend per week studying mathematics?</i>' and specifies: '<i>An hour here refers to 60 minutes, not a class period.</i>'</p> <p>Scale from 1 to 5: 1 = No time; 2 = Less than two hours; 3 = two to four hours; 4 = four to six hours; 5 = six or more hours. Participants are asked to rate the time spent in the following three mathematics-related learning situation:</p> <ol style="list-style-type: none"> <li>1. Regular lessons in mathematics at my school</li> <li>2. Out-of school-time lessons in mathematics</li> <li>3. Study or homework in mathematics by myself</li> </ol>	PISA (OECD Programme for International Student Assessment): <a href="http://www.pisa.oecd.org">www.pisa.oecd.org</a> .	WAVE 1 and 2
<b>Abbreviated Math Anxiety Scale (AMAS)</b>	Non-cognitive/emotion regulation	<a href="#">aamas</a>	9	<p>The AMAS assesses mathematics anxiety asking students to rate on a scale from 1 to 5, where 1 = not at all and 5 = very much, how anxious/nervous they feel in several maths-related contexts and activities. The 9 items are:</p> <ol style="list-style-type: none"> <li>1. Having to use the tables in the back of a maths book.</li> <li>2. Thinking about an upcoming maths test 1 day before.</li> <li>3. Watching a teacher work an algebraic equation on the blackboard.</li> <li>4. Taking an examination in a maths course.</li> <li>5. Being given a homework assignment of many difficult problems that is due the next class meeting.</li> <li>6. Listening to a lecture in maths class.</li> <li>7. Listening to another student explain a maths formula.</li> <li>8. Being given a "pop" quiz in maths class.</li> <li>9. Starting a new chapter in a maths book.</li> </ol>	Hopko, D. R., Mahadevan, R., Bare, R. L. & Hunt, M. K. (2003). The abbreviated math anxiety scale (AMAS): Construction, validity, and reliability. <i>Assessment</i> , 10, 2, 178–182. doi: 10.1177/1073191103010002008	WAVE1 and WAVE 2

<b>Academic self-perceived ability (mathematics/ literacy/ L2)</b>	non-cognitive/ motivational	amspa (maths)  /alitspa (literacy)  /al2spa (L2)	9 (3 for each subject)	This measure of self-perceived ability assesses how good students think they are at specific abilities in 3 academic subjects: Mathematics, Literacy (Italian) and Foreign language (L2) . Self-perceived ability (also known as self-efficacy) in each domain is assessed by asking each student: "How good do you think you are at" three subject-specific abilities. For mathematics the three abilities are: (1) Solving number and money problems; (2) Doing maths in your head; and (3) Multiplying and dividing. For literacy and L2 the three items are: (1) Reading; (2) Writing and (3) Grammar. Items are rated on a scale from 1 to 5, where 1 = not good at all and 5 = very good.	Spinath, B., Spinath, F. M., Harlaar, N., & Plomin, R. (2006). Predicting school achievement from general cognitive ability, self-perceived ability, and intrinsic value. <i>Intelligence</i> , 34(4), 363–374.	WAVE 1 and WAVE 2
<b>Academic interest (mathematics/ literacy/ L2)</b>	non-cognitive/ motivational	aminter (maths)/  aitinter (literacy) /  al2inter (L2)	9 (3 for each subject)	The interest/enjoyment measure assesses how much students enjoyed specific abilities in 3 academic domains: Maths, Literacy (Italian) and L2. Interest/enjoyment is assessed by asking the student: " How much do you enjoy the following activities?" The items are the same as the ones included in the self-perceived ability measure. For mathematics: (1) solving number and money problems; (2) doing maths in your head; and (3) multiplying and dividing . For literacy and L2 the three items are: (1) Reading; (2) Writing and (3) Grammar. Items are rated on a scale from 1 to 5, where 1 = not like it at all and 5 = like it very much.	Spinath, B., Spinath, F. M., Harlaar, N., & Plomin, R. (2006). Predicting school achievement from general cognitive ability, self-perceived ability, and intrinsic value. <i>Intelligence</i> , 34(4), 363–374.	WAVE1 and WAVE 2

<b>Mathematics classroom environment</b>	non-cognitive/environmental	<a href="#">amathse</a>	8 (+ 1 quality control item = item 5)	The measure has been adapted from the one collected at age 16 in TEDS and in the TCE project. Only the 4 highest loading items were kept for 2 factors: A) teacher-student relationship and B) competition/cooperation with classmates. The questionnaire asks students to think about their mathematics classroom during the past year, and rate on a scale from 1 to 4 how much the following statements are true: Factor A: (1) The teacher tries to make work interesting in this class; (2) The teacher shows an interest in every student's learning; (3) The teacher gives students an opportunity to express opinions; and (4) The teacher does a lot to help students. Factor B: (6) We help each other with our work; (7) Some pupils try to be the first ones to answer question the teacher asks; (8) Some pupils try to be the first ones to finish the class exercises; and (9) When we get reports we tell each other what grades we got. Items are rated on a 4-point scale (1 = never; 2 = some lessons; 3 = most lessons; 4 = every lesson). Item 5 = quality control item	Adapted from: Midgley, Eccles and Feldlaufer (1991). Classroom environment and the transition to junior high school. In Fraser and Walberg (eds) Educational environments: Evaluation, Antecedents and Consequences. Oxford: Pergamon Press.	WAVE1 and WAVE 2
<b>One-item Maths anxiety measure</b>	Non-cognitive/emotion regulation	<a href="#">amanx1it</a>	1	The item asks participants to rate on a scale from 1 to 10 how anxious they feel. The exact wording is: 'On a scale from 1 (not anxious) to 10 (very anxious), how anxious are you about mathematics?'	Núñez-Peña et al. (2013). The Single-Item Math Anxiety Scale: An Alternative Way of Measuring Mathematical Anxiety. <i>Journal of Psychoeducatio</i>	WAVE1 and WAVE 2

					<i>nal Assessment, 20, 1-12.</i>	
<b>Time spent on literacy (Italian)</b>	non-cognitive/ environmental	<a href="#">atimeita</a>	3	<p>Participants are asked to rate how much time they have normally spent on a subject every week during the past academic year. The question asks: <i>'How much time did you typically spend per week studying Italian?'</i> and specifies: <i>'An hour here refers to 60 minutes, not a class period.'</i> Scale from 1 to 5: 1 = No time; 2 = Less than two hours; 3 = two to four hours; 4 = four to six hours; 5 = six or more hours. Participants are asked to rate the time spent in the following three literacy-related learning situation:</p> <ol style="list-style-type: none"> <li>1. Regular lessons in Italian at my school</li> <li>2. Out-of school-time lessons in Italian</li> <li>3. Study or homework in Italian by myself</li> </ol>	PISA (OECD Programme for International Student Assessment): <a href="http://www.pisa.oecd.org">www.pisa.oecd.org</a> .	WAVE 1 and 2
<b>Literacy anxiety</b>	Non-cognitive/emotion regulation	<a href="#">aitaanx</a>	6	<p>Participants are asked to rate on a scale from 1 to 5, how anxious and nervous do they feel in the following situations related to their Italian classroom: (1) The teacher is about to assess you in Italian; (2) You need to read out loud in Italian; (3) You are being assessed with a literacy composition/essay; (4) You start a new chapter in an Italian text book; (5) You have a written assessment/composition the following day; (6) You have a surprise literacy test during your Italian lesson.</p>	Developed by MILES team	WAVE 1 and 2

<b>Literacy classroom environment</b>	non-cognitive/ environmental	<a href="#">aitaenv</a>	8	<p>The measure has been adapted from the one collected at age 16 in TEDS and in the TCE project. Only the 4 highest loading items were kept for 2 factors: A) teacher-student relationship and B) competition/cooperation with classmates. The questionnaire asks students to think about their literacy (Italian) classroom during the past year, and rate on a scale from 1 to 4 how much the following statements are true: Factor A: (1) The teacher tries to make work interesting in this class; (2) The teacher shows an interest in every student's learning; (3) The teacher gives students an opportunity to express opinions; and (4) The teacher does a lot to help students. Factor B: (1) We help each other with our work; (2) Some pupils try to be the first ones to answer question the teacher asks; (3) Some pupils try to be the first ones to finish the class exercises; and (4) When we get reports we tell each others what grades we got. Items are rated on a 4-point scale (1 = never; 2 = some lessons; 3 = most lessons; 4 = every lesson).</p>	Adapted from: Midgley, Eccles and Feldlaufer (1991). Classroom environment and the transition to junior high school. In Fraser and Walberg (eds) Educational environments: Evaluation, Antecedents and Consequences. Oxford: Pergamon Press.	WAVE1 and WAVE 2
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<b>Time spent on Foreign Language (L2)</b>	non-cognitive/ environmental	<a href="#">atime12</a>	3	Participants are asked to rate how much time they have normally spent on a subject every week during the past academic year. The question asks: <i>'How much time did you typically spend per week studying foreign language?'</i> and specifies: <i>'An hour here refers to 60 minutes, not a class period.'</i> Students were instructed that if they studied more than one foreign language, they should have answered focusing on their first foreign language (information about which languages students were studying was also collected). The scale ranged from 1 to 5: 1 = No time; 2 = Less than two hours; 3 = two to four hours; 4 = four to six hours; 5 = six or more hours. Participants are asked to rate the time spent in the three following second language-related learning situations: <ol style="list-style-type: none"> <li>1. Regular lessons in foreign language at my school</li> <li>2. Out-of school-time lessons in foreign language</li> <li>3. Study or homework in foreign language by myself</li> </ol>	PISA (OECD Programme for International Student Assessment): <a href="http://www.pisa.oecd.org">www.pisa.oecd.org</a> .	WAVE 1 and 2
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<b>Foreign Language (L2) anxiety</b>	Emotion regulation	<a href="#">al2anx</a>	7	<p>The L2 anxiety scale includes 7 items. The scale is part of a longer measure assessing L2 motivation. Anxiety has emerged as a clear separate factor from L2 motivation in the Csizér &amp; Kormos (2009) L2 questionnaire. This measure of L2 anxiety has good internal validity (<math>\alpha = .84</math>) and test-retest correlation (<math>r = .72</math>). The measure requires participants to rate on a 5-point scale (1 = not true at all to 5 = absolutely true). If participants are studying more than one foreign language, they are asked to think about their first foreign language when answering the questions. The 7 items are: (1). Even if I'm well prepared for the class, I feel anxious about it; (2). I would feel uneasy speaking the foreign language I study with/to a person who spoke that language; (3). I feel embarrassed to volunteer answers during my foreign language class; (4). I can get so nervous during my foreign language class that I forget the things I know; (5). I feel more tense and nervous in my foreign language class than in my other classes; (6). I get nervous when I'm speaking in my foreign language class; (7). I'm afraid that other students will laugh at me when I speak in my foreign language.</p>	Csizér, K., & Kormos, J. (2009). Modelling the role of intercultural contact in the motivation of learning English as a foreign language. <i>Applied Linguistics</i> , 30, 166-185.	WAVE1 and WAVE2
<b>Foreign language classroom environment</b>	non-cognitive/ environmental	<a href="#">al2env</a>	8 + 1 quality control item = item 6	<p>The measure has been adapted from the one collected at age 16 in TEDS and in the TCE project. Only the 4 highest loading items were kept for 2 factors: A) teacher-student relationship and B) competition/cooperation with classmates. The questionnaire asks students to think about their literacy (Italian) classroom during the past year, and rate on a scale from 1 to 4 how much the following statements are true: Factor A: (1) The teacher tries to make work interesting in this class; (2) The teacher shows an interest in every student's learning; (3) The teacher gives students an opportunity to express opinions; and (4) The teacher does a lot to help students. Factor B: (5) We help each other with our work; (7) Some pupils try to be the first ones to answer the question the teacher asks; (8) Some pupils try to be the first ones to finish the class exercises; and (9) When we get reports we tell each other what grades we got. Items are rated on a 4-point scale (1 = never; 2 = some lessons; 3 = most lessons; 4 = every lesson). <b>Item 6 = quality control</b></p>	Adapted from: Midgley, Eccles and Feldlaufer (1991). Classroom environment and the transition to junior high school. In Fraser and Walberg (eds) Educational environments: Evaluation,	WAVE1 and WAVE2

				item		Antecedents and Consequences. Oxford: Pergamon Press.	
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<b>SDQ - Strengths and Difficulties Questionnaire</b>	Behaviour and behavioural problems	<a href="#">asdq</a>	24 (+1 quality control item = item 18)	<p>The questionnaire asks participants to rate statements on a 3 point scale (1 = not true; 2 = quite true; 3 = very true). The SDQ questionnaire includes 5 subscales: <b>Anxiety (A)</b> scale (4 items) / <b>Peer problems (PP)</b> scale (5 items) / <b>Hyperactivity (H)</b> scale (5 items) / <b>Conduct (C)</b> scale (5 items) / <b>Pro-social (PS)</b> scale (5 items). The items are (Item 18 =Quality Control Item):</p> <ol style="list-style-type: none"> <li>1. I try to be nice to other people. I care about their feelings (PS)</li> <li>2. I am restless; I cannot stay still for long. (H)</li> <li>3. I get a lot of headaches, stomachaches or sickness.</li> <li>4. I usually share with others (food, games, pens etc.). (PS)</li> <li>5. I get very angry and often lose my temper. (C)</li> <li>6. I am usually on my own. I generally play alone or keep to myself. (PP)</li> <li>7. I usually do as I am told (C) <b>R</b></li> <li>8. I worry a lot (A)</li> <li>9. I am helpful if someone is hurt, upset or feeling ill (PS)</li> <li>10. I am constantly fidgeting or squirming (H)</li> <li>11. I have one good friend or more (PP) <b>R</b></li> <li>12. I fight a lot. I can make other people do what I want (C)</li> <li>13. Other people my age generally like me (PP) <b>R</b></li> <li>14. I am easily distracted, I find it difficult to concentrate (H)</li> <li>15. I am nervous in new situations. I easily lose confidence (A)</li> <li>16. I am kind to younger children (PS)</li> <li>17. I am often accused of lying or cheating (C)</li> <li>19. Other children or young people pick on me or bully me (PP)</li> <li>20. I often volunteer to help others (parents, teachers, children) (PS)</li> <li>21. I think before I do things (H) <b>R</b></li> <li>22. I take things that are not mine from home, school or elsewhere (C)</li> <li>23. I get on better with adults than with people my own age (PP)</li> <li>24. I have many fears; I am easily scared (A)</li> <li>25. I finish the work I'm doing. My attention is good (H) <b>R</b></li> </ol>	Goodman, R. (1997) The Strengths and Difficulties Questionnaire: A Research Note. Journal of Child Psychology and Psychiatry, 38, 581 -586	WAVE1
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<b>Narcissism (Narcissism subscale of the dark triad)</b>	Personalit y	<a href="#">anarci s</a>	9	<p>Participants are asked to rate how much they agreed or disagreed with 9 statements on a scale from 1 = strongly disagree to 5 = strongly agree. The items are the following:</p> <ol style="list-style-type: none"> <li>1. People see me as a natural leader.</li> <li>2. I hate being the centre of attention. <b>(R)</b></li> <li>3. Many group activities tend to be dull without me.</li> <li>4. I know that I am special because everyone keeps telling me so.</li> <li>5. I like to get acquainted with important people.</li> <li>6. I feel embarrassed if someone compliments me. <b>(R)</b></li> <li>7. I have been compared to famous people.</li> <li>8. I am an average person. <b>(R)</b></li> <li>9. I insist on getting the respect I deserve.</li> </ol>	Paulhus, D. L. (2013) . Dark Triad of Personality (D3-Short). Measurement Instrument Database for the Social Science. Retrieved from <a href="http://www.midss.ie">www.midss.ie</a>	WAVE1 and WAVE 2
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<p><b>The Adolescent Sleep Hygiene Scale</b></p>	<p>Sleep Hygiene</p>	<p>asleephyg</p>	<p>15</p>	<p>The Adolescent Sleep Hygiene Scale originally included 28-item assessing sleep-facilitating and sleep-inhibiting practices in adolescents. Students report how often sleep-related behaviors have occurred during the past months along a 6-point scale (“always,” “quite often,” “sometimes,” “once in a while,” and “never”). All scores range from 1 to 6, and higher scores are indicative of better sleep hygiene. MILES uses a reduced version of the sleep hygiene scale including the following 15 items (this reduced version emerged from the pilot study):</p> <ol style="list-style-type: none"> <li>1. After 6:00 pm, I have drinks with caffeine (for example: cola, pop, root beer, iced tea, coffee).</li> <li>2. During the 1 hour before bedtime, I am very active (for example: playing outside, running, wrestling).</li> <li>3. During the 1 hour before bedtime, I drink more than 4 glasses of water (or some other liquid).</li> <li>4. I go to bed and do things in my bed that keep me awake (for example: watching television, reading).</li> <li>5. I go to bed and think about things I need to do.</li> <li>6. I go to bed and replay the day’s events over and over in my mind.</li> <li>7. I use my bed for things other than sleep (for example: talking on the telephone, watching television, playing video games, doing homework).</li> <li>8. During the 1hour before bedtime, things happen that make me feel strong emotions (sadness, anger, excitement).</li> <li>9. I go to bed feeling upset.</li> <li>10. I go to bed and worry about things happening at home or at school.</li> <li>11. I fall asleep while watching television.</li> <li>12. I fall asleep in a room that feels too hot or too cold.</li> <li>13. I use a bedtime routine (for example, bathing, brushing teeth, reading).</li> <li>14. During the school week, I stay up more than1 hour past my usual bedtime.</li> <li>15. On weekends, I stay up more than 1 hour past my usual bedtime.</li> </ol>	<p>LeBourgeois, M. K., Giannotti, F., Cortesi, F., Wolfson, A. R., &amp; Harsh, J. (2005). The relationship between reported sleep quality and sleep hygiene in Italian and American adolescents. <i>Pediatrics</i>, 115 (Supplement 1), 257-265.</p>	<p>WAVE1</p>
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<b>The SMFQ (Short Mood and Feelings Questionnaire)</b>	behaviour al problems/ depressio n	<a href="#">amfq</a>	13	<p>Students are asked to rate on a 3-point scale (1 = not true; 2 = sometimes; 3 = true) how true the following 13 statements are about how they have been acting or feeling in the past two weeks:</p> <ol style="list-style-type: none"> <li>1. I felt miserable or unhappy.</li> <li>2. I didn't enjoy anything at all.</li> <li>3. I felt so tired I just sat around and did nothing.</li> <li>4. I was very restless.</li> <li>5. I felt I was no good anymore.</li> <li>6. I cried a lot.</li> <li>7. I found it hard to think properly or concentrate.</li> <li>8. I hated myself.</li> <li>9. I was a bad person.</li> <li>10. I felt lonely.</li> <li>11. I thought nobody really loved me.</li> <li>12. I thought I could never be as good as other kids.</li> <li>13. I did everything wrong.</li> </ol>	Angold, A., Costello, E. J., Messer, S. C., Pickles, A., Winder, F., & Silver, D. (1995) The development of a short questionnaire for use in epidemiological studies of depression in children and adolescents. <i>International Journal of Methods in Psychiatric Research</i> , 5, 237 - 249.	WAVE1
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<p><b>Life satisfaction</b></p>	<p>Environment and wellbeing</p>	<p>alifes at</p>	<p>21 (+1 quality control item = item 16)</p>	<p>The measure asks participants to rate on a scale from 1 to 7 (1 = strongly disagree to 7 = strongly agree) 22 statements related to how they see their lives. The scale includes 5 subscales (but can also be used as a mean composite score indicating general life satisfaction): (a) Family satisfaction mean (items 5, 12, 13, 14); (b) Friends satisfaction mean (items 2, 7, 10, 17, 20); (c) School satisfaction mean (items 4, 6, 15, 18); (d) Living environment satisfaction mean (items 9, 19, 21, 22); (e) self-satisfaction mean (items 1, 3, 8, 11). The items included in the scale are:</p> <ol style="list-style-type: none"> <li>1. I am fun to be around.</li> <li>2. I have a bad time with my friends.</li> <li>3. There are lots of things I can do well.</li> <li>4. I learn a lot at school.</li> <li>5. My family is better than most.</li> <li>6. There are many things about school I don't like.</li> <li>7. My friends will help me if I need it.</li> <li>8. I like myself.</li> <li>9. There are lots of fun things to do where I live.</li> <li>10. My friends treat me well.</li> <li>11. Most people like me.</li> <li>12. I enjoy being at home with my family.</li> <li>13. My family gets along well together.</li> <li>14. My parents treat me fairly.</li> <li>15. I like being in school.</li> <li>16. Quality control item</li> <li>17. I wish I had different friends.</li> <li>18. I enjoy school activities.</li> <li>19. I wish I lived in a different house.</li> <li>20. I have enough friends.</li> <li>21. I wish there were different people in my neighbourhood/area.</li> <li>22. I like where I live.</li> </ol>	<p>Huebner (1994). Preliminary development and validation of a multidimensional life satisfaction scale for children. Psychological Assessment, 6, 149-158.</p>	<p>WAVE1</p>
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<b>General Anxiety Disorder (GAD-7) Scale</b>	Emotion regulation	agad	7 (+ 1 quality control item = item 7)	The scale asks participants to rate on a scale from 1 to 4 (1 = not at all, 2 = several days; 3 = more than half the days; 4 = nearly every day), how often during the past two weeks they have been bothered by a number of problems. Items are: (1): feeling nervous anxious or on edge; (2) cannot stop or control worrying; (3) worrying too much about different things; (4) trouble relaxing; (5) being so restless it is hard to sit still; (6) becoming easily annoyed or irritable; (7) Quality control item; (8) feeling afraid as something awful might happen.	Löwe, B., Decker, O., Müller, M.S., Brähler, E., Schellberg, D., Herzog, W. and Herzberg, P.Y. (2008). Validation and Standardization of the Generalized Anxiety Disorder Screener (GAD-7) in the General Population. <i>Med Care</i> , 46(3), 266 - 274.	WAVE1 and WAVE 2
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<b>Mental Toughness Questionnaire</b>	non-cognitive	<a href="#">amtq</a>	18	<p>The version of the mental toughness questionnaire used in MILES is a reduced version including 18 items. Participants are asked to rate on a scale from 1 = strongly disagree to 5 = strongly agree. The items are the following:</p> <ol style="list-style-type: none"> <li>1) Even when under considerable pressure I usually remain calm</li> <li>2) I tend to worry about things well before they actually happen <b>(R)</b></li> <li>3) I usually find it hard to summon enthusiasm for the tasks I have to do <b>(R)</b></li> <li>4) I generally cope well with any problems that occur</li> <li>5) I generally feel that I am a worthwhile person</li> <li>6) "I just don't know where to begin" is a feeling I usually have when presented with several things to do at once <b>(R)</b></li> <li>7) I usually speak my mind when I have something to say</li> <li>8) When I make mistakes I usually let it worry me for days after <b>(R)</b></li> <li>9) In discussions, I tend to back-down even when I feel strongly about something <b>(R)</b></li> <li>10) I generally feel in control</li> <li>11) I often wish my life was more predictable <b>(R)</b></li> <li>12) When I am feeling tired I find it difficult to get going <b>(R)</b></li> <li>13) I am generally able to react quickly when something unexpected happens</li> <li>14) However bad things are, I usually feel they will work out positively in the end</li> <li>15) I generally look on the bright side of life</li> <li>16) I generally find it hard to relax <b>(R)</b></li> <li>17) I usually find it difficult to make a mental effort when I am tired <b>(R)</b></li> <li>18) If I feel somebody is wrong, I am not afraid to argue with them.</li> </ol>	Levy, A. R., Polman, R. C., Clough, P. J., Marchant, D. C., & Earle, K. (2006). Mental toughness as a determinant of beliefs, pain, and adherence in sport injury rehabilitation. <i>Journal of Sports Rehabilitation</i> , 15, 246-254.	WAVE1 and WAVE 2
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<b>Extra-curricular activities</b>	self-report	<a href="#">aextra</a>	6	<p>The measure includes 6 items asking students about their extra-curricular activities. The measure includes the following items: <b>(A)</b>"During this academic year, have you taken part in any of the following extra curricular activity organised by your school?" the option for item A are rated on the following 5 point scale: 0 = No; 1 = less than one hour; 2 = 1 to 2 hours; 3 = 2-3 hours; 4 = 3-4 hours; 5 = more than 5 hours. The activities that participants are asked to rate are the following:</p> <ol style="list-style-type: none"> <li>(1) Sport (e.g. football, basketball, swimming, yoga, tennis) [<a href="#">aextra_s1</a>]</li> <li>(2) Music (e.g. band, orchestra, school choir) [<a href="#">aextra_s2</a>]</li> <li>(3) Art and entertainment (e.g. dance, theatre) [<a href="#">aextra_s3</a>]</li> <li>(4) School magazine, school newspaper [<a href="#">aextra_s4</a>]</li> <li>(5) Academic club (e.g. debate, foreign language or IT club) [<a href="#">aextra_s5</a>]</li> <li>(6) Hobby Club (e.g. creative writing, chess) [<a href="#">aextra_s6</a>]</li> <li>(7) Volunteering or tutoring other students [<a href="#">aextra_s7</a>]</li> <li>(8) Other [<a href="#">aextra_s8</a>]</li> </ol> <p><b>(B)</b> "During this academic year, have you taken part in any of the following extra curricular activity NOT organised by your school?" the option for item B are rated on the following 5 point scale: 0 = No; 1 = less than one hour; 2 = 1 to 2 hours; 3 = 2-3 hours; 4 = 3-4 hours; 5 = more than 5 hours. The activities that participants are asked to rate are the following:</p> <ol style="list-style-type: none"> <li>(1) Sport (e.g. football, basketball, swimming, yoga, tennis) [<a href="#">aextra_ns1</a>]</li> <li>(2) Music (e.g. band, orchestra, choir) [<a href="#">aextra_ns2</a>]</li> <li>(3) Art and entertainment (e.g. dance, theatre) [<a href="#">aextra_ns3</a>]</li> <li>(4) Magazine, newspaper [<a href="#">aextra_ns4</a>]</li> <li>(5) Academic club (e.g. debate, foreign language or IT club) [<a href="#">aextra_ns5</a>]</li> <li>(6) Hobby Club (e.g. creative writing, chess) [<a href="#">aextra_ns6</a>]</li> <li>(7) Volunteering or tutoring other students [<a href="#">aextra_ns7</a>]</li> <li>(8) Other [<a href="#">aextra_ns8</a>]</li> </ol> <p><b>(C)</b> "During this academic year, have you stopped attending any extra-curricular activity organised by the school? This is a Y = yes or N = no answer (<a href="#">aextra_aas</a>)</p>	Developed by the MILES team	WAVE 1
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				<p><b>(D)</b> "If you have stopped any activity organised by the school, why did you choose to do it? (<a href="#">aextra_aaswhy</a>). Participants are asked to select one out of five options from a dropdown menu: (1) I did not have enough time; (2) I was not interested in the activity anymore; (3) I wanted to try something new; (4) For financial reasons; (5) Other; (collected as string in the original dataset).</p> <p><b>(E)</b> "During this academic year, have you stopped attending any extra-curricular activity NOT organised by the school? This is a Y = yes or N = no answer (<a href="#">aextra_aans</a>)</p> <p><b>(F)</b> "If you have stopped any activity NOT organised by the school, why did you choose to do it? (<a href="#">aextra_aanswhy</a>). Participants are asked to select one out of five options from a dropdown menu: (1) I did not have enough time; (2) I was not interested in the activity anymore; (3) I wanted to try something new; (4) For financial reasons; (5) Other.</p>		
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## General information and Socio-economic status

GENERAL INFORMATION AND SOCIOECONOMIC STATUS WAVE 1						
Measure	Category		N of items	Description of measure	Reference	Waves:
Date of birth	General information	aginfo__back grounddob	1	Participants are asked to provide their date of birth in the following format DDMMYYYY, for example 01012000 indicates the 1st of January of the year 2000.	Taken from the INVALSI test questionnaire	WAVE 1 and WAVE 2
Age in years	General information	aginfo__back groundage	1	Participants are also asked for their age in years, for example 15	Taken from the INVALSI test questionnaire	WAVE 1 and WAVE 2
Sex	General information	aginfo__back groundsex	1	Participants are asked about their sex at birth, and the sex is recorded in the main database as "f" for females and "m" for males.	Taken from the INVALSI test questionnaire	WAVE 1 and WAVE 2
Nationality	General information	aginfo__back groundnationality	1	Students are asked about their nationality with the following question: "Where were you born?" and students had to select one option from a dropdown menu: (a) Italy (coded in the database as "Ita"); (b) another Country in the European Union (coded as "Eu"); (c) another European Country NOT in the European Union (coded as "EuroNotEu"); and (d) another Country (coded as "other").	Taken from the INVALSI test questionnaire	WAVE 1 and WAVE 2

Mother's nationality	General information	aginfo__back groundnation mum	1	Students are asked about their mother's nationality with the following question: "Where was your mum born?" and students had to select one option from the following dropdown menu: (a) Italy (coded in the database as "Ita"); (b) another Country in the European Union (coded as "Eu"); (c) another European Country NOT in the European Union (coded as "EuroNotEu"); and (d) another Country (coded as "other").	Taken from the INVALSI test questionnaire	WAVE 1 and WAVE 2
Father's nationality	General information	aginfo__back groundnation dad	1	Students are asked about their father's nationality with the following question: "Where was your dad born?" and students had to select one option from the following dropdown menu: (a) Italy (coded in the database as "Ita"); (b) another Country in the European Union (coded as "Eu"); (c) another European Country NOT in the European Union (coded as "EuroNotEu"); and (d) another Country (coded as "other").	Taken from the INVALSI test questionnaire	WAVE 1 and WAVE 2
Age when moved to Italy	General information	aginfo__back groundageita	1	Those students who were not born in Italy are asked to report how old they were when they moved to Italy by selection one of the following options: (a) born in Italy (coded as 0); (b) aged 0-3 (coded as 0-3); (c) aged 4-6 (coded as 4-9); (d) aged 7-9 (coded as 7-9) (e) aged 10-12 (coded as 10-12); (f) aged 13-15 (coded as 13-15); (g) 16 or older (coded as 16).	Taken from the INVALSI test questionnaire www.pisa.oe cd.org.	WAVE 1 and WAVE 2
Main language spoken at home	General information	aginfo__back groundlangh ome	1	Students were asked to report the main language they spoke at home choosing from the following option in a dropdown menu: (a) Italian (coded in the original database as "Ita") (b) another language (coded in the original database as "otherlang").	Taken from the INVALSI test questionnaire www.pisa.oe cd.org.	WAVE 1 and WAVE 2

Main other language spoken at home	General information	aginfo__back groundotherl anghome	1	Students were asked to report which other main language they spoke at home but if they spoke Italian as the main one, they were asked to skip this question. Participants could select from the following dropdown menu: (a) English (coded in the database as "English", (b) Chinese (coded in the database as "Chinese"; (c) Another European language (coded as "OtherEUIlang"); (d) another Asian language (coded as "OtherASIALang"); (e) Dialect (coded as "Dialect"); and (f) Another language (coded as "other").	Taken from the INVALSI test questionnaire PISA (OECD Programme for International Student Assessment): <a href="http://www.pisa.oecd.org">www.pisa.oecd.org</a> .	WAVE 1 and WAVE 2
Siblings	General information	aginfo__back groundsibs	1	Students were asked whether they were an only child and could select YES (coded in the database as "y") and NO (coded as "n"). If they had no siblings they were asked to skip the following questions about brothers and sisters.	Developed by MILES team	WAVE 1 and WAVE 2
How many sisters	General information	aginfo__back groundsisters	1	Participants were asked: If not an only child, how many sisters do you have? They could choose between zero (coded as 0); one (coded as 1); two (coded as 2); or three or more (coded as 3)	Developed by MILES team	WAVE 1 and WAVE 2
How old sisters	General information	aginfo__back groundsisters age	1	If they had sisters, participants were asked to report whether their sisters are (a) older than they are (coded as "older"); (b) younger than they are (coded as "younger"); and (c) both older and younger than they are (coded as "olderandyounger")	Developed by MILES team	WAVE 1 and WAVE 2
How many brothers	General information	aginfo__back groundbrothers	1	Participants were asked: If not an only child, how many brothers do you have? They could choose between zero (coded as 0); one (coded as 1); two (coded as 2); or three or more (coded as 3)	Developed by MILES team	WAVE 1 and WAVE 2

How old brothers	General information	aginfo__back groundbrothe rsage	1	If they had brothers, participants were asked to report whether their brothers are (a) older than they are coded as "older"); (b) younger than they are (coded as "younger"); and c) both older and younger than they are (coded as "olderandyounger")	Developed by MILES team	WAVE 1 and WAVE 2
Maternal education level	SES	ases__amed u	1	Participants were asked to report the highest educational qualification obtained by their mother (or mother-like figure) . Participants could select one of the following options: (1) Primary school (coded in the database as "primary school") (2) Secondary School (coded as "secondary school") (3) Three-year professional qualification (coded as "professional qualification") (4) High school diploma (coded as "high school") (5) Certificate of higher education different from an undergraduate degree (e.g. fine arts academy or conservatoire) (coded as "art music school") (6) Degree (coded as "Degree") (7) Doctorate (coded as "PhD") (8) I don't know (coded as " not known")	PISA (OECD Programme for International Student Assessment): www.pisa.oecd.org.	WAVE 1

Paternal education level	SES	ases__apedu	1	<p>Participants were asked to report the highest educational qualification obtained by their father (or father-like figure) . Participants could select one of the following options:</p> <ul style="list-style-type: none"> <li>(1) Primary school (coded in the database as "primary school")</li> <li>(2) Secondary School (coded as "secondary school")</li> <li>(3) Three-year professional qualification (coded as "professional qualification")</li> <li>(4) High school diploma (coded as "high school")</li> <li>(5) Certificate of higher education different from an undergraduate degree (e.g. fine arts academy or conservatoire) (coded as "art music school")</li> <li>(6) Degree (coded as "Degree")</li> <li>(7) Doctorate (coded as "PhD")</li> <li>(8) I don't know (coded as " not known")</li> </ul>	PISA (OECD Programme for International Student Assessment): <a href="http://www.pisa.oecd.org">www.pisa.oecd.org</a> .	WAVE 1
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Maternal occupation status	SES	ases__amoc cup	1	<p>Participants were asked to select their mother's occupation from the options below:</p> <ul style="list-style-type: none"> <li>Unemployed (coded in the database as "unemployed")</li> <li>Family manager (coded as "housewife")</li> <li>Manager, Director, University Lecturer, high ranking military official (coded as "Director professor")</li> <li>Large Business owner, large farm owner (coded as "owner large business")</li> <li>Highly skilled employee or freelance (e.g. researcher, psychologist, medical doctor, lawyer, police commissioner, designer) (coded as "professional freelance")</li> <li>Small business owner (e.g. shop owner, carpenter, mechanic, tailor) (coded as: "small business owner")</li> <li>Teacher, office worker, military employee (coded as "teacher office worker")</li> <li>Factory worker, technician, nurse, waiter/waitress (coded as "'nurse waitress")</li> <li>I don't know (coded as 'not known')</li> </ul>	PISA (OECD Programme for International Student Assessment): <a href="http://www.pisa.oecd.org">www.pisa.oecd.org</a> .	WAVE 1
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Paternal occupation status	SES	ases_apoccup	1	<p>Participants were asked to select their father's occupation from the options below:</p> <p>Unemployed (coded in the database as "unemployed")</p> <p>Family manager (coded as "househusband")</p> <p>Manager, Director, University Lecturer, high ranking military official (coded as "Director professor")</p> <p>Large Business owner, large farm owner (coded as "owner large business")</p> <p>Highly skilled employee or freelance (e.g. researcher, psychologist, medical doctor, lawyer, police commissioner, designer) (coded as "professional freelance")</p> <p>Small business owner (e.g. shop owner, carpenter, mechanic, tailor) (coded as: "small business owner")</p> <p>Teacher, office worker, military employee (coded as "teacher office worker")</p> <p>Factory worker, technician, nurse, waiter/waitress (coded as "'nurse waitress")</p> <p>I don't know (coded as 'not known')</p>	PISA (OECD Programme for International Student Assessment): <a href="http://www.pisa.oecd.org">www.pisa.oecd.org</a> .	WAVE 1
MacArthur scale of subjective social status (SSS)	Perceived SES	aladder_familyLadderRung	1	<p>The measure takes the form of a 10-rung ladder with points attached. The lowest point, scored as 1, indicates the bottom rung of the ladder and the highest, scored as 10, indicates the top. Participants are asked to place a mark at the point on the ladder that represented their perception of their family's socio-economic status.</p>	Adler, N. E., Boyce, T., Chesney, M. A., Cohen, S., Folkman, S., Kahn, R. L., & Syme, S. L. (1994). Socioeconomic status and health: the challenge of the gradient.	WAVE 1

					American psychologist, 49(1), 15.	
Foreign language information	General information	al2info__ql2; al2info__qothl2; al2info__qaddl2; al2info__qwhichaddl2	4	<p>These four items are designed to know more about the foreign languages that students are studying. The first question asks about which foreign language do students study as their main second language (al2info__ql2). Participants can choose from the following options: English (coded as "en"); French (coded as "fr"); German (coded as "ge"); Spanish (coded as "sp"); Chinese (coded as "ch") or Another language (coded as "other"). The second question (al2info__qothl2) is an open text question, and asks participants who have selected "other" for the previous question to specify which language they study as their first foreign language. The third question (al2info__qaddl2) asks whether students are studying more than one foreign language in school and it is a yes (coded as "y") or no (coded as "n") answer. The fourth question (al2info__qwhichaddl2) asks participants to select which additional second language they are studying in school from the following options: English (coded as "en"); French (coded as "fr"); German (coded as "ge"); Spanish (coded as "sp"); Chinese (coded as "ch") or Another language (coded as "other").</p>	Designed by the MILES team	WAVE 1 and WAVE 2