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# NEW QUESTIONS FOR THE HEALTH BEHAVIOUR IN SCHOOL-AGED CHILDREN (HBSC) STUDY IN IRELAND: PILOT 2022

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An Roinn Sláinte  
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## CONTENTS

Section 1: INTRODUCTION .....	3
Section 2: METHOD.....	5
Section 3: HOW TO READ THIS REPORT .....	9
Section 4: RESULTS .....	11
Section 5: DISCUSSION.....	57
REFERENCES.....	59
ACKNOWLEDGEMENTS .....	60
APPENDIX 1: Response frequencies for Food Security Scale items .....	61
APPENDIX 2: Reliability and descriptive statistics for the Planetary Health Scale subscales .....	66
APPENDIX 3: COVID-19 items for participants in 3 <sup>rd</sup> – 4 <sup>th</sup> Class .....	68

## Section 1: INTRODUCTION

### ***What is HBSC?***

The Health Behaviour in School-aged Children (HBSC) study is a cross-national research study conducted in collaboration with the World Health Organisation (WHO) Regional Office for Europe, running on a four-year cycle. In 2022, Ireland participated for the seventh time in the HBSC study. The overall aim of the HBSC study is to gain new insight into and increase our understanding of young people's health and well-being, health behaviours and their social context. HBSC collects data on key indicators of health, health attitudes, and health behaviours, as well as the context of health for young people. The study is a school-based survey with information collected from students through self-completion questionnaires in classrooms. HBSC Ireland 2022 was funded by the Department of Health. Further information on the HBSC Ireland can be found at [www.universityofgalway.ie/hbsc](http://www.universityofgalway.ie/hbsc) or at [www.hbsc.org](http://www.hbsc.org), the International HBSC website.

### ***The HBSC questionnaire***

There are three types of items in the HBSC questionnaire. *Mandatory* items are asked in the same way in all participating countries to ensure that the results are cross-nationally comparable (Inchley et al., 2018). These cover health behaviours (e.g. fruit and vegetable consumption, physical activity), risk behaviours (e.g. tobacco and alcohol consumption, sedentary behaviour), health outcomes (e.g. mental health, symptoms) and the settings of young people's lives (e.g. family, peers, school). International *Optional* items are also administered in the same manner in each country, but it is a country-level decision which of these items to include (e.g. other dietary habits, romantic attraction). *National* items are developed by individual research teams and reflect the scientific and policy issues salient in that context. For instance, in Ireland, several child-developed questions are administered (e.g. loving your family, feeling self-confident).

The International HBSC research protocol recommends that participating countries conduct pilot studies prior to the main survey to ensure respondents' understanding of items, the appropriateness of questionnaire layout, sequencing of questions, translation, and the provision of adequate instructions.

### ***The aim of this report***

In this report, we present the pilot findings on the items that were reformulated since the 2018 data collection, or new items that were considered for inclusion in the 2022 Irish questionnaire. The pilot study was conducted in line with the International HBSC research protocol, and the University of Galway (former National University of Ireland Galway) research ethics committee approval was obtained. Data collection took place in March and April 2022 in five schools that were not selected for the main study data collection (see **Table 1**). Children from 3<sup>rd</sup> Class in primary school to 5<sup>th</sup> Year in post-primary school were invited to participate.

## Section 2: METHOD

### *Participants*

Data were collected from 426 school students across five schools. **Table 1** in the next section presents the sample sizes by school and year group.

### *The process of data collection*

School Principals were invited to take part in the pilot study by a letter of invitation and study information sheet. Once agreement to participate was obtained, parental consent letters, along with study information sheets were provided to the school. A designated liaison person in the school selected the dates and classes that would participate in the pilot. Parents were informed about the study in advance and they were asked to provide active written consent for their child to participate. On the day of data collection, children were informed that they were free to decide if they wanted to take part in the data collection or not.

Researchers administered the questionnaires and facilitated subsequent classroom discussions based on a standardised protocol. First, the researchers introduced themselves, the study and provided an overview of HBSC to the children. They then explained that all questionnaires were confidential and anonymous, and that answers would not be shared with anyone else than the research team. Finally, it was reiterated that participants did not have to take part and that they could skip any questions that they did not want to answer.

1<sup>st</sup> Year and Transition Year students received an online questionnaire via the Qualtrics online survey platform. Children in all other classes received paper-and-pencil questionnaires. After paper questionnaires were distributed to / the link for the online questionnaire shared with children, they were reminded not to provide any information that would identify them or their school on the questionnaires. The children were invited to raise their hand if they required any assistance. On a blank copy of the questionnaire the researchers made notes at any point where a question or query arose. Once the children had reached the end of the questionnaire, they were invited to go back to the beginning and underline any words or sentences that they did not understand; were embarrassed by; felt uncomfortable with or found unacceptable. They were also encouraged to

comment on any of the questions. At the end of the questionnaire, a text box was provided for closing remarks on the study in general.

During the classroom discussion, researchers led the children through each section of the questionnaire by asking:

- Did you understand the questions?
- Were they easy to answer?
- Did you feel uncomfortable answering them?
- Did you feel the questions were unacceptable?

Once the discussion was finished the children were reminded to place the completed questionnaires in the blank envelopes provided for collection.

### ***Pilot questionnaires***

Data were collected from participating students on gender, birth date (year and month), and family affluence. The remaining questionnaire items were either new items developed by the international HBSC network, or new items proposed for inclusion by the HBSC Ireland research team in consultation with the Department of Health. These comprised:

- Birth-registered sex and gender identity
- Physical activity
- Food security
- COVID-19 exposure and impact
- Planetary health
- Mental health (loneliness, self-efficacy, and perceived stress)
- Period poverty and period symptoms
- Self-identified sexual orientation and sexual fantasies
- Gender of last sexual partner

Of these topics, the questionnaire for 3<sup>rd</sup> and 4<sup>th</sup> Class pupils contained only the items on COVID-19, and these items were simplified in their language and were fewer in number than those tested with 5<sup>th</sup> class – 5<sup>th</sup> Year students. The item on gender of last sexual partner was only tested among those in 2<sup>nd</sup> – 5<sup>th</sup> Year in post-primary schools.

Findings in this report are presented by gender. There were two participants who did not answer the question on whether they were boy or a girl. They are included in the analysis of birth-registered sex and gender identity, but not in any other analyses.

Some topics were tested by presenting one of two versions ('A' and 'B') to participants, in a randomly and evenly split fashion. These included birth-registered sex, gender identity, food security, planetary health, and self-identified gender. The A and B versions of these items and the relevant response options can be found below at the beginning of the results sub-sections. The original items were developed by the HBSC International Research Network, as described by Inchley et al. (2023). However, some of these items had been developed by or adapted from the work of non-native English speakers, and we wanted to test whether the original wording was understandable for young people in Ireland. Therefore, we applied minor changes to the wording of the items, without changing the conceptual meaning. Such changes were tested in the gender identity, food security and the planetary health items. For the birth-registered sex item, we tested the original item and a second item where the concept of sex registered at birth was explained in brackets ('On your birth certificate'). One version of the gender of last sexual partner item came with the original response options ('I haven't had sexual intercourse' / 'A girl or a woman' / 'A boy or a man'); the other version contained an 'Other' response option with a text box for open-ended responses. We presented original and modified items balanced across A and B versions. The two versions of the questionnaires were randomly distributed to participants.

There were two items in the survey that have routinely been used in earlier HBSC Ireland surveys: girls in 5<sup>th</sup> Class – 5<sup>th</sup> Year have been asked whether they have started menstruation, and if yes, at what age; and all participants in 2<sup>nd</sup> – 5<sup>th</sup> Year been asked whether they have ever had sexual intercourse. We included these items in the survey because we wished to test new items on period poverty, period symptoms, and gender of the last sexual partner, and these established items were an important introduction.

For the COVID-19 exposure and impact items, there were no concurrent versions, but the items were simplified for 3<sup>rd</sup> – 4<sup>th</sup> Class children. Therefore, the results are presented separately for pupils in 5<sup>th</sup> Class – 1<sup>st</sup> Year and pupils in 3<sup>rd</sup> – 4<sup>th</sup> Class.



## ***Data management***

All participants in primary schools (3<sup>rd</sup> – 6<sup>th</sup> Class) and 2<sup>nd</sup> Year of post-primary schools received a paper-and-pencil questionnaire ( $n = 293$ , 68.8%). Participants in 1<sup>st</sup> Year and Transition Year of post-primary schools filled in the questionnaire via the Qualtrics online survey platform ( $n = 133$ , 31.2%). Subsequently, paper-and-pencil data were entered by researchers into Qualtrics and merged with data from the online questionnaires. The datafile was exported into the SPSS statistical software (Version 25). Qualitative feedback from students were extracted manually from each questionnaire by the researchers and analysed across A and B versions. Researcher field notes were compiled, and where relevant, linked with questionnaire items.

## ***Data presentation***

Under each sub-section of the results below, descriptive statistics for the items are reported. First, overall descriptive data are presented: frequencies for categorical variables, and reliability indices, means, standard deviations, and standard errors for scale variables. Then the descriptive data are presented by gender and by age group. For the items that were tested in two versions, descriptive statistics are presented separately for both versions. Finally, the qualitative feedback from participants (in their own words) and the researchers' field notes are presented for each item.

## Section 3: HOW TO READ THIS REPORT

The findings of the 2022 Pilot Study are presented in the tables below. In summary, 363 children participated in the pilot. The sample composition (by schools and classes) is presented in **Table 1**. The presented findings are not weighted. For each item, first a summary table is presented, indicating number and frequency (in percentages) of respondents for each of the response options and missing responses. Responses are then broken down by gender and age, with valid percentages (which excludes missing responses) presented.

For scale variables, the overall descriptive statistics and reliability index (Cronbach's alpha) are reported for the full sample and by gender and age.

Where different versions of the item(s) were tested, we report the results by version. The items and scales tested in this pilot are listed by school grade in **Table 2** below.

Following the quantitative tables, for each item, the qualitative findings are presented as follows<sup>1 2</sup>:

- Words underlined by participants to indicate they were considered difficult to understand
- Written comments from participants on the specific item or wording
- Written comments from participants inserted at the end of the questionnaire, but relevant to the item
- Relevant material from the fieldwork notes made by the researchers during data collection.

**Table 1.** Composition of the pilot sample by grade ( $N = 426$ )

	3 <sup>rd</sup> Class	4 <sup>th</sup> Class	5 <sup>th</sup> Class	6 <sup>th</sup> Class	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	TY	Total
<b>School 1</b>	—	—	—	—	—	88	—	<b>88</b>
<b>School 2</b>	—	—	—	—	92	—	43	<b>135</b>
<b>School 3</b>	23	17	13	20	—	—	—	<b>73</b>
<b>School 4</b>	19	15	21	15	—	—	—	<b>70</b>
<b>School 5</b>	11	15	24	10	—	—	—	<b>60</b>
<b>Total</b>	<b>53</b>	<b>47</b>	<b>58</b>	<b>45</b>	<b>92</b>	<b>88</b>	<b>43</b>	<b>426</b>

*Note.* Some classes from the same year are collapsed within the given cell. TY: Transition Year.

<sup>1</sup> Not all five sources of qualitative information were provided by participants for each item.

<sup>2</sup> Text underlined and comments made by participants about items or response options are listed individually. Where the same comment was made by more than one participant this is indicated by a multiplier within the table cells (i.e. 'x2' means that two participants made the same comment). The same approach was employed for underlined words.

**Table 2.** Items/scales in the pilot questionnaire and number of valid responses by grade

	3 <sup>rd</sup> Class	4 <sup>th</sup> Class	5 <sup>th</sup> Class	6 <sup>th</sup> Class	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	Transition Y	Total	Presentation
Birth-registered sex	—	—	—	—	—	88	43	131 <sup>a</sup>	Single item
Gender identity	—	—	—	—	—	88	43	131 <sup>a</sup>	Single item
Physical activity	—	—	56	42	92	86	42	318	Single item
Food security	—	—	56	43	90	86	39	314	Scale; groups <sup>b</sup>
COVID-19 exposure: self	50	44	58	43	90	86	40	411	Single item
COVID-19 exposure: family	48	44	58	43	88	85	40	406	Single item
COVID-19 exposure: hospital	49	41	55	42	89	82	39	397	Single item
COVID-19 Impact Scale	26	29	45	37	80	80	38	335	Scale
Planetary health: knowledge	—	—	46	37	85	79	38	285	Scale
Planetary health: behaviour	—	—	52	42	85	84	40	303	Scale
Planetary health: social norms	—	—	52	42	83	84	40	301	Scale
Planetary health: total score	—	—	43	35	82	77	38	275	Scale
Loneliness	—	—	57	42	87	86	40	312	Single item
Self-efficacy	—	—	55	42	87	84	40	308	Scale; groups <sup>c</sup>
Perceived stress	—	—	53	41	81	74	40	289	Scale
Prevalence and age of onset of menstruation	—	—	32	30	32	39	18	151	Single item
Period poverty: unable to afford products	—	—	31	25	32	42	20	150	Three items
Period poverty: missed school	—	—	31	25	32	42	20	150	Single item
Period poverty: missed other daily activities	—	—	31	25	32	42	19	149	Single item
Period symptoms: experienced symptoms	—	—	31	26	32	42	20	151	Three items
Period symptoms: missed school	—	—	30	25	30	42	20	147	Single item
Period symptoms: missed other daily activities	—	—	31	25	32	42	19	149	Single item
Self-identified sexual orientation	—	—	—	—	—	84	40	124	Single item
Sexual fantasies	—	—	—	—	—	80	40	120	Single item
Gender of last sexual partner	—	—	—	—	—	10	37	47	Single item

<sup>a</sup>Including those participants ( $n = 2$ ) who did not answer the question on gender (are you a boy or a girl).

<sup>b</sup>The Food Security scores were categorised into 'High', 'Marginal', 'Low', and 'Very low' food security groups.

<sup>c</sup>The Self-Efficacy scores were categorised into 'High', 'Medium', and 'Low' self-efficacy groups.

## Section 4: RESULTS

### Birth-registered sex

Version A (original)	Version B (simplified)
<p>What sex were you registered at birth? (On your birth certificate)</p> <p><input type="checkbox"/> Male</p> <p><input type="checkbox"/> Female</p>	<p>What sex were you registered at birth?</p> <p><input type="checkbox"/> Male</p> <p><input type="checkbox"/> Female</p>

### Quantitative results

**Table 3.** Frequency of birth-registered sex ( $N = 131$ )

	Frequency	Percent	Valid percent
Male	67	51.1	51.1
Female	64	48.9	48.9
Total	131	100.0	100.0
Missing	0	0	—

**Table 4.** Frequency of birth-registered sex by gender (%)

	Boys	Girls	Gender missing
Male	100.0	0	100.0
Female	0	100.0	0

**Table 5.** Frequency of birth-registered sex by age (%)

	13 yrs	14 yrs	15yrs	16 yrs	17 yrs
Male	50.0	52.1	50.0	52.5	0
Female	50.0	47.9	50.0	47.5	100.0

**Table 6.** Frequency of birth-registered sex by version

	A	B
Male	45.3	56.7
Female	54.7	43.3

## Qualitative results

### a) Words underlined by participants to indicate they were considered difficult to understand

*No words underlined*

### b) Written comments from participants on the specific item or wording

*No written comments*

### c) Written comments from participants at the end of the questionnaire, but relevant to this item

*No written comments*

### d) Relevant material from the fieldwork notes made during data collection

Several children said that this was a good question to ask. One child said they did not know the meaning of “registered at birth”.

Some children reported that there was too much repetition with the gender, sex registered at birth and gender identity questions, one child said they see no reason for questions asking similar things to be spread out.

## Gender identity

### Version A

**Identities of people are varied: some people identify themselves as boys, others as girls, and there are people who don't feel represented by either boy or girl.**

*Please choose the option that you feel more identified with:*

- ☐ I identify myself as a boy
- ☐ I identify myself as a girl
- ☐ I identify myself as neither a boy nor a girl
- ☐ Other/s: \_\_\_\_\_

### Version B (simplified)

**Some people identify as boys, others as girls, and some don't feel represented by either boy or girl.**

*Please, choose the option that you identify most with:*

- ☐ I identify as a boy
- ☐ I identify as a girl
- ☐ I identify as neither a boy nor a girl
- ☐ Other/s: \_\_\_\_\_

## Quantitative results

**Table 7.** Frequency of gender identity ( $N = 131$ )

	<i>Frequency</i>	<i>Percent</i>	<i>Valid percent</i>
Identify as a boy	63	48.1	48.1
Identify as a girl	65	49.6	49.6
Identify as neither a boy nor a girl	3	2.3	2.3
Other/s	0	0	0
Total	131	100.0	100.0
Missing	0	0	—

**Table 8.** Frequency of gender identity by gender (%)

	<b>Boys</b>	<b>Girls</b>	<b>Gender missing</b>
Identify as a boy	96.9	0	0
Identify as a girl	0	100.0	50.0
Identify as neither a boy nor a girl	3.1	0	50.0
Other/s	0	0	0

**Table 9.** Frequency of gender identity by age (%)

	13 yrs	14 yrs	15 yrs	16 yrs	17 yrs
Identify as a boy	50.0	47.9	50.0	50.0	0
Identify as a girl	50.0	49.3	50.0	47.5	100.0
Identify as neither a boy nor a girl	0	2.8	0	2.5	0
Other/s	0	0	0	0	0

**Table 10.** Frequency of gender identity by version

	A	B
Identify as a boy	42.2	53.7
Identify as a girl	56.3	43.3
Identify as neither a boy nor a girl	1.6	3.0
Other/s	0	0

### Qualitative results

#### a) Words underlined by participants to indicate they were considered difficult to understand

*No words underlined*

#### b) Written comments from participants on the specific item or wording

Version A	Version B
<i>(no comments)</i>	"There are 2 genders" written underneath question

#### c) Written comments from participants at the end of the questionnaire, but relevant to this item

*No written comments*

#### d) Relevant material from the fieldwork notes made during data collection

Some children felt that there was too much repetition with the gender, sex registered at birth and gender identity questions. The question "Are you a boy or a girl?" was preferred by some children to the gender identity question. One child suggested combining the sex registered at birth and gender identity questions.

## Physical activity

### Version A (original)

**OUTSIDE SCHOOL HOURS: How often do you usually exercise in your free time so much that you get out of breath or sweat?**

- ☐ Every day
- ☐ 4 to 6 times a week
- ☐ 2 to 3 times a week
- ☐ Once a week
- ☐ Once a month
- ☐ Less than once a month
- ☐ Never

### Version B ('2 times a week' and '3 times a week' options separated)

**OUTSIDE SCHOOL HOURS: How often do you usually exercise in your free time so much that you get out of breath or sweat?**

- ☐ Every day
- ☐ 4 to 6 times a week
- ☐ 3 times a week
- ☐ 2 times a week
- ☐ Once a week
- ☐ Once a month
- ☐ Less than once a month
- ☐ Never

## Quantitative results

**Table 11.** Frequency of Physical activity A and B version combined ( $N = 322$ )

	<i>Frequency</i>	<i>Percent</i>	<i>Valid percent</i>
Every day	94	29.2	29.6
4 to 6 times a week	109	33.9	34.3
2 to 3 times a week in Version A; 3 times a week in version B	68	21.1	21.4
2 times a week	14	4.3	4.4
Once a week	20	6.2	6.3
Once a month	4	1.2	1.3
Less than once a month	5	1.6	1.6
Never	4	1.2	1.3
Total	318	98.8	100.0
Missing	4	1.2	—



**Table 12.** Frequency of physical activity by gender (%)

	Boys	Girls
Every day	40.8	19.3
4 to 6 times a week	32.2	36.1
2 to 3 times a week in Version A; 3 times a week in version B	16.4	25.9
2 times a week	3.9	4.8
Once a week	3.3	9.0
Once a month	0.7	1.8
Less than once a month	1.3	1.8
Never	1.3	1.2

**Table 13.** Frequency of physical activity by age group (%)

	10–11 yrs	12–14 yrs	15–17 yrs
Every day	27.6	33.8	15.1
4 to 6 times a week	31.0	32.9	43.4
2 to 3 times a week in Version A; 3 times a week in version B	20.7	21.3	22.6
2 times a week	3.4	4.3	5.7
Once a week	8.6	5.8	5.7
Once a month	3.4	0.5	1.9
Less than once a month	3.4	1.0	1.9
Never	1.7	0.5	3.8

**Table 14.** Frequency of physical activity by version

	A	B
Every day	29.4	29.7
4 to 6 times a week	34.4	34.2
2 to 3 times a week in Version A; 3 times a week in Version B	22.5 (2 to 3 times a week)	20.3 (3 times a week)
2 times a week in Version B		8.9 (2 times a week)
Once a week	8.8	3.8
Once a month	1.3	1.3
Less than once a month	1.9	1.3
Never	1.9	0.6

## Qualitative results

### a) Words underlined by participants to indicate they were considered difficult to understand

Version A	Version B
"1." (Question number is underlined)	(no underlined words)

### b) Written comments from participants on the specific item or wording

Version A	Version B
"I dont have many friends so I am quite lonely very often" "but I dont really get out of breath or sweat" "I don't know"	"I don't know" "I walk to and from school everyday" written beside "Every day" response option

### c) Written comments from participants at the end of the questionnaire, but relevant to this item

*No written comments*

### d) Relevant material from the fieldwork notes made during data collection

Several children said they would like to be asked more questions about sports and what sports they play. Some children found this question too long and complicated, and they believed it could be simplified.

## Food security

### Version A (original)

**6. The following questions are about the food situation in your home during the last month.**

Please tick the answer that best describes you

	A lot	Sometimes	Never
Did you worry that food at home would run out before your family got money to buy more?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did the food that your family bought run out, and you didn't have money to get more?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did your meals only include a few kinds of cheap foods because your family was running out of money to buy food?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How often were you not able to eat a balanced meal because your family didn't have enough money?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did you have to eat less because your family didn't have enough money to buy food?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has the size of your meals been cut because your family didn't have enough money for food?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did you have to skip a meal because your family didn't have enough money for food?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were you hungry but didn't eat because your family didn't have enough food?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did you not eat for a whole day because your family didn't have enough money for food?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### Version B (simplified)

**6. Some families don't have enough money for food. These questions are about the food situation in your home during the last month.**

Please tick one box for each line

	A lot	Sometimes	Never
Did you worry that food at home would run out before your family got money to buy more?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did the food that your family bought run out, and you didn't have money to get more?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did your meals only include some cheap foods because your family was running out of money to buy food?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**7. How often, in the last month, did any of the following happen to you because your family didn't have enough money for food?**

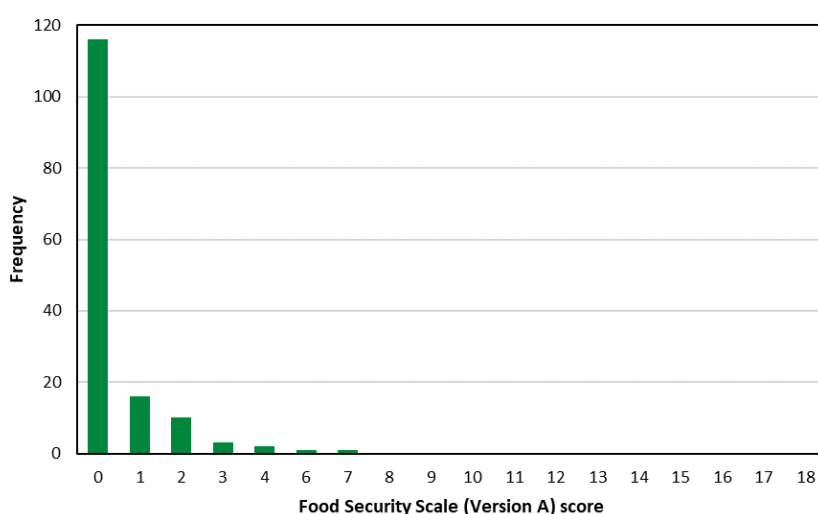
Please tick one box for each line

	A lot	Sometimes	Never
You were not able to eat a balanced meal.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
You had to eat less.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The size of your meal was cut.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
You had to skip a meal.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
You were hungry but didn't eat.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
You did not eat for a whole day.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

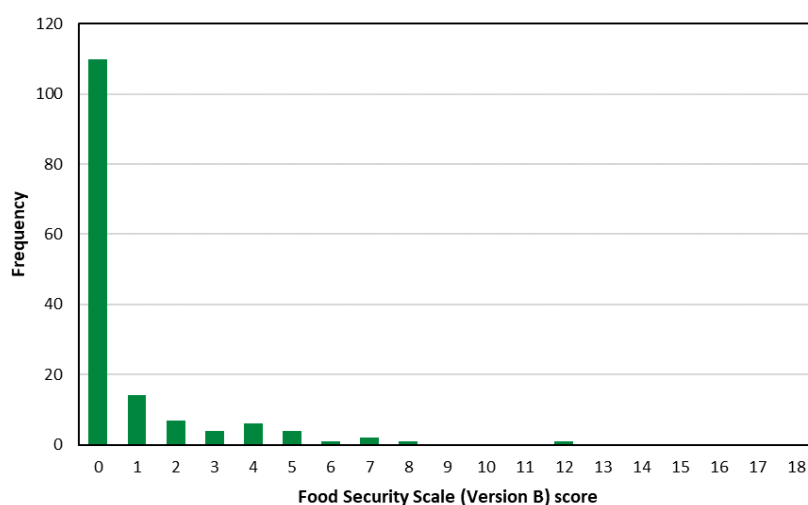
### Quantitative results<sup>3</sup>

In sum, 299 participants responded to all items on the Food Security Scale. One or more items were not answered by 23 participants (7.1%). The scale scores ranged from 0 to 18, where 0 means no food insecurity in the family, and 18 means that the family lives in total food insecurity. The distribution of the scores is presented in **Figure 1a (Version A)** and **Figure 1b (Version B)**. In both versions, the scores show a heavy skew to the left (i.e. the majority of the students scoring zero indicating no food insecurity).

**Figure 1a.** Distribution of the Food Security Scale scores (Version A) ( $N = 149$ )



**Figure 1b.** Distribution of the Food Security Scale scores (Version B) ( $N = 150$ )



<sup>3</sup> Item-wise response frequencies are presented in **Appendix 1**.

**Table 15a.** Descriptive statistics and reliability indices of the Food Security Scale, for all and by gender and age, Version A (original) ( $N = 161$ )

	<i>n</i>	<b>Alpha</b>	<b>Mean</b>	<b>SD</b>	<b>SE</b>	<b>Min.</b>	<b>Max.</b>
<b>Overall</b>	149	.65	0.44	1.07	0.09	0	7
<b>Gender</b>							
Boys	68	.42	0.37	0.77	0.09	0	4
Girls	81	.73	0.51	1.28	0.14	0	7
<b>Age groups</b>							
10–11 yrs	29	.66	0.61	1.23	0.22	0	6
12–14 yrs	97	.62	0.32	0.79	0.08	0	4
15–17 yrs	23	.85	0.39	1.08	0.22	0	4

**Table 15b.** Descriptive statistics and reliability indices of the Food Security Scale, for all and by gender and age, Version B (simplified) ( $N = 161$ )

	<i>n</i>	<b>Alpha</b>	<b>Mean</b>	<b>SD</b>	<b>SE</b>	<b>Min.</b>	<b>Max.</b>
<b>Overall</b>	150	.83	0.83	1.86	0.15	0	12
<b>Gender</b>							
Boys	77	.86	0.71	1.82	0.21	0	12
Girls	73	.81	0.95	1.90	0.22	0	8
<b>Age groups</b>							
10–11 yrs	26	.84	0.85	1.77	0.43	0	7
12–14 yrs	98	.82	0.66	1.48	0.14	0	8
15–17 yrs	26	.85	1.04	2.05	0.40	0	8

**Table 16.** Frequency of food security groups ( $N = 322$ )

	<b>Frequency</b>	<b>Percent</b>	<b>Valid percent</b>
<b>High food security</b>	239	74.2	76.1
<b>Marginal food security</b>	33	10.2	10.5
<b>Low food security</b>	38	11.8	12.1
<b>Very low food security</b>	4	1.2	1.3
<b>Total</b>	314	97.5	100.0
<b>Missing</b>	8	2.5	—

**Table 17.** Frequency of food security groups by gender (%)

	<b>Boys</b>	<b>Girls</b>
<b>High food security</b>	76.2	76.1
<b>Marginal food security</b>	12.6	8.6
<b>Low food security</b>	10.6	13.5
<b>Very low food security</b>	0.7	1.8

**Table 18.** Frequency of food security groups by age group (%)

	10–11 yrs	12–14 yrs	15–17 yrs
High food security	69.0	78.2	76.0
Marginal food security	15.5	9.7	8.0
Low food security	12.1	11.7	14.0
Very low food security	3.4	0.5	2.0

**Table 19.** Frequency of food security groups by version (%)

	A	B
High food security	79.0	73.2
Marginal food security	11.5	9.6
Low food security	8.9	15.3
Very low food security	0.6	1.9

## Qualitative results

### a) Words underlined by participants to indicate they were considered difficult to understand

Item	Version A	Version B
Did you worry that food at home would run out before your family got money to buy more?	<i>(no underlined words)</i>	<i>(no underlined words)</i>
Did the food that your family bought run out, and you didn't have money to get more?	Underlined full item	Circled full item
Did your meals only include some cheap foods because your family was running out of money to buy food?	Underlined full item	<i>(no underlined words)</i>
A: How often were you not able to eat a balanced meal because your family didn't have enough money? B: You were not able to eat a balanced meal	Underlined full item	<i>(no underlined words)</i>
A: Did you have to eat less because your family didn't have enough money to buy food? B: Had to eat less.	Underlined full item	<i>(no underlined words)</i>
A: Has the size of your meals been cut because your family didn't have enough money for food? B: The size of your meal was cut.	Underlined full item	<i>(no underlined words)</i>
A: Did you have to skip a meal because your family didn't have enough money for food? B: You had to skip a meal.	Underlined full item	<i>(no underlined words)</i>
A: Were you hungry but didn't eat because your family didn't have enough food? B: You were hungry but didn't eat.	Underlined full item	<i>(no underlined words)</i>
A: Did you not eat for a whole day because your family didn't have enough money for food? B: You did not eat for the whole day.	Underlined full item	<i>(no underlined words)</i>

**b) Written comments from participants on the specific item or wording**

Item	Version A	Version B
Did you worry that food at home would run out before your family got money to buy more?	Circled question and wrote "Didn't like"	"Hard to answer for some people"
Did the food that your family bought run out, and you didn't have money to get more?	(no comments)	"Bit too personal"  Child ticked two answers: "sometimes" and "never"
Did your meals only include some cheap foods because your family was running out of money to buy food?	(no comments)	(no comments)
<b>A:</b> How often were you not able to eat a balanced meal because your family didn't have enough money? <b>B:</b> You were not able to eat a balanced meal	(no comments)	(no comments)
<b>A:</b> Did you have to eat less because your family didn't have enough money to buy food? <b>B:</b> Had to eat less.	(no comments)	(no comments)
<b>A:</b> Has the size of your meals been cut because your family didn't have enough money for food? <b>B:</b> The size of your meal was cut.	(no comments)	(no comments)
<b>A:</b> Did you have to skip a meal because your family didn't have enough money for food? <b>B:</b> You had to skip a meal.	(no comments)	(no comments)
<b>A:</b> Were you hungry but didn't eat because your family didn't have enough food? <b>B:</b> You were hungry but didn't eat.	(no comments)	Ticked "sometimes" and wrote "not in money terms"
<b>A:</b> Did you not eat for a whole day because your family didn't have enough money for food? <b>B:</b> You did not eat for the whole day.	(no comments)	(no comments)

**c) Written comments from participants at the end of the questionnaire, but relevant to this item**

*No written comments*

**d) Relevant material from the fieldwork notes made during data collection**

These questions were highlighted by the children as being difficult and problematic. Some children thought it was obvious that the questions were trying to determine families' financial situations. Some children thought there should be more questions about the people in their family/pets to distinguish reasons why food poverty might affect some more than others.

## COVID-19 exposure

Version for participants in 5<sup>th</sup> Class – 5<sup>th</sup> Year<sup>4</sup>

**1. Thinking about the time during the COVID-19 pandemic, please answer the following questions.**

Please tick one box for each line

	Yes	No	I do not know
Did you ever test positive (a positive test result means that you had COVID-19) for COVID-19?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did anyone in your close family (i.e., parent, sibling or grandparent) test positive for COVID-19?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>If Yes,</b> were any of these people treated in the hospital for COVID-19?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Quantitative results

(i) Test positive for COVID-19

**Table 20.** Frequency of having tested positive for COVID-19 (N = 322)

	Frequency	Percent	Valid percent
Yes	184	57.1	58.0
No	126	39.1	39.7
I do not know	7	2.2	2.2
Total	317	98.4	100.0
Missing	5	1.6	—

**Table 21.** Frequency of having tested positive for COVID-19 by gender (%)

	Boys	Girls
Yes	62.9	53.6
No	34.4	44.6
I do not know	2.6	1.8

**Table 22.** Frequency of having tested positive for COVID-19 by age group (%)

	10–11 yrs	12–14 yrs	15–17 yrs
Yes	55.0	58.7	58.8
No	43.3	39.3	37.3
I do not know	1.7	1.9	3.9

<sup>4</sup> A simplified version of the items was presented to participants in 3<sup>rd</sup> – 4<sup>th</sup> Class. Results on those are presented in **Appendix 3**.



(ii) Having had a close family member test positive for COVID-19

**Table 23.** Frequency of having had a close family member test positive for COVID-19 (*N* = 322)

	<i>Frequency</i>	<i>Percent</i>	<i>Valid percent</i>
<b>Yes</b>	275	85.4	87.6
<b>No</b>	33	10.2	10.5
<b>I do not know</b>	6	1.9	1.9
<b>Total</b>	314	97.5	100.0
<b>Missing</b>	8	2.5	—

**Table 24.** Frequency of having had a close family member test positive for COVID-19 by gender (%)

	<b>Boys</b>	<b>Girls</b>
<b>Yes</b>	90.7	84.8
<b>No</b>	7.3	13.4
<b>I do not know</b>	2.0	1.8

**Table 25.** Frequency of having had a close family member test positive for COVID-19 by age group (%)

	<b>12-14 yrs</b>	<b>15-17 yrs</b>	<b>18 or older</b>
<b>Yes</b>	80.0	89.2	90.0
<b>No</b>	16.7	9.3	8.0
<b>I do not know</b>	3.3	1.5	2.0

(iii) Any close family in hospital for COVID-19

**Table 26.** Frequency of having had any close family member in hospital for COVID-19 (*N* = 322)

	<i>Frequency</i>	<i>Percent</i>	<i>Valid percent</i>
<b>Yes</b>	15	4.7	4.9
<b>No</b>	273	84.8	88.9
<b>I do not know</b>	19	5.9	6.2
<b>Total</b>	307	95.3	100.0
<b>Missing</b>	15	4.7	—

**Table 27.** Frequency of having had any close family member in hospital for COVID-19 by gender (%)

	<b>Boys</b>	<b>Girls</b>
<b>Yes</b>	3.4	6.3
<b>No</b>	91.2	86.9
<b>I do not know</b>	5.4	6.9

**Table 28.** Frequency of having had any close family member in hospital for COVID-19 by age group (%)

	10–11 yrs	12–14 yrs	15–17 yrs
Yes	3.5	4.5	8.0
No	84.2	90.5	88.0
I do not know	12.3	5.0	4.0

## Qualitative results

### a) Words underlined by participants to indicate they were considered difficult to understand

Item	5 <sup>th</sup> Class – 5 <sup>th</sup> Year Feedback
Did you ever test positive (a positive test result means that you had COVID-19) for COVID-19?	<i>(no underlined words)</i>
Did anyone in your close family (i.e., parent, sibling, or grandparent) test positive for COVID-19?	“i.e.”
If yes, were any of these people treated in the hospital for COVID-19?	Underlined full item

### b) Written comments from participants on the specific item or wording

Item	5 <sup>th</sup> Class – 5 <sup>th</sup> Year Feedback
Did you ever test positive (a positive test result means that you had COVID-19) for COVID-19?	“Maybe vaccine questions” written nearby
Did anyone in your close family (i.e., parent, sibling, or grandparent) test positive for COVID-19?	“but she’s in cork” “don’t have grandparents since 2018”
If yes, were any of these people treated in the hospital for COVID-19?	“uncle”

### c) Written comments from participants at the end of the questionnaire, but relevant to this item

“Did anyone in your close family test positive for covid, does that mean if they live near you because my granny is in Cork, so I haven't been in conade [contact?]”

### d) Relevant material from the fieldwork notes made during data collection

Some children found the COVID-19 questions challenging. Several children said that they found the questions boring. Some children believed the COVID-19 questions were important and thought they should be asked more in relation to vaccination (i.e. whether they were vaccinated, how many times and by which vaccine e.g. Pfizer). Children also suggested asking about their experience of having COVID-19 (e.g. how long ago they had COVID-19, how severe COVID was for them and their families and how long they had it for) and COVID-19 testing (e.g. have you been tested and how many times).

There was some confusion in relation to what constitutes as a close family member; one child explained that their grandmother was living in a distant city and was unsure if she would count as 'close family'. Some children mentioned that they may not know if a family member had been in hospital.

## COVID-19 impact

### Version for participants in 5<sup>th</sup> Class–5<sup>th</sup> Year<sup>5</sup>

2. Since the start of the COVID-19 pandemic, the lives of many people have been affected (i.e. lockdowns, school closures, home schooling, and social distancing).

What impact did these measures have on the following aspects of your life?

(A negative impact means it made things worse, a positive impact means it made things better). Please tick one box for each line

	Very negative	Quite negative	Neither negative nor positive	Quite positive	Very positive
Your life as a whole	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your health	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Relationships with your family	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Relationships with your friends	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your mental health (e.g. dealing with your emotions, stress etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your school performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Physical activity (e.g. sports, cycling, walks, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
What you ate or drank	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your future expectations (e.g. exams, jobs, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your family's financial situation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

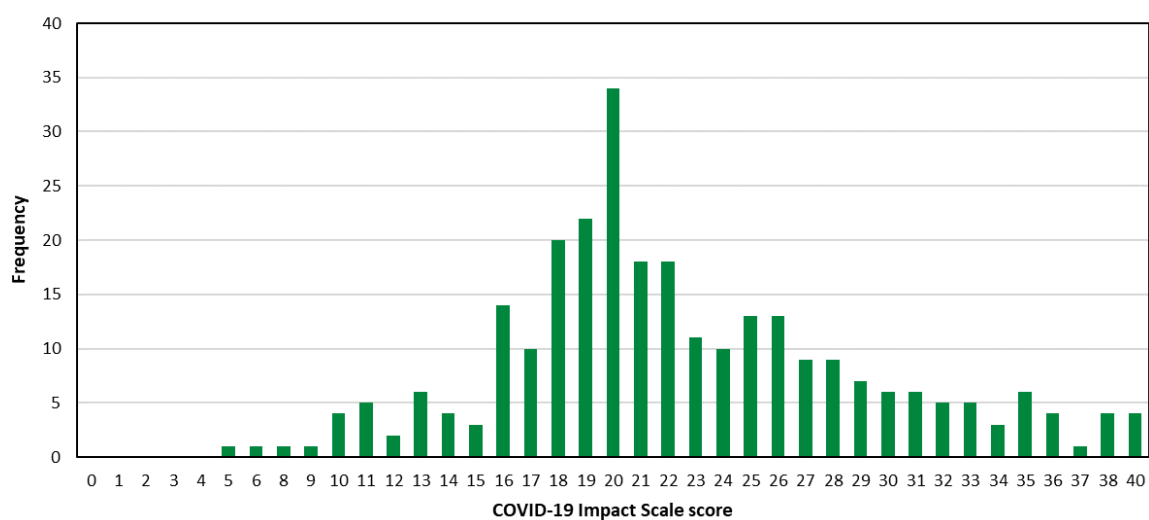
## Quantitative results<sup>6</sup>

In sum, 280 participants responded to all items on the Covid Impact Scale. One or more items were not answered by 42 participants (13.0%). The scale scores ranged from 0 to 40, where 0 means the most negative impact of COVID-19 on the participant, and 40 means the most positive impact. The distribution of the scores is presented in **Figure 2**, which shows a light skew to the right and platykurtosis (i.e. in general, participants perceived somewhat more positive than negative impact, but the scores are widely spread). The mean score for the Covid Impact Scale was 22.51 (SD = 6.70).

<sup>5</sup> A simplified version of the items was presented to participants in 3<sup>rd</sup> – 4<sup>th</sup> Class. Results on those are presented in **Appendix 3**.

<sup>6</sup> Item-wise response frequencies are presented in **Appendix 1**.

**Figure 2.** Distribution of the Covid Impact Scale scores, overall ( $N = 280$ )



**Table 29.** Descriptive statistics and reliability indices of the COVID-19 Impact Scale, for all and by gender and age ( $N = 322$ )

	<i>n</i>	Alpha	Mean	<i>SD</i>	<i>SE</i>	Min.	Max.
<b>Overall</b>	280	0.87	22.51	6.70	0.40	15	50
<b>Gender</b>							
Boys	135	0.89	23.73	6.79	0.58	21	50
Girls	145	0.84	21.37	6.45	0.54	15	48
<b>Age groups</b>							
10–11 yrs	48	0.84	23.44	6.72	0.97	18	48
12–14 yrs	184	0.87	22.86	6.55	0.48	19	50
15–17 yrs	48	0.88	20.23	6.60	1.00	15	48

## Qualitative results

### a) Words underlined by participants to indicate they were considered difficult to understand

Item	5 <sup>th</sup> Class – 5 <sup>th</sup> Year Feedback
Your life as a whole	"i.e." and "closures" (in the prompt) Entirety of question number "2" circled and no responses provided Underlined full item x4
Your health	<i>(no underlined words)</i>
Relationships with your family	<i>(no underlined words)</i>
Relationships with your friends	Circled full item
Your mental health (e.g. dealing with your emotions, stress)	Circled full item
Your school performance	<i>(no underlined words)</i>
Physical activity (e.g. sports, cycling, walks, etc.)	"physical"
What you ate or drank	Underlined full item
Your future expectations (e.g. exams, jobs, etc.)	<i>(no underlined words)</i>
Your family's financial situation	Circled full item Underlined full item, crossed out answer "financial"

### b) Written comments from participants on the specific item or wording

Item	5 <sup>th</sup> Class – 5 <sup>th</sup> Year Feedback
Your life as a whole	"does it mean as a person or not?" "I don't know" "???" "I don't know what [it] means"
Your health	<i>(no comments)</i>
Relationships with your family	<i>(no comments)</i>
Relationships with your friends	"I don't no [know] what you mean"
Your mental health (e.g., dealing with your emotions, stress, etc.)	"a little" "don't know"
Your school performance	"?" x2
Physical activity (e.g. sports, cycling, walks, etc.)	<i>(no comments)</i>
What you ate or drank	"?"
Your future expectations (e.g. exams, jobs, etc.)	"I don't know" x2
Your family's financial situation	"I am not sure" "Don't know what [it] means" "I don't know" x2

### c) Written comments from participants at the end of the questionnaire, but relevant to this item

*No written comments*

### d) Relevant material from the fieldwork notes made during data collection

The COVID-19 questions raised some difficulties for the children. They thought that it was good to ask about COVID-19 but there should be a response option for "it didn't affect me". Some children

did not understand what “i.e.” meant. Some children suggested changing the scale from “very negative – very positive” to “worse – better”. In one classroom discussion it was raised that one could have learnt something new during COVID-19.

Children were confused by the first item (What impact did these measures have on your life as a whole?) and unsure of the phrase “as a whole”. They suggested changing the phrasing of “as a whole” to “overall” or “altogether”.

Some children were unsure what was meant by the fourth item (What impact did these measures have on relationships with your friends?) and asked, “how do you mean?”.

## Planetary health

### Version A (simplified)

Protecting the environment is closely linked to protecting human health. This link between the environment and human health is known as planetary/environmental health. We are interested in what you think about environmental health and things that can be done to protect the environment.

1. Below are some statements about your relationship with environmental health. Please show your degree of agreement or disagreement with each one.  
Please tick one box for each line

	Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree
Protecting all living creatures is important for sustainable development.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We need to move to renewable natural resources for sustainable development.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We need to reduce all sorts of waste for sustainable development.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I think that we need stricter laws and rules to protect the environment.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using less water is necessary for sustainable development.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am always looking for ways to help the environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I choose environmental topics for school projects when I can.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have changed my lifestyle to protect the environment.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My school is environmentally friendly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My family is environmentally friendly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My friends are environmentally friendly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### Version B (original)

Protecting the environment is closely linked to protecting human health. This link between the environment and human health is known as planetary/environmental health. We are interested in what you think about environmental health and things that can be done to protect the environment.

1. Below are some statements about your relationship with environmental health. Please show your degree of agreement or disagreement with each one.  
Please tick one box for each line

	Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree
Preserving the variety of living creatures is necessary for sustainable development (preserving biological diversity)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sustainable development requires a shift to renewable natural resources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sustainable development demands that we humans reduce all sorts of waste	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I think that we need stricter laws and regulations to protect the environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reducing water consumption is necessary for sustainable development	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
At the present time, I am energetically pursuing ways to solve environmental problems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I choose an environmental topic when I can choose a topic for an assignment in school	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have changed my personal lifestyle to protect the environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel that my school is environmentally friendly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My family is environmentally friendly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My friends are environmentally friendly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

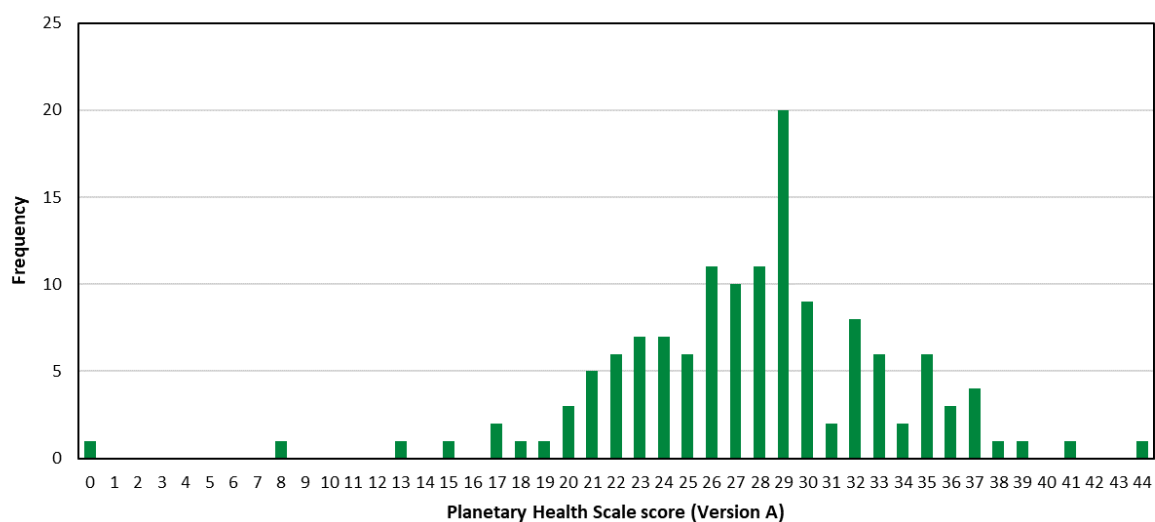
## Quantitative results<sup>7</sup>

In sum, 275 participants responded to all items on the Planetary Health Scale. One or more items were not answered by 47 participants (14.6%). The scale scores ranged from 0 to 44, where 0 means no motivation to live an environmentally friendly life, and 44 indicates very strong motivation to live an environmentally friendly life. The distribution of the scores is presented in **Figure 3a** (Version A) and **Figure 3b** (Version B). In both versions, the scores are roughly normally distributed, but in the original (Version B), the scores are generally lower than in the simplified scale (Version A).

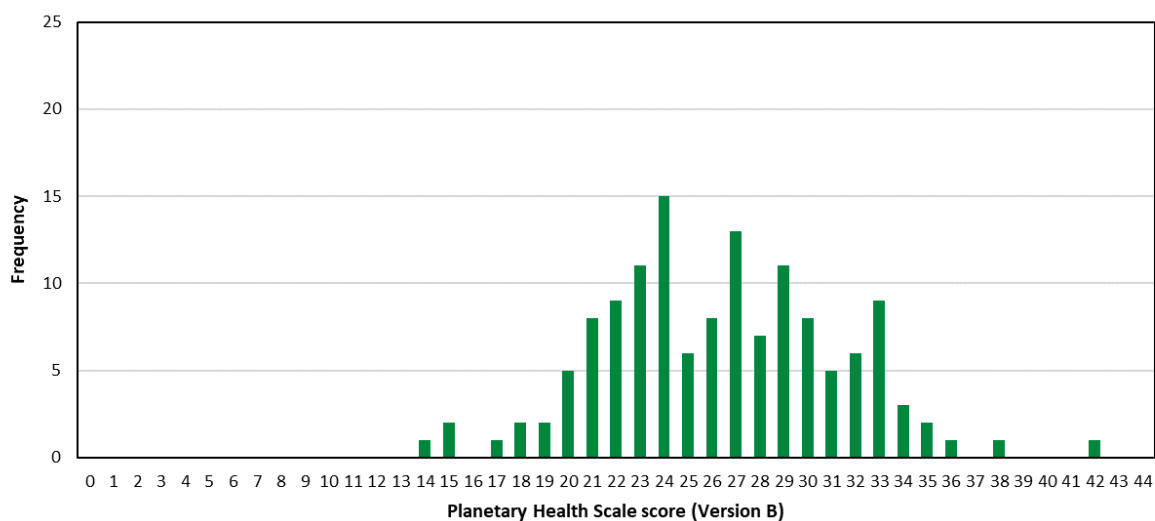
<sup>7</sup> Item-wise response frequencies are presented in **Appendix 1**. Descriptive statistics and reliability indices for the Planetary Health subscales can be found in **Appendix 2**.



**Figure 3a.** Distribution of the Planetary Health Scale scores, Version A (simplified) ( $N = 138$ )



**Figure 3b.** Distribution of the Planetary Health Scale scores, Version B (original) ( $N = 137$ )





## Qualitative results

### a) Words underlined by participants to indicate they were considered difficult to understand

Item	Version A	Version B
A: Protecting all living creatures is important for sustainable development B: Preserving the variety of living creatures is necessary for sustainable development (preserving biological diversity)	Underlined “Planetary health” heading x2 “sustainable”	Circled full item x4 “planetary” “biological diversity” x3 “preserving” x3 “sustainable” “diversity”
A: We need to move to renewable natural resources for sustainable development B: Sustainable development requires a shift to renewable natural resources	Circled full item x3 “renewable” x2 “sustainable” x2 “development”	Underlined full item x2 “renewable” x2 “sustainable” x4
A: We need to reduce all sorts of waste for sustainable development B: Sustainable development demands that we humans reduce all sorts of waste	“sustainable development”	“sustainable” x4
A: I think that we need stricter laws and rules to protect the environment B: I think that we need stricter laws and regulations to protect the environment	(no underlined words)	(no underlined words)
A: Using less water is necessary for sustainable development B: Reducing water consumption is necessary for sustainable development	(no underlined words)	Circled full item “consumption” x4 “sustainable”
A: I am always looking for ways to help the environment B: At the present time, I am energetically pursuing ways to solve environmental problems	(no underlined words)	“pursuing”
A: I choose environmental topics for school projects when I can B: I choose an environmental topic when I can choose a topic for an assignment in school	(no underlined words)	(no underlined words)
A: I have changed my lifestyle to protect the environment B: I have changed my personal lifestyle to protect the environment	“environment”	(no underlined words)
A: My school is environmentally friendly B: I feel that my school is environmentally friendly	Circled full item “environmentally” “friendly”	(no underlined words)
A: My family is environmentally friendly B: My family is environmentally friendly	“environmentally”	(no underlined words)
A: My friends are environmentally friendly B: My friends are environmentally friendly	“environmentally”	Circled full item

**b) Written comments from participants on the specific item or wording**

Item	Version A	Version B
A: Protecting all living creatures is important for sustainable development B: Preserving the variety of living creatures is necessary for sustainable development (preserving biological diversity)	"confusing"	"?" "I don't know" x2 "Don't know what [it] means"
A: We need to move to renewable natural resources for sustainable development B: Sustainable development requires a shift to renewable natural resources	"?" "confusing" Ticked two boxes	"not 100% sure what this means so I'm going to leave it blank" "bit difficult to understand" "I don't know" "I don't know what it means" "?"
A: We need to reduce all sorts of waste for sustainable development B: Sustainable development demands that we humans reduce all sorts of waste	"?" "confusing"	"not sure can't really understand [the] words" "bit difficult to understand"
A: I think that we need stricter laws and rules to protect the environment B: I think that we need stricter laws and regulations to protect the environment	"confusing"	(no comments)
A: Using less water is necessary for sustainable development B: Reducing water consumption is necessary for sustainable development	"confusing"	"? Didn't understand"
A: I am always looking for ways to help the environment B: At the present time, I am energetically pursuing ways to solve environmental problems	"confusing"	(no comments)
A: I choose environmental topics for school projects when I can B: I choose an environmental topic when I can choose a topic for an assignment in school	"?" "confusing"	"can't"
A: I have changed my lifestyle to protect the environment B: I have changed my personal lifestyle to protect the environment	"confusing"	(no comments)
A: My school is environmentally friendly B: I feel that my school is environmentally friendly	(no comments)	(no comments)
A: My family is environmentally friendly B: My family is environmentally friendly	(no comments)	(no comments)
A: My friends are environmentally friendly B: My friends are environmentally friendly	"one of my friends called me a coward"	"I don't know that is a guess"

**c) Written comments from participants at the end of the questionnaire, but relevant to this item**

“It was easy enough. Q2 page 7 some of the words were a bit difficult”

“I didn’t like page 7’s questions”

“I feel a question involving childrens’ fear about climate change would be helpful 😊”

**d) Relevant material from the fieldwork notes made during data collection**

Many children indicated that they found the planetary health items challenging. A lot of children had difficulty understanding the statements, they thought the text was too long and some children said that they lost concentration while completing this section. One 5<sup>th</sup> class teacher thought that some children would not understand the wording of the questions. A 6<sup>th</sup> class teacher double checked with students to see if they understood the questions and they replied yes. Some children mentioned that nobody would be honest about their friends or family being environmentally friendly. One student thought that “I’m not sure” should be an option in response to the statement “my friends are environmentally friendly”.

Children found version B of the items difficult and indicated that they would require more explanation to understand them. Several children did not understand the first statement in version B (“Preserving the variety of living creatures is necessary for sustainable development (preserving biological diversity)”), they did not know what “preserving” meant and one child asked, “Does preserving mean saving lives?”. Children also had difficulty understanding the term “sustainable development”. Some children indicated that although they found this section long and difficult, they thought the items were important and interesting.

## Loneliness

Only one version of this item was used:

**During the past 12 months, how often have you felt lonely?**

☐ Never

☐ Rarely

☐ Sometimes

☐ Most of the time

☐ Always

## Quantitative results

**Table 31.** Frequency of feeling lonely ( $N = 322$ )

	<i>Frequency</i>	<i>Percent</i>	<i>Valid percent</i>
<b>Never</b>	64	19.9	20.5
<b>Rarely</b>	88	27.3	28.2
<b>Sometimes</b>	105	32.6	33.7
<b>Most of the time</b>	45	14.0	14.4
<b>Always</b>	10	3.1	3.2
<b>Total</b>	312	96.9	100.0
<b>Missing</b>	10	3.1	—

**Table 32.** Frequency of feeling lonely by gender (%)

	<b>Boys</b>	<b>Girls</b>
<b>Never</b>	32.2	10.2
<b>Rarely</b>	36.3	21.1
<b>Sometimes</b>	24.0	42.2
<b>Most of the time</b>	6.8	21.1
<b>Always</b>	0.7	5.4

**Table 33.** Frequency of feeling lonely by age group (%)

	<b>10–11 yrs</b>	<b>12–14 yrs</b>	<b>15–17 yrs</b>
<b>Never</b>	22.0	21.3	15.7
<b>Rarely</b>	28.8	29.2	23.5
<b>Sometimes</b>	33.9	33.2	35.3
<b>Most of the time</b>	11.9	13.4	21.6
<b>Always</b>	3.4	3.0	3.9

## Qualitative results

### a) Words underlined by participants to indicate they were considered difficult to understand

Underlined full item

### b) Written comments from participants on the specific item or wording

“I feel really insecure about answering this .... Question”

### c) Written comments from participants at the end of the questionnaire, but relevant to this item

*No written comments*

### d) Relevant material from the fieldwork notes made during data collection

Some children thought that asking, “How often have you felt lonely?” was too personal and were not happy answering this question.

## Self-efficacy

Only one version of the item was used:

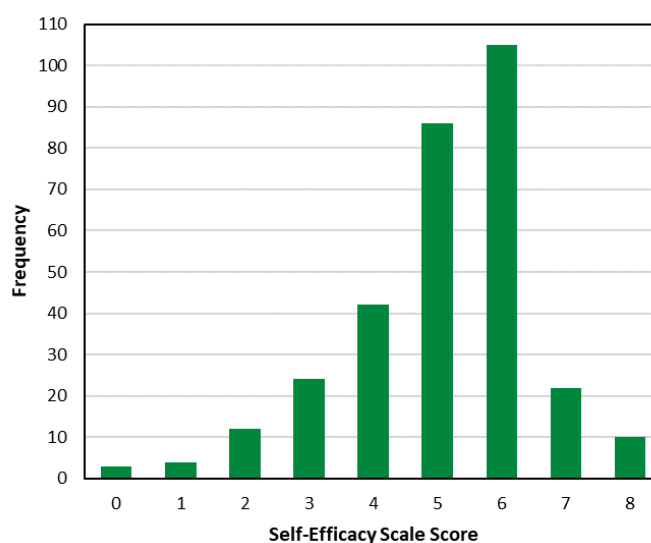
**2. The following questions are about the way you deal with things.**  
Please tick one box for each line

	Never	Rarely	Sometimes	Most of the time	Always
How often do you find a solution to a problem if you try hard enough?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How often do you manage to do the things that you decide to do?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Quantitative results<sup>8</sup>

In sum, 308 participants responded to both items of the Self-Efficacy Scale. One or more items were not answered by 14 participants (4.3%). The scale scores ranged from 0 to 8, where 0 indicates the lowest, and 8 the highest self-efficacy. The distribution of the scores is presented in **Figure 4**. The majority of the participants scored at the higher end of the scale. Subsequently, the score was split into three groups, based on the instructions of Damsgaard and Madsen (2020): High self-efficacy (score 7–8), medium self-efficacy (score 5–6) and low self-efficacy (0–4).

**Figure 4.** Distribution of the Self-Efficacy Scale scores ( $N = 308$ )



<sup>8</sup> Item-wise response frequencies are presented in **Appendix 1**.



**Table 34.** Descriptive statistics and reliability indices of the Self-Efficacy Scale, for all and by gender and age ( $N = 322$ )

	<i>n</i>	<b>Alpha</b>	<b>Mean</b>	<b>SD</b>	<b>SE</b>	<b>Min.</b>	<b>Max.</b>
<b>Overall</b>	308	.57	5.07	1.47	0.08	0	8
<b>Gender</b>							
Boys	146	.61	5.28	1.51	0.13	0	8
Girls	162	.52	4.88	1.42	0.11	0	8
<b>Age groups</b>							
10–11 yrs	57	.36	5.10	1.46	0.19	1	8
12–14 yrs	201	.60	5.00	1.50	0.12	0	8
15–17 yrs	50	.70	5.36	1.37	0.19	3	8

**Table 35.** Frequency of self-efficacy groups ( $N = 308$ )

	<b>Frequency</b>	<b>Percent</b>	<b>Valid percent</b>
<b>Low self-efficacy</b>	85	26.4	27.6
<b>Medium self-efficacy</b>	191	59.3	62.0
<b>High self-efficacy</b>	32	9.9	10.4
<b>Total</b>	308	95.7	100.0
<b>Missing</b>	14	4.3	—

**Table 36.** Frequency of self-efficacy groups by gender (%)

	<b>Boys</b>	<b>Girls</b>
<b>Low self-efficacy</b>	26.0	29.0
<b>Medium self-efficacy</b>	57.5	66.0
<b>High self-efficacy</b>	16.4	4.9

**Table 37.** Frequency of self-efficacy groups by age group (%)

	<b>10–11 yrs</b>	<b>12–14 yrs</b>	<b>15–17 yrs</b>
<b>Low self-efficacy</b>	29.8	27.4	26.0
<b>Medium self-efficacy</b>	59.6	63.2	60.0
<b>High self-efficacy</b>	10.5	9.5	14.0

## Qualitative results

### a) Words underlined by participants to indicate they were considered difficult to understand

Item	5 <sup>th</sup> Class – 5 <sup>th</sup> Year Feedback
How often do you find a solution to a problem if you try hard enough?	Underlined full item “rarely” “if you try hard enough”
How often do you manage to do the things that you decide to do?	“things that you decide to do”

### b) Written comments from participants on the specific item or wording

Item	5 <sup>th</sup> Class – 5 <sup>th</sup> Year Feedback
How often do you find a solution to a problem if you try hard enough?	“kind of confused me” “I had to read it a few times to understand”
How often do you manage to do the things that you decide to do?	“I don’t understand” “I had to read it a few times to understand”

### c) Written comments from participants at the end of the questionnaire, but relevant to this item

*No written comments*

### d) Relevant material from the fieldwork notes made during data collection

There were no researcher field notes recorded for the ‘self-efficacy solution’ question. There was one note recorded for the item ‘how often do you manage to do the things that you decide to do’ in the 5<sup>th</sup> Class – 1<sup>st</sup> Year group, which stated that a “student struggled to understand the phrasing of this question”.

## Perceived stress

Only one version of the scale was used:

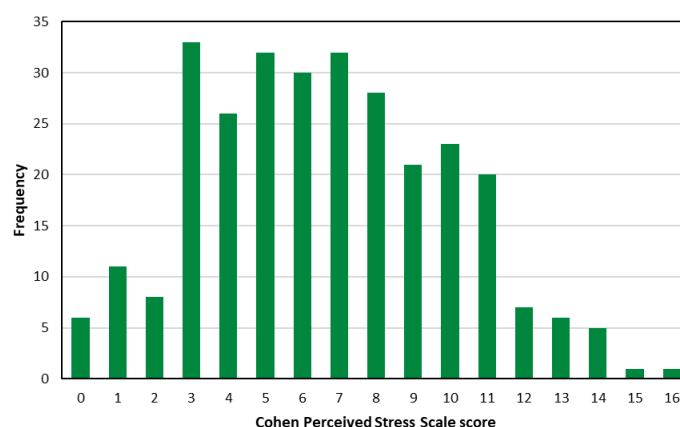
**13. In the last month...**  
Please tick one box for each line.

	Never	Almost never	Sometimes	Fairly often	Very often
How often have you felt that you were unable to control the important things in your life?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How often have you felt confident about your ability to handle your personal problems?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How often have you felt that things were going your way?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How often have you felt difficulties were piling up so high that you could not overcome them?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Quantitative results<sup>9</sup>

In sum, 290 participants gave response to all items on the Cohen Perceived Stress Scale, 4-item version (CPSS-4) (Cohen & Williamson, 1988). One or more items were not answered by 33 participants (10.2%). The scale scores ranged from 0 to 16, where 0 means not at all being stressed, while 16 means being very much stressed in the last month. The mean score for the CPSS-4 was 6.62 (SD = 3.33). The distribution of the scores is presented in **Figure 5**.

**Figure 5.** Distribution of the CPSS scores, overall (N = 289)



<sup>9</sup> Item-wise response frequencies are presented in **Appendix 1**.

**Table 38.** Descriptive statistics and reliability indices of the Cohen Perceived Stress Scale, for all and by gender and age ( $N = 289$ )

	<i>n</i>	Alpha	Mean	SD	SE	Min.	Max.
<b>Overall</b>	289	.75	6.62	3.33	0.20	0	16
<b>Gender</b>							
Boys	131	.66	5.40	2.83	0.25	0	14
Girls	158	.77	7.63	3.37	0.27	0	16
<b>Age groups</b>							
10–11 yrs	56	.75	5.95	3.60	0.48	0	14
12–14 yrs	184	.75	6.79	3.28	0.24	0	16
15–17 yrs	49	.77	6.73	3.15	0.45	1	14

## Qualitative results

### a) Words underlined by participants to indicate they were considered difficult to understand

Item	5 <sup>th</sup> Class – 5 <sup>th</sup> Year Feedback
How often have you felt that you were unable to control the important things in your life?	Underlined full item
How often have you felt confident about your ability to handle your personal problems?	Underlined full item x2
How often have you felt that things were going your way?	(no underlined words)
How often have you felt difficulties were piling up so high that you could not overcome them?	“difficulties” Underlined full item

### b) Written comments from participants on the specific item or wording

Item	5 <sup>th</sup> Class – 5 <sup>th</sup> Year Feedback
How often have you felt that you were unable to control the important things in your life?	“I don’t know” “didn’t understand”
How often have you felt confident about your ability to handle your personal problems?	“didn’t understand”
How often have you felt that things were going your way?	(no comments)
How often have you felt difficulties were piling up so high that you could not overcome them?	“?” “Didn’t like answering” (in reference to all items)

### c) Written comments from participants at the end of the questionnaire, but relevant to this item

No written comments

**d) Relevant material from the fieldwork notes made during data collection**

In the 2<sup>nd</sup> to 5<sup>th</sup> Year version, a handful of students did not answer Item 4 ('How often have you felt difficulties were piling up so high that you could not overcome them?') because the survey was missing answer boxes. Some students added boxes and completed the questions themselves.

## Prevalence of menstruation and period poverty

### Prevalence of menstruation and age of onset of menstruation

Questions on menstruation and period poverty were only asked from girls in 5<sup>th</sup> Class – 5<sup>th</sup> Year.

First, we asked girls whether they have begun to menstruate (have periods). Of the 169 girls, 18 gave no answer (10.7%). Of those who answered the question, 51 girls (30.2%) reported not having, and 100 girls (59.2%) reported having started menstruating. Their mean age of onset of menstruation was 12.01 years (SD = 0.14). Reported age of onset of menstruation ranged between 6.75 and 14.75 years.

Following the question on menstruation and age of onset, we asked girls about the affordability of period products and missing school or other daily activities due to not being able to afford such products. The below tables contain data of those girls ( $N = 100$ ) who reported already having a period.

**2. Have you ever...**  
Please tick one box for each line.

	Never	1 time	2 times	3-4 times	5 times or more
been unable to afford period products?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
missed school because you were unable to afford period products?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
missed other daily activities because you were unable to afford period products?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### Quantitative findings

- (i) Being unable to afford period products

**Table 39.** Frequency of being unable to afford period products ( $N = 100$ )

	Frequency	Percent	Valid percent
Never	96	96.0	96.0
1 time	2	2.0	2.0
2 times	1	1.0	1.0
3-4 times	1	1.0	1.0
5 times or more	0	0	0
Total	100	100	100
Missing	0	0	—

**Table 40.** Frequency of being unable to afford period products by age group (%)

	10–11 yrs	12–14 yrs	15–17 yrs
<b>Never</b>	87.5	97.1	95.7
<b>1 time</b>	0	1.4	4.3
<b>2 times</b>	12.5	0	0
<b>3-4 times</b>	0	1.4	0
<b>5 times or more</b>	0	0	0

(ii) Missed school because of being unable to afford period products

**Table 41.** Frequency of missed school because of being unable to afford period products (*N* = 100)

	<i>Frequency</i>	<i>Percent</i>	<i>Valid percent</i>
<b>Never</b>	96	96.0	96.0
<b>1 time</b>	2	2.0	2.0
<b>2 times</b>	2	2.0	2.0
<b>3-4 times</b>	0	0	0
<b>5 times or more</b>	0	0	0
<b>Total</b>	100	100.0	100.0
<b>Missing</b>	0	0	—

**Table 42.** Frequency of missed school because of being unable to afford period products by age group (%)

	10–11 yrs	12–14 yrs	15–17 yrs
<b>Never</b>	100	95.7	96.0
<b>1 time</b>	0	2.9	2.0
<b>2 times</b>	0	1.4	2.0
<b>4-3 times</b>	0	0	0
<b>5 times or more</b>	0	0	0

(iii) Missed daily activities because of being unable to afford period products

**Table 43.** Frequency of missed daily activities because of being unable to afford period products (*N* = 100)

	<i>Frequency</i>	<i>Percent</i>	<i>Valid percent</i>
<b>Never</b>	96	96.0	97.0
<b>1 time</b>	3	3.0	3.0
<b>2 times</b>	0	0	0
<b>3-4 times</b>	0	0	0
<b>5 times or more</b>	0	0	0
<b>Total</b>	99	99.0	100.0
<b>Missing</b>	1	1.0	—

**Table 44.** Frequency of missed activities because of being unable to afford period products (%)

	10–11 yrs	12–14 yrs	15–17 yrs
<b>Never</b>	87.5	98.6	95.5
<b>1 time</b>	12.5	1.4	4.5
<b>2 times</b>	0	0	0
<b>3-4 times</b>	0	0	0
<b>5 times or more</b>	0	0	0

### Qualitative findings

#### a) Words underlined by participants to indicate they were considered difficult to understand

Item	5 <sup>th</sup> Class – 5 <sup>th</sup> Year Feedback
been unable to afford period products?	Underlined full question
missed school because you were unable to afford period products?	Circled full item
missed other daily activities because you were unable to afford period products?	Circled full item

#### b) Written comments from participants on the specific item or wording

Item	5 <sup>th</sup> Class – 5 <sup>th</sup> Year Feedback
been unable to afford period products?	“I know my family can afford these things because of my mother” “I haven’t got it yet” “I only had stomachaches but I didn’t bleed yet”
missed school because you were unable to afford period products?	(no comments)
missed other daily activities because you were unable to afford period products?	“afford period products”

#### c) Written comments from participants at the end of the questionnaire, but relevant to this item

*No written comments*

#### d) Relevant material from the fieldwork notes made during data collection

Some students felt uncomfortable being asked about their period, they thought that it was inappropriate and too personal “you don’t need to know”. Other students were comfortable answering questions in relation to periods and believed that these questions were important to ask. Some male students thought that period products were free, they all agreed that they should be free.



## Period symptoms

**3. Have you ever...**  
Please tick one box for each line.

	Never	1 time	2 times	3-4 times	5 times or more
experienced period symptoms (e.g. pain, stomach cramps, mood changes)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
missed school because of period symptoms?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
missed other daily activities because of period symptoms?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Quantitative findings

### (i) Experiencing period symptoms

**Table 45.** Frequency of experiencing period symptoms ( $N = 100$ )

	Frequency	Percent	Valid percent
Never	6	6.0	6.0
1 time	3	3.0	3.0
2 times	7	7.0	7.0
3-4 times	10	10.0	10.0
5 times or more	74	74.0	74.0
Total	100	100.0	100.0
Missing	0	0	—

**Table 46.** Frequency of experiencing period symptoms by age group (%)

	10–11 yrs	12–14 yrs	15–17 yrs
Never	12.5	7.2	0
1 time	12.5	1.4	4.3
2 times	12.5	7.2	4.3
3-4 times	12.5	13.0	0
5 times or more	50.0	71.0	91.3

(ii) Missed school because of period symptoms

**Table 47.** Frequency of missed school because of period symptoms (*N* = 100)

	<i>Frequency</i>	<i>Percent</i>	<i>Valid percent</i>
<b>Never</b>	47	47.0	48.0
<b>1 time</b>	16	16.0	16.3
<b>2 times</b>	8	8.0	8.2
<b>3-4 times</b>	11	11.0	11.2
<b>5 times or more</b>	16	16.0	16.3
<b>Total</b>	98	98.0	100.0
<b>Missing</b>	2	2.0	—

**Table 48.** Frequency of missed school because of period symptoms by age group (%)

	<b>10–11 yrs</b>	<b>12–14 yrs</b>	<b>15–17 yrs</b>
<b>Never</b>	75.0	47.8	39.1
<b>1 time</b>	25.0	14.9	17.4
<b>2 times</b>	0	10.4	4.3
<b>3-4 times</b>	0	9.0	21.7
<b>5 times or more</b>	0	17.9	17.4

(iii) Missed daily activities because of period symptoms

**Table 49.** Frequency of missed activities because of period symptoms (*N* = 100)

	<i>Frequency</i>	<i>Percent</i>	<i>Valid percent</i>
<b>Never</b>	96	96.0	97.0
<b>1 time</b>	3	3.0	3.0
<b>2 times</b>	0	0	0
<b>3-4 times</b>	0	0	0
<b>5 times or more</b>	0	0	0
<b>Total</b>	99	99.0	100.0
<b>Missing</b>	1	1.0	—

**Table 50.** Frequency of missed daily activities because of period symptoms by age group (%)

	<b>10–11 yrs</b>	<b>12–14 yrs</b>	<b>15–17 yrs</b>
<b>Never</b>	87.5	98.6	95.5
<b>1 time</b>	12.5	1.4	4.5
<b>2 times</b>	0	0	0
<b>3-4 times</b>	0	0	0
<b>5 times or more</b>	0	0	0

## Qualitative findings

### a) Words underlined by participants to indicate they were considered difficult to understand

Item	5 <sup>th</sup> Class – 5 <sup>th</sup> Year Feedback
experienced period symptoms (e.g. pain, stomach cramps, mood changes)?	Circled/underlined full item x2
missed school because of period symptoms?	<i>(no underlined words)</i>
missed other daily activities because of period symptoms?	Underlined full item "symptoms"

### b) Written comments from participants on the specific item or wording

Item	5 <sup>th</sup> Class – 5 <sup>th</sup> Year Feedback
experienced period symptoms (e.g. pain, stomach cramps, mood changes)?	"Dont have it" written beside "3" "everytime" "most of the time" "all of the time"
missed school because of period symptoms?	<i>(no comments)</i>
missed other daily activities because of period symptoms?	"I am a girl I just don't want to answer these" "I suggest adding the question 'have your cramps/mood changes disrupted your life in any way?'"

### c) Written comments from participants at the end of the questionnaire, but relevant to this item

"I didnt like the questens about girls aksing about their periods"

### d) Relevant material from the fieldwork notes made during data collection

Some students felt uncomfortable being asked about their period, they thought that it was inappropriate and too personal ("you don't need to know"). Other students were comfortable answering questions in relation to periods and believed that these questions were important to ask.

## Self-identified sexual orientation

**How would you describe your sexual orientation?**  
**We mean which gender partners are you attracted to.**

☐ Heterosexual (attracted to the opposite gender)

☐ Mostly heterosexual

☐ Bisexual (attracted to both girls and boys)

☐ Gay or lesbian (attracted to the same gender).

☐ Other: \_\_\_\_\_

☐ I am not sure yet

☐ I don't understand this question

## Quantitative findings

**Table 51.** Frequency of self-identified sexual orientation ( $N = 129$ )

	<i>Frequency</i>	<i>Percent</i>	<i>Valid percent</i>
<b>Heterosexual</b>	96	74.4	77.4
<b>Mostly heterosexual</b>	4	3.1	3.2
<b>Bisexual</b>	11	8.5	8.9
<b>Gay or lesbian</b>	2	1.6	1.6
<b>Other sexual orientation</b>	4	3.1	3.2
<b>I am not sure yet</b>	5	3.9	4.0
<b>I don't understand this question</b>	2	1.6	1.6
<b>Total</b>	124	96.1	100.0
<b>Missing</b>	5	3.9	—

*Note.* One participant noted that they were asexual in the textbox underneath this question but did not tick any of the response options provided.

Of the four participants who used the 'other' option, two identified as asexual; one as straight; and one noted "Attracted to opposite gender I'm a girl and like lads".

**Table 52.** Frequency of sexual orientation by gender (%)

	<b>Boys</b>	<b>Girls</b>
<b>Heterosexual</b>	83.9	71.0
<b>Mostly heterosexual</b>	1.6	4.8
<b>Bisexual</b>	6.5	11.3
<b>Gay or lesbian</b>	1.6	1.6
<b>Other sexual orientation</b>	4.8	1.6
<b>I am not sure yet</b>	0	8.1
<b>I don't understand this question</b>	1.6	1.6

**Table 53.** Frequency of sexual orientation by age group (%)

	12–14 yrs	15–17 yrs
<b>Heterosexual</b>	78.4	76.0
<b>Mostly heterosexual</b>	4.1	2.0
<b>Bisexual</b>	9.5	8.0
<b>Gay or lesbian</b>	0	4.0
<b>Other sexual orientation</b>	4.1	2.0
<b>I am not sure yet</b>	2.7	6.0
<b>I don't understand this question</b>	1.4	2.0

## Qualitative findings

### a) Words underlined by participants to indicate they were considered difficult to understand

2 <sup>nd</sup> Year – 5 <sup>th</sup> Year Feedback
Highlighted full item Highlighted full item and response options “heterosexual”, “mostly heterosexual”, bisexual”, “gay or lesbian” “heterosexual” “orientation”

### b) Written comments from participants on the specific item or wording

2 <sup>nd</sup> Year – 5 <sup>th</sup> Year Feedback
“I’m straight not gay” “Straight” with arrow pointing towards “heterosexual”

### c) Written comments from participants at the end of the questionnaire, but relevant to this item

*No written comments*

### d) Relevant material from the fieldwork notes made during data collection

*No relevant material*

## Sexual fantasies

**When you think or daydream about sex, do you dream about:**

☐ Girls or women

☐ Boys or men

☐ Both

☐ I don't daydream about sex

## Quantitative findings

**Table 54.** Frequency of sexual fantasies ( $N = 129$ )

	<i>Frequency</i>	<i>Percent</i>	<i>Valid percent</i>
<b>Girls or women</b>	38	29.5	31.7
<b>Boys or men</b>	31	24.0	25.8
<b>Both</b>	11	8.5	9.2
<b>I don't daydream about sex</b>	40	31.0	33.3
<b>Total</b>	120	93.0	100.0
<b>Missing</b>	9	7.0	—

**Table 55.** Frequency of sexual fantasies by gender (%)

	<b>Boys</b>	<b>Girls</b>
<b>Girls or women</b>	59.7	1.7
<b>Boys or men</b>	3.2	50.0
<b>Both</b>	6.5	12.1
<b>I don't daydream about sex</b>	30.6	36.2

**Table 56.** Frequency of sexual fantasies by age group (%)

	<b>12–14 yrs</b>	<b>15–17 yrs</b>
<b>Girls or women</b>	35.2	26.5
<b>Boys or men</b>	21.1	32.7
<b>Both</b>	7.0	12.2
<b>I don't daydream about sex</b>	36.6	28.6

## Qualitative findings

### a) Words underlined by participants to indicate they were considered difficult to understand

2 <sup>nd</sup> Year – 5 <sup>th</sup> Year Feedback
Highlighted full item “daydream about sex” x3

### b) Written comments from participants on the specific item or wording

2 <sup>nd</sup> Year – 5 <sup>th</sup> Year Feedback
“None of your Business That’s a very weird question. Do you daydream about sex?” Circled “girls or women” and “boys or men” and wrote “2 GENDERS”

### c) Written comments from participants at the end of the questionnaire, but relevant to this item

*No written comments*

### d) Relevant material from the fieldwork notes made during data collection

Some students thought that this question was too personal. In one class students suggested changing the words “male” and “female” to “boys” and “girls”.

## Gender of last sexual partner

In HBSC questions on sex are restricted to those aged 15 or older. Of those 54, only one reported that they had ever had sex, while five did not respond to the item. Forty-seven participants answered a follow-up question on gender of their last sexual partner, but 95.7% of them reported that they had not had sexual intercourse.

Version A ('other' option added)	Version B (original)
<p><b>The last time you had sexual intercourse, was your partner...</b></p> <p><input type="checkbox"/> I haven't had sexual intercourse</p> <p><input type="checkbox"/> A girl or a woman</p> <p><input type="checkbox"/> A boy or a man</p> <p><input type="checkbox"/> Other: _____</p>	<p><b>The last time you had sexual intercourse, was your partner...</b></p> <p><input type="checkbox"/> I haven't had sexual intercourse</p> <p><input type="checkbox"/> A girl or a woman</p> <p><input type="checkbox"/> A boy or a man</p>

## Quantitative findings

**Table 57.** Frequency of gender of last sexual partner ( $N = 54$ )

	Frequency	Percent	Valid percent
I have not had sexual intercourse	45	83.3	95.7
A girl or a women	1	1.9	2.1
A boy or a man	0	0.0	0
Other	1 <sup>10</sup>	1.9	2.1
Total	47	87.0	100.0
Missing	7	13.0	—

**Table 58.** Frequency of gender of last sexual partner by gender (%)

	Boy	Girl
I have not had sexual intercourse	95.8	95.7
A girl or a women	4.2	0
A boy or a man	0	0
Other	0	4.3

<sup>10</sup> In contrast to the sexual intercourse question, where only one participant indicated ever having had sexual intercourse, there were two participants who indicated the gender of their last sexual partner. In the HBSC study we generally observe a small number of participants who report never having had sexual intercourse, but their answers on follow-up questions (e.g. on their age at first sex, or whether they or their partner used condom or contraceptive pill at last intercourse) imply that they have had sexual intercourse.



**Table 59.** Frequency of gender of last sexual partner by age group (%)

	15 yrs	16 yrs	17 yrs
I have not had sexual intercourse	100.0	94.1	100.0
A girl or a women	0	2.9	0
A boy or a man	0	0	0
Other	0	2.9	0

**Table 60.** Frequency of gender of last sexual partner by version (%)

	A	B
I have not had sexual intercourse	95.5	96.0
A girl or a women	0	4.0
A boy or a man	0	0
Other	4.5	—

### Qualitative findings

**a) Words underlined by participants to indicate they were considered difficult to understand**

*No words underlined*

**b) Written comments from participants on the specific item or wording**

*No written comments*

**c) Written comments from participants at the end of the questionnaire, but relevant to this item**

*No written comments*

**d) Relevant material from the fieldwork notes made during data collection**

*No relevant material*

## Section 5: DISCUSSION

The aim of the pilot study presented in this report was to test the appropriateness of potential new questionnaire items, and to determine whether or not they should be introduced into the 2022 HBSC Ireland study. We had concerns about whether some original items would be understandable to participants. Therefore we developed a second version of some items, with simplified language (for food security, COVID-19 impact, COVID-19 exposure and planetary health). Based on the feedback from sexual and gender minority youth from a separate pilot study (see Költő et al., 2021), we also tested two versions of the item on the gender of the last sexual partner: beside the original version, we used another one where an open-ended 'other' option was offered to report the gender of the partner. Other questions were administered only with their original wording and response options. We calculated and presented frequency and distribution of the responses; descriptive statistics and Cronbach's alpha value for the scales; along with written feedback and researchers' fieldwork notes from classroom discussions following the administration of the pilot questionnaire.

### ***Birth-registered sex***

While there was a difference in the proportion of girls and boys across the original and the simplified versions, they were not different in terms of feedback, therefore we decided to keep the original items.

### ***Physical activity***

Here we compared the original item (with a response option '2 to 3 times a week') to a new international mandatory version where 2 times a week and 3 times a week were presented as separate response options. The distribution of the answers demonstrated that participants used both separated options, therefore we consider the new version of the item response options to be acceptable.

### ***Food security scale***

The original version showed somewhat lower reliability than the simplified items, and some participants found the items difficult. However, in order to preserve international comparability, we decided to include the original version in the main 2022 study.

### ***COVID-19 exposure***

The items worked well, however there was mixed feedback from participants. Some children found the items challenging or boring, while others agreed with their importance. However, given that this topic is a current priority for the International HBSC Network, we decided to administer them to children in 5<sup>th</sup> Class – 5<sup>th</sup> Year in their original form and 3<sup>rd</sup> – 4<sup>th</sup> Class children in their simplified form (with an explanation provided about the meaning of a positive COVID-19 test).

### ***COVID-19 impact***

There was mixed feedback from participants on the question on COVID-19 impact. Some participants found the items challenging or boring. The first item (impact on your health in general) and the last item (impact on your family's financial situation) were difficult for some participants to understand.

However, other participants agreed that they were important. Given that this topic is a current priority for the International HBSC Network, we decided to administer them to children in 5<sup>th</sup> Class – 5<sup>th</sup> Year in their original form. The scale was not administered to 3<sup>rd</sup> – 4<sup>th</sup> Class children.

### ***Planetary health***

The simplified version showed better reliability and had somewhat higher mean scores than the original version. However, for the sake of international comparability we decided to retain the original items.

### ***Mental health (loneliness, self-efficacy, and perceived stress)***

The item on loneliness and both the self-efficacy and the perceived stress scales worked relatively well and only a small number of participants indicated difficulty in understanding the items. While reliability of the self-efficacy scale was somewhat low, especially among the 12–14-year-olds (Cronbach alpha values ranging from .36 to .70), this is probably associated with the scale consisting of only two items. Due to mental health being a priority for the international HBSC network, we decided to retain these items.

### ***Period poverty and period symptoms***

The items worked well. While some female participants expressed discomfort in answering the items, other participants agreed with their importance. This topic is also a priority for the Department of Health. Therefore, we decided to retain these items.

### ***Sexual orientation***

The item generally worked well. Some young people had difficulty with understanding the term ‘heterosexual’ and/or indicated ‘straight’ instead of ‘heterosexual’. We decided to retain the item.

### ***Sexual fantasies***

This item proved to be very personal and felt intrusive for some participants, therefore we decided not to retain the item in the main study.

### ***Gender of last sexual partner***

Very few pilot participants reported that they had ever had sex, and thus it has not been possible to fully test this item. Due to negative feedback on the item within the young LGBTQ+ community in Ireland (Költő et al., 2021), we decided not to retain the item in the main study.

## REFERENCES

- Cohen, S., & Williamson, G. (1988). Perceived stress in a probability sample of the United States. In S. Spacapan & S. Oskamp (Eds.), *The Social Psychology of Health: Claremont Symposium on Applied Social Psychology* (pp. 31–65). Sage.
- Damsgaard, M. T., & Madsen, K. R. (2020). *Monitorering af børns mentale sundhed. HBSC studiets nye indikatorer for positiv mental sundhed 2018 samt nordiske sammenligninger af indikatorer for mental sundhed 2002-2018*. Statens Institut for Folkesundhed, Syddansk Universitet. <https://portal.findresearcher.sdu.dk/da/publications/monitorering-af-b%C3%B8rns-mentale-sundhed-hbhc-studiets-nye-indikator>
- Inchley, J., Currie, D., Cosma, A., & Samdal, O. (Eds.). (2018). *Health Behaviour in School-aged Children (HBSC) study protocol: Background, methodology and mandatory items for the 2017/18 survey*. Children and Adolescent Health Research Unit, University of St Andrews. <http://www.hbhc.org/methods/>
- Inchley, J., Currie, D., Samdal, O., Jåstad, A., Cosma, A., & Nic Gabhainn, S. (Eds.). (2023). *Health Behaviour in School-aged Children (HBSC) study protocol: Background, methodology and mandatory items for the 2021/22 survey*. MRC/CSO Social and Public Health Sciences Unit, University of Glasgow.
- Költő, A., Ciria Barreiro, E., Chan, A., Nic Gabhainn, S., Taylor, A. B., Willis, M., Young, H., Moreno Maldonado, C., Inchley, J., Saewyc, E., & Nic Gabhainn, S. (2021). Asking about sex, gender and youth health: A pilot study. Pre-registered Protocol at the Open Science Foundation. <https://doi.org/10.17605/OSF.IO/3CPKZ>

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Further information on HBSC Ireland is available at [www.universityofgalway.ie/hbsc](http://www.universityofgalway.ie/hbsc).

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## APPENDIX 1: Response frequencies for Food Security Scale items

Covid-19 Impact, planetary health, self-efficacy, and stress scale item frequencies (raw percentages).

**Table 61.** Item frequencies for the Food Security Scale

Items	A lot	Sometimes	Never	Total	Missing
Did you worry that food at home would run out before your family got money to buy more?	0.6	8.1	88.2	96.9	3.1
Did the food that your family bought run out, and you didn't have money to get more?	0.3	4.3	92.2	96.9	3.1
Did your meals only include a few kinds of cheap foods because your family was running out of money to buy food?	0.6	9.0	85.7	95.3	4.7
How often were you not able to eat a balanced meal because your family didn't have enough money?	1.6	5.3	89.4	96.3	3.7
Did you have to eat less because your family didn't have enough money to buy food?	0.3	4.3	91.6	96.3	3.7
Has the size of your meals been cut because your family didn't have enough money for food?	0	3.4	93.2	96.6	3.4
Did you have to skip a meal because your family didn't have enough money for food?	0	4.3	92.2	96.6	3.4
Were you hungry but didn't eat because your family didn't have enough food?	1.6	8.4	86.0	96.0	4.0
Did you not eat for a whole day because your family didn't have enough money for food?	0.3	3.4	92.2	96.0	4.0

**Table 62.** Item frequencies for the COVID-19 Impact Scale, 5<sup>th</sup> Class – 5<sup>th</sup> Year (*N* = 322)

Items	Very negative	Quite negative	Neither negative nor positive	Quite positive	Very positive	Total	Missing
Your life as a whole	3.4	22.0	46.0	18.0	5.6	95.0	5.0
Your health	2.5	12.7	45.7	24.2	10.9	96.0	4.0
Relationships with your family	2.5	9.0	29.5	29.8	25.8	96.6	3.4
Relationships with your friends	3.4	11.2	35.4	25.5	19.9	95.3	4.7
Your mental health (e.g. dealing with your emotions, stress, etc.)	10.9	22.4	36.0	15.2	11.2	95.7	4.3
Your school performance	8.4	19.3	44.1	17.7	5.9	95.3	4.7
Physical activity (e.g. sports, cycling, walks, etc.)	6.8	16.8	19.9	27.3	25.8	96.6	3.4
What you ate or drank	4.3	14.0	46.3	16.8	14.9	96.3	3.7
Your future hopes (e.g., tests, jobs, etc.)	4.0	10.2	51.9	17.7	11.8	95.7	4.3
Your family's money situation	0.9	4.7	59.0	14.9	14.6	94.1	5.9

**Table 63.** Item frequencies for the Planetary Health scale (version A – simplified) (*N* = 161)

Items	Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree	Total	Missing
Protecting all living creatures is important for sustainable development	1.2	5.0	11.2	47.8	27.3	92.5	7.5
We need to move to renewable natural resources for sustainable development	1.9	4.3	16.8	41.0	26.1	90.1	9.9
We need to reduce all sorts of waste for sustainable development	1.9	3.7	16.1	44.7	23.6	90.1	9.9
I think that we need stricter laws and rules to protect the environment	3.7	6.8	24.8	35.4	23.0	93.8	6.2
Using less water is necessary for sustainable development	5.6	19.9	31.1	26.1	10.6	93.2	6.8
I am always looking for ways to help the environment	1.9	9.3	36.0	38.5	9.3	95.0	5.0
I choose environmental topics for school projects when I can	6.2	19.9	43.5	20.5	3.7	93.8	6.2
I have changed my lifestyle to protect the environment	8.1	24.8	38.5	21.1	2.5	95.0	5.0
My school is environmentally friendly	5.0	7.5	29.8	36.6	14.9	93.8	6.2
My family is environmentally friendly	2.5	6.2	24.8	48.4	13.0	95.0	5.0
My friends are environmentally friendly	2.5	6.2	34.8	41.6	9.3	94.4	5.6



**Table 64.** Item frequencies for the Planetary Health scale (version B - original) (*N* = 161)

Items	Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree	Total	Missing
Preserving the variety of living creatures is necessary for sustainable development (preserving biological diversity)	2.5	1.2	23.6	38.5	28.6	94.4	5.6
Sustainable development requires a shift to renewable natural resources	1.9	1.2	25.5	41.0	23.0	92.5	7.5
Sustainable development demands that we humans reduce all sorts of waste	1.2	3.7	21.1	50.9	18.6	95.7	4.3
I think that we need stricter laws and regulations to protect the environment	3.7	5.0	26.1	44.7	18.0	97.5	2.5
Reducing water consumption is necessary for sustainable development	5.6	23.6	37.9	22.4	5.6	95.0	5.0
At the present time, I am energetically pursuing ways to solve environmental problems	4.3	22.4	44.7	19.9	4.3	95.7	4.3
I choose an environmental topic when I can choose a topic for an assignment in school	6.8	35.4	38.5	13.0	2.5	96.3	3.7
I have changed my personal lifestyle to protect the environment	5.0	23.0	46.6	19.9	1.9	96.3	3.7
I feel that my school is environmentally friendly	4.3	18.0	25.5	37.3	9.9	95.0	5.0
My family is environmentally friendly	1.9	4.3	30.4	47.2	12.4	96.3	3.7
My friends are environmentally friendly	1.9	10.6	45.3	31.7	6.8	96.3	3.7

**Table 65.** Item frequencies for the Self-Efficacy scale

Items	Never	Rarely	Some-times	Most of the time	Always	Total	Missing
How often do you find a solution to a problem if you try hard enough?	3.1	9.6	30.4	46.0	7.8	96.9	3.1
How often do you manage to do the things that you decide to do?	2.5	8.1	23.3	54.0	8.1	96.0	4.0

**Table 66.** Item frequencies for the Cohen Perceived Stress scale

Items	Never	Almost never	Some-times	Fairly often	Very often	Total	Missing
How often have you felt that you were unable to control the important things in your life?	18.0	24.5	27.6	19.9	5.3	95.3	4.7
How often have you felt confident about your ability to handle your personal problems?	5.6	13.7	30.1	31.4	14.3	95.0	5.0
How often have you felt that things were going your way?	4.0	13.4	41.9	30.1	5.9	95.3	4.7
How often have you felt difficulties were piling up so high that you could not overcome them?	22.7	23.6	25.5	12.7	7.1	91.6	8.4

## APPENDIX 2: Reliability and descriptive statistics for the Planetary Health Scale subscales

**Table 67a.** Descriptive statistics and reliability indices of the Planetary Health Knowledge subscale, for all and by gender and age, Version A (simplified) ( $N = 161$ )

	<i>n</i>	Alpha	Mean	SD	SE	Min.	Max.
<b>Overall</b>	138	.77	13.85	3.37	0.29	0	20
<b>Gender</b>							
Boys	65	.79	13.00	3.62	0.45	0	20
Girls	73	.73	14.60	2.96	0.35	5	20
<b>Age groups</b>							
10–11 yrs	23	.82	13.65	3.96	0.82	5	20
12–14 yrs	93	.78	13.58	3.39	0.35	0	20
15–17 yrs	22	.58	15.18	2.32	0.50	10	20

**Table 67b.** Descriptive statistics and reliability indices of the Planetary Health Knowledge subscale, for all and by gender and age, Version B (original) ( $N = 161$ )

	<i>n</i>	Alpha	Mean	SD	SE	Min.	Max.
<b>Overall</b>	137	.60	13.53	2.77	0.24	5	20
<b>Gender</b>							
Boys	69	.58	13.26	2.73	0.33	5	19
Girls	68	.63	13.81	2.80	0.34	8	20
<b>Age groups</b>							
10–11 yrs	23	.54	13.35	2.95	0.61	8	19
12–14 yrs	88	.65	13.47	2.82	0.30	5	20
15–17 yrs	26	.46	13.88	2.53	0.50	9	19

**Table 68a.** Descriptive statistics and reliability indices of the Planetary Health Behaviour subscale, for all and by gender and age, Version A (simplified) ( $N = 161$ )

	<i>n</i>	Alpha	Mean	SD	SE	Min.	Max.
<b>Overall</b>	138	.80	6.18	2.31	0.20	0	12
<b>Gender</b>							
Boys	65	.77	5.78	2.21	0.27	0	9
Girls	73	.81	6.53	2.35	0.28	0	12
<b>Age groups</b>							
10–11 yrs	23	.81	6.87	2.55	0.53	0	10
12–14 yrs	93	.77	6.01	2.16	0.22	0	12
15–17 yrs	22	.89	6.18	2.61	0.56	2	12

**Table 68b.** Descriptive statistics and reliability indices of the Planetary Health Behaviour subscale, for all and by gender and age, Version B (original) ( $N = 161$ )

	<i>n</i>	Alpha	Mean	SD	SE	Min.	Max.
<b>Overall</b>	137	.74	5.61	2.17	0.19	0	12
<b>Gender</b>							
Boys	69	.72	5.30	2.03	0.24	0	11
Girls	68	.74	5.91	2.28	0.28	0	12
<b>Age groups</b>							
10–11 yrs	23	.66	6.39	2.17	0.45	0	11
12–14 yrs	88	.76	5.56	2.12	0.23	1	12
15–17 yrs	26	.70	5.08	2.23	0.44	0	10

**Table 69a.** Descriptive statistics and reliability indices of the Planetary Health Social Norms subscale, for all and by gender and age, Version A (simplified) ( $N = 161$ )

	<i>n</i>	Alpha	Mean	SD	SE	Min.	Max.
<b>Overall</b>	138	.77	7.57	2.31	0.20	0	12
<b>Gender</b>							
Boys	65	.80	7.54	2.44	0.30	0	12
Girls	73	.74	7.60	2.19	0.26	2	12
<b>Age groups</b>							
10–11 yrs	23	.68	8.83	2.06	0.43	5	12
12–14 yrs	93	.79	7.42	2.30	0.24	0	12
15–17 yrs	22	.80	6.91	2.20	0.47	2	12

**Table 69b.** Descriptive statistics and reliability indices of the Planetary Health Social Norms subscale, for all and by gender and age, Version B (original) ( $N = 161$ )

	<i>n</i>	Alpha	Mean	SD	SE	Min.	Max.
<b>Overall</b>	137	.77	7.21	2.15	0.18	2	12
<b>Gender</b>							
Boys	69	.77	7.16	2.08	0.25	2	12
Girls	68	.76	7.26	2.23	0.27	2	12
<b>Age groups</b>							
10–11 yrs	23	.63	9.00	1.45	0.30	5	12
12–14 yrs	88	.79	7.08	2.12	0.23	2	12
15–17 yrs	26	.61	6.08	1.79	0.35	2	9

## APPENDIX 3: COVID-19 items for participants in 3<sup>rd</sup> – 4<sup>th</sup> Class

### COVID-19 Exposure

#### Version for participants in 3<sup>rd</sup> – 4<sup>th</sup> Class (simplified)

**1. Thinking about the time during the COVID-19 pandemic, please answer the following questions.**

Please tick one box for each line

	Yes	No	I do not know
Did you ever test positive for COVID-19?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did anyone in your close family (i.e., parent, sibling or grandparent) test positive for COVID-19?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were any of your close family in hospital for Covid-19?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### Quantitative results

(i) Tested positive for COVID-19

**Table 70.** Frequency of having tested positive for COVID-19 (N = 95)

	Frequency	Percent	Valid percent
Yes	60	63.2	63.8
No	31	32.6	33.0
I do not know	3	3.2	3.20
Total	94	98.9	100.0
Missing	1	1.1	

**Table 71.** Frequency of having tested positive for COVID-19 by gender (%)

	Boys	Girls
Yes	51.9	68.7
No	44.4	28.4
I do not know	3.7	3.0

(ii) Close family tested positive for COVID-19

**Table 72.** Frequency of having had a close family member test positive for COVID-19 (*N* = 95)

	<i>Frequency</i>	<i>Percent</i>	<i>Valid percent</i>
<b>Yes</b>	78	82.1	84.8
<b>No</b>	9	9.5	9.8
<b>I do not know</b>	5	5.3	5.4
<b>Total</b>	92	96.8	100.0
<b>Missing</b>	3	3.2	

**Table 73.** Frequency of having had a close family member test positive for COVID-19 by gender (%)

	<b>Boys</b>	<b>Girls</b>
<b>Yes</b>	81.5	86.2
<b>No</b>	7.4	10.8
<b>I do not know</b>	11.1	3.1

(iii) Close family in hospital for COVID-19

**Table 74.** Frequency of having had a close family member in hospital for COVID-19 (*N* = 95)

	<i>Frequency</i>	<i>Percent</i>	<i>Valid percent</i>
<b>Yes</b>	9	9.5	10.0
<b>No</b>	65	68.4	72.2
<b>I do not know</b>	16	16.8	17.8
<b>Total</b>	90	94.7	100.0
<b>Missing</b>	5	5.3	

**Table 75.** Frequency of having had a close family member in hospital for COVID-19 by gender (%)

	<b>Boys</b>	<b>Girls</b>
<b>Yes</b>	3.8	12.5
<b>No</b>	65.4	75.0
<b>I do not know</b>	30.8	12.5

## Qualitative results

### a) Words underlined by participants to indicate they were considered difficult to understand

<b>Item</b>	<b>3<sup>rd</sup> – 4<sup>th</sup> Class Feedback</b>
Did you ever test positive for COVID-19?	Circled and/or underlined full item x2
Did anyone in your close family (i.e. parent, sibling, or grandparent) test positive for COVID-19?	"i.e." Circled full item x2
Were any of your close family in hospital for Covid-19?	Circled full item x2

**b) Written comments from participants on the specific item or wording**

Item	3 <sup>rd</sup> – 4 <sup>th</sup> Class Feedback
Did you ever test positive for COVID-19?	"Fuc of!" "7 times"
Did anyone in your close family (i.e. parent, sibling, or grandparent) test positive for COVID-19?	"grandparents parents me brothers sister"
Were any of your close family in hospital for Covid-19?	(no comments)

**c) Written comments from participants at the end of the questionnaire, but relevant to this item**

"I had my covid vaccine and a few covid tests."

**d) Relevant material from the fieldwork notes made during data collection**

The children found the COVID-19 questions difficult to understand.

***Having tested positive for COVID-19*** – One child said they did not want to be asked this question as they had covid last week.

***Having had a family member test positive for COVID-19*** – Some children did not understand the meaning of "i.e."

## COVID-19 impact

### Version for participants in 3<sup>rd</sup> – 4<sup>th</sup> Class (simplified)

#### 2. The recent COVID-19 pandemic has affected young people's lives across the world (e.g. school closures, social distancing).

##### How did this affect your life?

Please tick one box for each line

	Much worse	A bit worse	Neither worse nor better	A bit better	Much better
Your life as a whole	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your health	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Relationships with your family	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Relationships with your friends	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your mental health (e.g. dealing with your emotions, stress etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your school performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Physical activity (e.g. sports, cycling, walks, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
What you ate or drank	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your future hopes (e.g. tests, jobs, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your family's money situation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Quantitative results

**Table 76.** Descriptive statistics and reliability indices of the Covid-19 Impact Scale, for all and by gender ( $N = 99$ )

	<i>n</i>	Alpha	Mean	<i>SD</i>	<i>SE</i>	Min.	Max.
<b>Overall</b>	55	0.91	24.47	9.10	1.23	5	40
<b>Gender</b>							
Boys	18	0.88	24.06	8.14	1.92	9	35
Girls	37	0.92	24.68	9.63	1.58	5	40



## Qualitative results

### a) Words underlined by participants to indicate they were considered difficult to understand

Item	3 <sup>rd</sup> – 4 <sup>th</sup> Class Feedback
Your life as a whole	Circled entirety of question 2 and did not answer x7 Circled and/or underlined full item x4 "whole" x2 "closures"
Your health	<i>(no underlined words)</i>
Relationships with your family	<i>(no underlined words)</i>
Relationships with your friends	Underlined full item "relationships"
Your mental health (e.g. dealing with your emotions, stress, etc.)	Circled and/or underlined full item x3 Crossed out answer ("a bit worse") and underlined "mental health (e.g. dealing with your emotions, stress etc.)" "emotions"
Your school performance	Circled/underlined full item x3 "performance" x3
Physical activity (e.g. sports, cycling, walks, etc.)	Underlined full item x2 "physical"
What you ate or drank	<i>(no underlined words)</i>
Your future hopes (e.g. tests, jobs, etc.)	Circled/underlined full item x5
Your family's money situation	Circled full item x3 Underlined full item and wrote "a little hard to understand" (might be in reference to entire question 2 itself since it is written in the nearby margin) "situation"

**b) Written comments from participants on the specific item or wording**

Item	3 <sup>rd</sup> – 4 <sup>th</sup> Class Feedback
Your life as a whole	<p>"I don't get it" in reference to entirety of question 2, but answered "much better" for all</p> <p>"Fuc of!"</p> <p>"I don't know" x4</p> <p>Ticked 2 boxes: "a bit better" and "a bit worse"</p>
Your health	<p>"I don't know" x2</p> <p>Lightly ticked/erased "a bit worse", and wrote "my asthma started then"</p>
Relationships with your family	"I don't know"
Relationships with your friends	<p>"I don't know" x2</p> <p>Ticked two boxes: "a bit worse" and "neither worse nor better"</p>
Your mental health (e.g. dealing with your emotions, stress, etc.)	<p>"I don't know" x3</p> <p>Ticked two boxes: "much worse" and "much better"</p>
Your school performance	"I don't know" x3
Physical activity (e.g. sports, cycling, walks, etc.)	"I don't know" x2
What you ate or drank	"I don't know" x2
Your future hopes (e.g. tests, jobs, etc.)	"I don't know" x2
Your family's money situation	<p>"I don't know" x5</p> <p>Ticked two boxes: "a bit better" and "much better"</p> <p>"I don't like this question", did not answer</p> <p>"I Do not want to answer this Question sorry I Think you should change This Question because it could be private stuff in my opinion", did not answer</p> <p>"really really difficult plus change it"</p>

**c) Written comments from participants at the end of the questionnaire, but relevant to this item**

*No written comments*

**d) Relevant material from the fieldwork notes made during data collection**

Many children found the COVID-19 impact questions challenging. Several children said they did not like these questions, they did not want to be asked about the impact of COVID-19 and would prefer not to answer the questions at all. A lot of children found the questions difficult to understand and answer. Some children also mentioned that the questions were too sensitive. One child suggested asking "if they were scared of COVID-19".

**COVID-19 impact on your life as a whole:** Multiple students did not understand the meaning of "as a whole". **COVID-19 impact on your mental health:** This item was flagged a particularly difficult to answer by some children. **COVID-19 impact on your family's money situation:** Several children did not like this question, they thought that it was too private and should be removed.

**Table 77.** Item frequencies for the COVID-19 Impact Scale, 3<sup>rd</sup> – 4<sup>th</sup> Class ( $N = 99$ )

Items	Much worse	A bit worse	Neither worse nor better	A bit better	Much better	Total	Missing
Your life as a whole	6.1	24.2	21.2	8.1	16.2	75.8	24.2
Your health	3.0	14.1	31.3	13.1	24.2	85.9	14.1
Relationships with your family	5.1	13.1	24.2	7.1	34.3	83.8	16.2
Relationships with your friends	4.0	16.2	27.3	10.1	25.3	82.8	17.2
Your mental health (e.g. dealing with your emotions, stress, etc.)	9.1	16.2	23.2	13.1	17.2	78.8	21.2
Your school performance	3.0	20.2	25.3	15.2	12.1	75.8	24.2
Physical activity (e.g. sports, cycling, walks, etc.)	5.1	9.1	21.2	12.1	33.3	80.8	19.2
What you ate or drank	2.0	10.1	33.3	15.2	23.2	83.8	16.2
Your future hopes (e.g., tests, jobs, etc.)	3.0	9.1	29.3	10.1	25.3	76.8	23.2
Your family's money situation	1.0	7.1	36.4	10.1	20.2	74.7	25.3