

# NatPAT COVID-19 2022 Survey Codebook



# Section 0: Twin Registry Information

schoolgradecovidsurvey2022\_0/schoolgradecovidsurvey2022\_1 (parent reported child-level grade)

ageCOVIDsurvey2022\_0/ageCOVIDsurvey2022\_1 (age of twin, calculated by date of birth subtracted from date of consent)

Ethnicity\_0/Ethnicity\_1 (parent reported ethnicity of twin)

1 = Hispanic or Latino

0 = Not Hispanic or Latino

twinsex\_0/twinsex\_1 (parent reported child-level sex)

1 = male

0 = female

zygosity\_0/zygosity\_1 (calculated zygosity from questionnaire)

1 = MZ twins

2 = DZ twins

Race\_0/Race\_1 (parent reported race of twin)

1 = American Indian or Alaska Native

2 = Asian

3 = Black or African American

4 = Native Hawaiian or Other Pacific Islander

5 = White

6 = Mixed

pair\_sex\_0/pair\_sex\_1 (parent reported twin sex at pair level)

0 = female-female pair

1 = male-male pair

2 = male-female pair

**\*\*\* All the following variables are the core variable names. In the final datasets, the core variable names have “\_0” or “\_1” at the end.**

**\*\*\* For any of the following scored scales, sum/mean scores are only calculated if no more than 10% of the item level data was missing.**

**\*\*\* Sum/Mean scores are calculated for participants who do not have missing data on any of the items in that scale or subscale.**

**\*\*\* A red asterisk \* indicates that the item needs to be reverse coded.**

**\*\*\* Any open ended responses have been removed from final data. These are available from Sara Hart.**

# **NatPAT COVID-19 2022 Survey Parent**

## **Section 1: About you and your family**

**Questions refer to caregiver relationship to twins,  
health insurance plans, distress and resilience.**

# Section 1

## About you and your family

1.1 The person completing this questionnaire is (check one): **questionnaire**

- 1  Biological mother
- 2  Biological father
- 3  Step mother
- 4  Step father
- 5  Other relative (e.g., grandmother, aunt, etc.) Please specify: **otherrelativeresponse**
- 6  Adoptive or foster parent
- 7  Other, specify: **questionnaireotherresponse**

1.2 Do you currently have health insurance or a health care plan? **healthinsurance**

- 0  I **DO NOT** have health insurance
- 1  I **HAVE** some kind of health insurance

1.3 On a scale of 1 to 10, where 1 is the worst health care plan possible and 10 is the best health care plan possible, what number would you use to rate your health care plan? **healthcareplan**

- 1 1   2 2   3 3   4 4   5 5   6 6   7 7   8 8   9 9   10 10   Not applicable

1.4 In March 2020 did you have health insurance or a health care plan? **insurance2020**

- 1  Yes
- 2  No

1.5 During the last 30 days, about how often did...

	1	2	3	4	5
	None of the time	A little of the time	Some of the time	Most of the time	All the time
<b>distress#</b>					
1 ... you feel depressed?	1	2	3	4	5
2 ... you feel so depressed that nothing could cheer you up?	1	2	3	4	5
3 ... you feel hopeless?	1	2	3	4	5
4 ... you feel restless or fidgety?	1	2	3	4	5
5 ... you feel so restless that you could not sit still?	1	2	3	4	5
6 ... you feel tired out for no good reason?	1	2	3	4	5
7 ... you feel that everything was an effort?	1	2	3	4	5
8 ... you feel worthless?	1	2	3	4	5
9 ... you feel nervous?	1	2	3	4	5
10 ... you feel so nervous that nothing could calm you down?	1	2	3	4	5

1.6 Please indicate the extent to which you agree with each of the following statements by using the following scale: strongly disagree, disagree, neutral, agree, strongly agree. Please circle only one number per row.

	1	2	3	4	5
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
<b>brs#</b>					
1 I tend to bounce back quickly after hard times	1	2	3	4	5
2 I have a hard time making it through stressful events	1	2	3	4	5
3 It does not take me long to recover from a stressful event	1	2	3	4	5
4 It is hard for me to snap back when something bad happens	1	2	3	4	5
5 I usually come through difficult times with little trouble	1	2	3	4	5
6 I tend to take a long time to get over set-backs in my life	1	2	3	4	5

## #1.1 - #1.4

Items are created by the research team.

## #1.5 Distress Scale - Kessler 10

Items are from: Kessler, R. C., Andrews, G., Colpe, L. J., Hiripi, E., Mroczek, D. K., Normand, S. L., ... & Zaslavsky, A. M. (2002). Short screening scales to monitor population prevalences and trends in non-specific psychological distress. *Psychological medicine*, 32(6), 959-976.

```
parent$KesslerDepressed <- rowSums (parent[, c("distress1", "distress2",  
"distress3")])  
parent$KesslerMotor <- rowSums (parent[, c("distress4", "distress5")])  
parent$KesslerFatigue <- rowSums (parent[, c("distress6", "distress7")])  
parent$KesslerAnxiety <- rowSums (parent[, c("distress9", "distress10")])  
parent$KesslerWorthless <- parent$distress8
```

## #1.6 Brief Resilience Scale (BRS)

Items are from: Smith, B. W., Dalen, J., Wiggins, K., Tooley, E., Christopher, P., & Bernard, J. (2008). The brief resilience scale: assessing the ability to bounce back. *International journal of behavioral medicine*, 15, 194-200.

# Section 2

## How COVID-19 has affected you and your family

Some of these questions are about the most recent school year and some of these questions are about the time period around the initial COVID-19 outbreak in 2020. Please pay extra attention to the dates provided for each question in this section.

**2.1** If your twins were home-schooled in the 2021-2022 school year check here  1 0 - No  
**homeschool**

If you checked home-schooled please skip questions 2.2 to 2.11 about your twins' school life.

**2.2** During the 2021-2022 school year, did you feel **comfortable** interacting with or communicating with your twins' teachers? **comfort2021**

- 1  Not comfortable      2  Somewhat comfortable      3  Neutral      4  Comfortable      5  Very comfortable

**2.3** During 2021-2022 school year, how **effective** did you feel in dealing with concerns raised by your twins' teachers? **effective2021**

- 1  Not effective      2  Somewhat effective      3  Neutral      4  Effective      5  Very effective

**2.4** During the 2021-2022 school year, how **satisfied** did you feel after interacting with your twins' teachers? **satisfied2021**

- 1  Not satisfied      2  Somewhat satisfied      3  Neutral      4  Satisfied      5  Very satisfied

**2.5** During the 2021-2022 school year, did you feel **qualified** or like an authority in terms of your twins' school achievement? **qualified2021**

- 1  Not qualified      2  Somewhat qualified      3  Neutral      4  Qualified      5  Very qualified

**2.6** During the 2021-2022 school year, how **likely** were you to question a teacher's practices or school curriculum? **question2021**

- 1  Not likely      2  Somewhat likely      3  Neutral      4  Likely      5  Very likely

**2.7** During the 2021-2022 school year, did you help your twins with schoolwork? **help2021**

- 1  Not at all      2  Rarely      3  Sometimes      4  Often      5  Very often

**2.8** During the 2021-2022 school year, did you feel it was your job to help your twins with schoolwork? **response2021**

- 1  Not at all      2  Rarely      3  Sometimes      4  Often      5  Very often



**#2.1 - #2.9 are created by Sara Hart and team.**

**#2.10 - #2.11 are adapted from:**

Becker, S. P., Quach, E. T., Dvorsky, M. R., Breaux, R., Melvin, G. A., & Sciberras, E. (2020). Home adjustment to COVID-19 scale (HACS). Cincinnati, OH: Authors.

**#2.12 - #2.13 are created by Callie Little.**

**2.14** During the past 12 months, were any of the following true in your household?

covidimpacts#	1 Not true	2 Some- what true	3 Very true
1	1	2	3
2	1	2	3
3	1	2	3
4	1	2	3
5	1	2	3
6	1	2	3
7	1	2	3
8	1	2	3
9	1	2	3
10	1	2	3
11	1	2	3
12	1	2	3
13	1	2	3
14	1	2	3
15	1	2	3
16	1	2	3
17	1	2	3
18	1	2	3

**2.15** During the 2019-2020 school year, before the initial outbreak of COVID, did your twins receive food services such as groceries or meals (e.g., free and reduced price lunch, breakfast) through their school? Select only one answer. **foodservices**

1  Yes                      0  No

**Do not answer question 2.16 if you responded NO to Question 2.15.**

**2.16** During the 3 months following March 13, 2020, how much of an interruption to food services such as groceries or meals (e.g., free and reduced price lunch, breakfast) provided through their school did your twins experience? **interruptfood**

1  No interruption              2  Very little interruption              3  Some interruption              4  A lot of interruption

**2.17** During the 2021-2022 school year, how did you perceive COVID-19 as a risk...

covidrisk#	1 No risk	2 Low risk	3 Moderate risk	4 High risk
1	1	2	3	4
2	1	2	3	4
3	1	2	3	4
4	1	2	3	4
5	1	2	3	4
6	1	2	3	4

## **#2.14 COVID-19 Family Stressor Scale**

Items 1- 6 and items 8-17 are from: Prime, H., Wade, M., May, S. S., Jenkins, J. M., & Browne, D. T. (2021). The COVID-19 Family Stressor Scale: Validation and measurement invariance in female and male caregivers. *Frontiers in Psychiatry*, 12, 669106.

Items 7 and 18 are created by the research team.

**#2.15 - #2.16 are investigator created by the research team.**

**#2.17 is investigator created by Jeffrey Shero.**

**2.18** Have you experienced a change in job status since the initial COVID-19 outbreak? jobstatus

1  Yes                      0  No

**2.18a** If you answered YES to 2.18, how difficult has this change been for your family's financial situation?

difficultfinancial

3  Very difficult    2  Somewhat difficult    1  Not at all difficult -98  Don't know/  
No change

**2.19** Has the twins' other caregiver experienced a change in job status since the initial COVID-19 outbreak? caregiverjobchange

1  Yes                      0  No                      -99  N/A (No other caregiver)

**2.19a** If you answered YES to 2.19, how difficult has this change been for your family's financial situation?

difficultchange

3  Very difficult    2  Somewhat difficult    1  Not at all difficult -98  Don't know/  
No change

**2.20** During the 2021-2022 school year, how difficult was it for you to cover your expenses and pay all your bills? paybills

3  Very difficult    2  Somewhat difficult    1  Not at all difficult -98  Don't know

**2.21** Think of the support you receive from people close to you (such as family, friends, close co-workers, neighbors). During the 2021-2022 school year, was there an increase or decrease in the amount of support compared to 2020-2021?

support#

	1 Big decrease	2 Decrease	3 No change	4 Increase	5 Big increase
1 Financial help	1	2	3	4	5
2 Childcare	1	2	3	4	5
3 House chores/yard work	1	2	3	4	5
4 Transportation (e.g., giving rides)	1	2	3	4	5
5 Shared resources (e.g., food, toiletries)	1	2	3	4	5
6 Social support (e.g., listening, giving advice)	1	2	3	4	5

**2.22** If your job provided support for any of the following categories due to the initial COVID-19 outbreak on March 13, 2020, how has that support changed over the past 12 months?

jobsupport#

	1 Big decrease	2 Decrease	3 No change	4 Increase	5 Big increase	-99 N/A (No support)
1 Financial help (e.g., bonuses)	1	2	3	4	5	6
2 Childcare at work/childcare voucher	1	2	3	4	5	6
3 Flexible hours/additional time off	1	2	3	4	5	6
4 Therapy services/vouchers	1	2	3	4	5	6

**2.23** During 2021-2022, to what extent has COVID-19 had a negative effect on the mental health of ...

	1 Not at all	2 A little	3 Somewhat	4 Much	5 Very much
You <span style="color: green;">mentalyou</span>	1	2	3	4	5
Your spouse/partner (leave blank if not in a relationship) <span style="color: green;">mentalspouse</span>	1	2	3	4	5

**#2.18 & #2.19 are created by the research team.**

**#2.20 COVID-19 Related Household Finances**

from: <https://www.phenxtoolkit.org/protocols/view/980101>

Citation is RAND American Life Panel (MS546) Impacts of COVID-19 [RIR Survey 1]

**#2.21 is investigator created by Willa van Dijk.**

**#2.22 is created by the research team.**

**#2.23 Investigator created,**

based slightly from Drouin, M., McDaniel, B. T., Pater, J., & Toscos, T. (2020). How parents and their children used social media and technology at the beginning of the COVID-19 pandemic and associations with anxiety. *Cyberpsychology, Behavior, and Social Networking*, 23(11), 727-736.

**2.24** On a scale of 0 (not at all) to 10 (very much), how much have you been concerned about the following due to the COVID-19 pandemic in 2021-2022?

concerned#

1	Your family's health concerns	0	1	2	3	4	5	6	7	8	9	10
2	Your family's financial concerns	0	1	2	3	4	5	6	7	8	9	10
3	Impact on your work	0	1	2	3	4	5	6	7	8	9	10
4	Impact on your child	0	1	2	3	4	5	6	7	8	9	10
5	Impact on your community	0	1	2	3	4	5	6	7	8	9	10
6	Impact on your family members	0	1	2	3	4	5	6	7	8	9	10
7	Your access to food	0	1	2	3	4	5	6	7	8	9	10
8	Your access to baby supplies (e.g., formula, diapers, wipes)	0	1	2	3	4	5	6	7	8	9	10
9	Your access to personal care products or household supplies	0	1	2	3	4	5	6	7	8	9	10
10	Your access to medical care, including mental health care	0	1	2	3	4	5	6	7	8	9	10
11	Having to social distance or be quarantined	0	1	2	3	4	5	6	7	8	9	10

**2.25** Which of the following strategies were helpful to YOU during the COVID-19 pandemic?

covexp#

		1	2	3	4	5
		Not at all	Slightly	Some-what	Mode-rately	Very much
1	Texting, calling or video-calling family members or friends	1	2	3	4	5
2	Talking to therapist	1	2	3	4	5
3	Exercising/walking	1	2	3	4	5
4	Cooking/baking	1	2	3	4	5
5	Arts and crafts project	1	2	3	4	5
6	Cleaning/doing household chores	1	2	3	4	5
7	Playing games with family members	1	2	3	4	5
8	Playing online games	1	2	3	4	5
9	Virtual entertainment (concerts, live shows, sports, museums, etc.)	1	2	3	4	5
10	Other (specify) <u>covexp10response</u>	1	2	3	4	5

## #2.25 COVID-19 Experiences (COVEX)

Items are from: Fisher, P.W., Desai, P., Klotz, J., Turner, J.B., Reyes-Portillo, J.A., Ghisolfi, I., Canino, G., and Duarte, C.S. (2020). COVID-19 Experiences (COVEX). Section 7: Coping. Columbia University: Disaster Lit.

## #2.24 ECHO COVID-19 Questionnaire - Adult Primary Version

Item is modified from: Environmental Influences on Child Health Outcomes (ECHO) COVID-19 Questionnaire – Adult Primary Version. ECHO-wide Cohort Version 01.30. April 9, 2020.

link: <https://www.phenxtoolkit.org/protocols/view/960201?origin=search>

## **Section 3: All about your child**

**Questions refer to the individual twin's school experience, school supports or services, after school activities, peer interactions, and COVID-19 impacts.**

# Section 3

All about your child

For the following,  
think **ONLY** of...

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**3.1** To what extent do you think your twin remembers being in school before the initial COVID-19 outbreak in March of 2020? [rememberschool](#)

1  Not at all 2  Slightly 3  Somewhat 4  Moderately 5  Very much

-99  N/A (Twin was not enrolled in school in March of 2020).

**3.2** To what extent do you think your twin remembers social conditions (e.g., interactions with friends, interactions with community members, interactions with extended family) before the initial COVID-19 outbreak in March of 2020? [remembersocial](#)

1  Not at all 2  Slightly 3  Somewhat 4  Moderately 5  Very much

**3.3** Which of the following strategies were helpful to YOUR CHILD throughout the COVID-19 outbreak during the 2021-2022 school year?

<a href="#">covexc#</a>	1 Not at all	2 Slightly	3 Some-what	4 Mode-rately	5 Very much
1 Texting, calling or video-calling family members or friends	1	2	3	4	5
2 Virtual learning/school	1	2	3	4	5
3 Talking to therapist	1	2	3	4	5
4 Exercising/walking	1	2	3	4	5
5 Cooking/baking	1	2	3	4	5
6 Arts and crafts project	1	2	3	4	5
7 Cleaning/doing household chores	1	2	3	4	5
8 Playing games with family members	1	2	3	4	5
9 Playing online games	1	2	3	4	5
10 Virtual entertainment (concerts, live shows, sports, museums, etc.)	1	2	3	4	5
11 Other (specify) <a href="#">covexc11response</a>	1	2	3	4	5

**3.4** Do you remember the date school started for the 2021-2022 school year? If yes, please write that date here: [schoolstart](#)

Start (MM/DD/YYYY): \_\_\_\_\_

**3.5** Do you remember the date school ended for the 2021-2022 school year? If yes, please write that date here: [schoolend](#)

Finish (MM/DD/YYYY): \_\_\_\_\_

**3.6** Please estimate how many weeks your child attended school each way during the 2021-2022 school year: [estimateweeks](#)

a) \_\_\_\_\_ weeks in-person at typical school (physically went to school) [weeksinperson](#)

b) \_\_\_\_\_ weeks in-person at "school pod" or other temporary school [weeksschoolpod](#)

c) \_\_\_\_\_ weeks online [weeksonline](#)

d) \_\_\_\_\_ weeks hybrid (combination of both in-person and online) [weekshybrid](#)

e) \_\_\_\_\_ weeks homeschooled [weekshomeschooled](#)

f) \_\_\_\_\_ weeks did not go to school/unschooled [weeksunschooled](#)

**#3.1 & #3.2 are developed by the research team.**

### **#3.3 COVID-19 Experiences (COVEX)**

Items are adapted from NIH Phenxtoolkit, Protocol - COVID-19 Experiences (COVEX).

Retrieved from: <https://www.phenxtoolkit.org/protocols/view/960501?origin=search>

Fisher, P.W., Desai, P., Klotz, J., Turner, J.B., Reyes-Portillo, J.A., Ghisolfi, I., Canino, G., and Duarte, C.S. (2020). COVID-19 Experiences (COVEX). Section 7: Coping. Columbia University: Disaster Lit.

**##3.4 - #3.5 are developed by the research team.**

**3.6a** Children had very different experiences with how they went to school during the 2021-2022 school year. We would like to know what happened with your child. Please select how your child went to school, and the dates that applies. If your child attended school the whole year in the same format, choose that format and check the box in the first row.

If your child switched how they were going to school, you can fill out multiple rows. Check only one way of attending per row. You do not need to account for normal school holidays with the dates.

<b>How your child went to school in 2021-2022</b> <span style="color: green;">school1</span>	<b>Dates</b> <span style="color: green;">schoolwhole</span>
<ul style="list-style-type: none"> <li>1 <input type="checkbox"/> In-person at typical school (physically went to school)</li> <li>2 <input type="checkbox"/> In-person at "school pod" or other temporary school</li> <li>3 <input type="checkbox"/> Online</li> <li>4 <input type="checkbox"/> Hybrid (combination of both in-person and online)</li> <li>5 <input type="checkbox"/> Homeschooled</li> <li>6 <input type="checkbox"/> Did not go to school/Unschoolled</li> </ul>	<input type="checkbox"/> Check this box if your child attended school this way for the whole school year If you did not check the box above, please fill out these dates. <b>Start (MM/YY):</b> <span style="color: green;">school1start</span> <b>Finish (MM/YY):</b> <span style="color: green;">school1end</span>
<b>If your child switched how they were attending school, please fill out as many additional rows as you need.</b> <span style="color: green;">school2</span>	<b>Dates</b>
<ul style="list-style-type: none"> <li>1 <input type="checkbox"/> In-person at typical school (physically went to school)</li> <li>2 <input type="checkbox"/> In-person at "school pod" or other temporary school</li> <li>3 <input type="checkbox"/> Online</li> <li>4 <input type="checkbox"/> Hybrid (combination of both in-person and online)</li> <li>5 <input type="checkbox"/> Homeschooled</li> <li>6 <input type="checkbox"/> Did not go to school/Unschoolled</li> </ul>	<b>Start (MM/YY):</b> <span style="color: green;">school2start</span> <b>Finish (MM/YY):</b> <span style="color: green;">school2end</span>
<span style="color: green;">school3</span>	<b>Dates</b>
<ul style="list-style-type: none"> <li>1 <input type="checkbox"/> In-person at typical school (physically went to school)</li> <li>2 <input type="checkbox"/> In-person at "school pod" or other temporary school</li> <li>3 <input type="checkbox"/> Online</li> <li>4 <input type="checkbox"/> Hybrid (combination of both in-person and online)</li> <li>5 <input type="checkbox"/> Homeschooled</li> <li>6 <input type="checkbox"/> Did not go to school/Unschoolled</li> </ul>	<b>Start (MM/YY):</b> <span style="color: green;">school3start</span> <b>Finish (MM/YY):</b> <span style="color: green;">school3end</span>
<span style="color: green;">school4</span>	<b>Dates</b>
<ul style="list-style-type: none"> <li>1 <input type="checkbox"/> In-person at typical school (physically went to school)</li> <li>2 <input type="checkbox"/> In-person at "school pod" or other temporary school</li> <li>3 <input type="checkbox"/> Online</li> <li>4 <input type="checkbox"/> Hybrid (combination of both in-person and online)</li> <li>5 <input type="checkbox"/> Homeschooled</li> <li>6 <input type="checkbox"/> Did not go to school/Unschoolled</li> </ul>	<b>Start (MM/YY):</b> <span style="color: green;">school4start</span> <b>Finish (MM/YY):</b> <span style="color: green;">school4end</span>

**3.7** In your opinion, how different has it been for your child to do the following during COVID-19 compared to before COVID-19? diffchild#

	1 Much easier	2 Easier	3 About the same	4 Harder	5 Much harder
1 Get their schoolwork done because of other responsibilities at home (taking care of children, family)?	1	2	3	4	5
2 Get their schoolwork done because of the home environment (internet, computers, tension, space)?	1	2	3	4	5
3 Focus on their schoolwork	1	2	3	4	5
4 Finish their schoolwork	1	2	3	4	5
5 Find motivation to start or complete schoolwork	1	2	3	4	5
6 Manage frustration about their schoolwork	1	2	3	4	5
7 Work on their schoolwork on their own	1	2	3	4	5
8 Stay interested in their schoolwork	1	2	3	4	5

**3.8** Did your child regularly receive any of the following supports or services at school during the 2021-2022 school year?

	1	2
School counseling or therapy <span style="color: green;">therapy2021</span>	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Tutoring/help with schoolwork or homework <span style="color: green;">tutor2021</span>	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Extended time to complete work <span style="color: green;">extended2021</span>	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Modified assignments or tests <span style="color: green;">modified2021</span>	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Physical or occupational therapy <span style="color: green;">phytherapy2021</span>	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Speech or language therapy <span style="color: green;">speech2021</span>	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Meals provided by school <span style="color: green;">meals2021</span>	<input type="checkbox"/> Yes	<input type="checkbox"/> No

**3.9** Did your child require any special services at school during the 2021-2022 school year?  
Check all that apply:

- 0/1  Special Education sped2021
- 0/1  504 Plan/IEP iep2021
- 0/1  RTI rti2021
- 0/1  Gifted/Enriched Programming gifted2021
- 0/1  Other (please describe): schother2021 schother2021response

If your child received special services during the 2021-2022 school year, please check all that apply.

- 0/1  Intellectual Disabilities intdis
- 0/1  Hearing Impairments hear
- 0/1  Deafness deaf
- 0/1  Speech or Language Impairment (SLI/DLD) sli
- 0/1  Visual Impairment including Blindness blind
- 0/1  Emotional Disturbance emodist
- 0/1  Orthopedic Impairment ortho
- 0/1  Other Health Impairment (e.g., ADHD) adhd
- 0/1  Specific Learning Disability (SLD) sld
- 0/1  Traumatic Brain Injury tbi
- 0/1  Autism Spectrum Disorder asd
- 0/1  Developmental Delay devdelay

**3.10** If your child required special services at school, how satisfied are you with the services provided during the 2021-2022 school year? schservice2021

- 1  Not satisfied    2  Somewhat satisfied    3  Neutral    4  Satisfied    5  Very satisfied

### **#3.6 Type of Schooling**

Items are adapted from: Becker, S. P., Quach, E. T., Dvorsky, M. R., Breaux, R., Melvin, G. A., & Sciberras, E. (2020). Home adjustment to COVID-19 scale (HACS). Cincinnati, OH: Authors.

### **#3.7 School Difficulties Due to Covid**

Items 1 and 2 are adapted from NIH Phenxtoolkit, Protocol - COVID-19 Experiences (COVEX). Retrieved from: <https://www.phenxtoolkit.org/protocols/view/980201?origin=search>  
Fisher, P.W., Desai, P., Klotz, J., Turner, J.B., Reyes-Portillo, J.A., Ghisolfi, I., Canino, G., and Duarte, C.S. (2020) COVID-19 Experiences (COVEX).

Items 3-8 are adapted from: Becker, S. P., Quach, E. T., Dvorsky, M. R., Breaux, R., Melvin, G. A., & Sciberras, E. (2020). Home adjustment to COVID-19 scale (HACS). Cincinnati, OH: Authors.

### **#3.8 School-Based Practices and Services**

Items are adapted from: Becker, S. P., Quach, E. T., Dvorsky, M. R., Breaux, R., Melvin, G. A., & Sciberras, E. (2020). Home adjustment to COVID-19 scale (HACS). Cincinnati, OH: Authors.

**#3.9 & #3.10** are created by Sara Hart and Stephanie Al Otaiba for a different data collection (Project KIDS). They were adapted for COVID here.

**3.11** During the 2021-2022 school year, please indicate how often your child participated in the following activities after school (e.g., after 3pm) (circle one)

activities2021_#		0	1	2	3	4	5
		Never	Once a week	Twice a week	Three times a week	Four times a week	Five times a week or more
1	Educational lessons or activities, such as Spanish club	0	1	2	3	4	5
2	Art or music lessons, such as piano	0	1	2	3	4	5
3	Youth organizations, such as Boy Scouts	0	1	2	3	4	5
4	Individual sports with a coach or instructor, such as tennis	0	1	2	3	4	5
5	Team sports with a coach or instructor, such as baseball	0	1	2	3	4	5
6	Sports and/or exercise for fun	0	1	2	3	4	5
7	Homework	0	1	2	3	4	5
8	Watch TV	0	1	2	3	4	5
9	Video or computer games	0	1	2	3	4	5
10	Instant messaging	0	1	2	3	4	5
11	Read for fun	0	1	2	3	4	5
12	Household chores	0	1	2	3	4	5
13	Practice a musical instrument	0	1	2	3	4	5
14	Arts & crafts	0	1	2	3	4	5
15	Hang out with friends	0	1	2	3	4	5

**3.12** How did your child's peer interactions change from the 2020-2021 school year to the 2021-2022 school year?

		1	2	3	4	5
		Decreased dramatically	Decreased a bit	Stayed the same	Increased a bit	Increased dramatically
Face-to-face contact	face2face2021	1	2	3	4	5
Contact through social media	socialmedia2021	1	2	3	4	5
Number of friends	numfriends2021	1	2	3	4	5
Conflict with friends	conflictfriends2021	1	2	3	4	5

**3.13** To what extent has COVID-19 had a negative effect on the mental health of your child during the 2021-2022 school year? covidmentalhealthchild

1  Not at all      2  A little      3  Somewhat      4  Much      5  Very much

**3.14** During the 2021-2022 school year, how stressful were your parenting experiences with your child? covidparentingstress

1  Not at all      2  A little      3  Somewhat      4  Much      5  Very much

**3.15** For each item, please circle the number for Not True, Somewhat True or Certainly True. It would help us if you answered all items as best you can even if you are not absolutely certain or the item seems odd! Please give your answers on the basis of how your child has been over the last six months.

sdq#		Not true	Somewhat true	Certainly true
1	Considerate of other people's feelings	1	2	3
2	Restless, overactive, cannot stay still for long	1	2	3
3	Often complains of headaches, stomach-aches or sickness	1	2	3
4	Shares readily with others (food, games, pens, etc.)	1	2	3

### #3.11 After School Activities

Items 1-6 are from MDI: Middle Years Development Instrument found in:

Schonert-Reichl, K.A., Guhn, M., Gadermann, A.M. et al. Development and Validation of the Middle Years Development Instrument (MDI): Assessing Children’s Well-Being and Assets across Multiple Contexts. Soc Indic Res 114, 345–369 (2013). <https://doi.org/10.1007/s11205-012-0149-y>

Items 7-15 are investigator added to the published scale by Sara Hart and team.

### #3.12 Peer Connection

Items are investigator created for this data collection by LaTasha Holden

### #3.13 is investigator created by Sara Hart and team

### #3.14 Parenting Experience

Item is adapted from parenting stress question from:

Prime, H., Wade, M., May, S. S., Jenkins, J. M., & Browne, D. T. (2021). The COVID-19 Family Stressor Scale: Validation and measurement invariance in female and male caregivers. *Frontiers in Psychiatry*, 716.

**3.15** For each item, please circle the number for Not True, Somewhat True or Certainly True. It would help us if you answered all items as best you can even if you are not absolutely certain or the item seems odd! Please give your answers on the basis of how your child has been over the last six months.

sdq#

	Not true	Somewhat true	Certainly true
1 Considerate of other people's feelings	1	2	3
2 Restless, overactive, cannot stay still for long	1	2	3
3 Often complains of headaches, stomach-aches or sickness	1	2	3
4 Shares readily with others (food, games, pens, etc.)	1	2	3

### 3.15 Continued

	1	2	3
	Not true	Somewhat true	Certainly true
5 Often has temper tantrums or hot temper	1	2	3
6 Rather solitary, tends to play alone	1	2	3
7* Generally obedient, usually does what adults request	1	2	3
8 Many worries, often seems worried	1	2	3
9 Helpful if someone is hurt, upset or feeling ill	1	2	3
10 Constantly fidgeting or squirming	1	2	3
11* Has at least one good friend	1	2	3
12 Often fights with other children or bullies them	1	2	3
13 Often unhappy, down-hearted or tearful	1	2	3
14* Generally liked by other children	1	2	3
15 Easily distracted, concentration wanders	1	2	3
16 Nervous or clingy in new situations; easily loses confidence	1	2	3
17 Kind to younger children	1	2	3
18 Often lies or cheats	1	2	3
19 Picked on or bullied by other children	1	2	3
20 Often volunteers to help others (parents, teachers, children)	1	2	3
21* Thinks things out before acting	1	2	3
22 Steals from home, school or elsewhere	1	2	3
23 Gets on better with adults than with other children	1	2	3
24 Many fears, easily scared	1	2	3
25* Sees tasks through to the end, good attention span	1	2	3

### 3.16 In the past month pss#

	1	2	3	4	5
	Never	Almost never	Sometimes	Fairly often	Very often
1* How often did your child seem able to control life's emotions?	1	2	3	4	5
2* How often did it seem that life was going well for your child?	1	2	3	4	5
3 How often did your child appear angered by things that happened outside of his/her/their control?	1	2	3	4	5
4 How often did difficulties pile up so high that your child did not seem able to overcome them?	1	2	3	4	5
5 How often was your child upset because of something that happened unexpectedly?	1	2	3	4	5
6 How often did your child appear frustrated by being unable to control or do something?	1	2	3	4	5
7 How often did your child appear nervous and "stressed"?	1	2	3	4	5
8* How often did your child appear confident about his/her/their ability to handle personal problems?	1	2	3	4	5
9* How often did your child seem to feel things were going well?	1	2	3	4	5
10 How often did your child seem unable to cope with all the things that had to be done?	1	2	3	4	5

### # 3.15 Strengths and Difficulties Questionnaire (SDQ)

Scale details are here <https://www.sdqinfo.org/a0.html>

Goodman R, Meltzer H, Bailey V. The Strengths and Difficulties Questionnaire: a pilot study on the validity of the self-report version. *Eur Child Adolesc Psychiatry*. 1998 Sep;7(3):125-30. doi: 10.1007/s007870050057. PMID: 9826298

```
## recode all variables (minus 1)
for (i in 1:25) {
  var_name <- paste0("sdq", i)
  recoded_var_name <- paste0(var_name, "_r")
  parenttwin[[recoded_var_name]] <- parenttwin[[var_name]] - 1}
##reverse code items 7, 21, 25, 11, 14
parenttwin$sdq7_rr <- 2- parenttwin$sdq7_r
parenttwin$sdq21_rr <- 2- parenttwin$sdq21_r
parenttwin$sdq25_rr <- 2- parenttwin$sdq25_r
parenttwin$sdq11_rr <- 2- parenttwin$sdq11_r
parenttwin$sdq14_rr <- 2- parenttwin$sdq14_r
#subscales
parenttwin$SDQ_emot_sum <- rowSums(parenttwin[, c("sdq3_r", "sdq8_r",
"sdq13_r", "sdq16_r", "sdq24_r")])
parenttwin$SDQ_cond_sum <- rowSums(parenttwin[, c("sdq5_r", "sdq7_rr",
"sdq12_r", "sdq18_r", "sdq22_r")])
parenttwin$SDQ_hype_sum <- rowSums(parenttwin[, c("sdq2_r", "sdq10_r",
"sdq15_r", "sdq21_rr", "sdq25_rr")])
parenttwin$SDQ_peer_sum <- rowSums(parenttwin[, c("sdq6_r", "sdq11_rr",
"sdq14_rr", "sdq19_r", "sdq23_r")])
parenttwin$SDQ_pros_sum <- rowSums(parenttwin[, c("sdq1_r", "sdq4_r", "sdq9_r",
"sdq17_r", "sdq20_r")])

parenttwin$SDQ_difficulties_sum <- rowSums(parenttwin[, c("SDQ_emot_sum",
"SDQ_cond_sum", "SDQ_hype_sum", "SDQ_peer_sum")])
parenttwin$SDQ_externalizing_sum <- rowSums(parenttwin[, c("SDQ_cond_sum",
"SDQ_hype_sum")])
parenttwin$SDQ_internalizing_sum <- rowSums(parenttwin[, c("SDQ_emot_sum",
"SDQ_peer_sum")])
```

### #3.16 Perceived Stress Scale (PSS-10) Parent report of child.

Items are adapted from NIH Common Data elements. Cite for original measure: Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior\**, 24(4), 385–396.

*\*Note. Original measure is adult self-report. Sum scores here are not validate in original publication.*

```
## recode all variables (minus 1)
for (i in 1:10) {
  var_name <- paste0("pss", i)
  recoded_var_name <- paste0(var_name, "_r")
  parenttwin[[recoded_var_name]] <- parenttwin[[var_name]] - 1 }
## reverse code 1, 2, 8, 9
parenttwin$pss1_rr <- 4 - parenttwin$pss1_r
parenttwin$pss2_rr <- 4 - parenttwin$pss2_r
parenttwin$pss8_rr <- 4 - parenttwin$pss8_r
parenttwin$pss9_rr <- 4 - parenttwin$pss9_r

parenttwin$PSS_sum <- rowSums(parenttwin[, c("pss1_rr", "pss2_rr", "pss3_r",
"pss4_r", "pss5_r", "pss6_r", "pss7_r", "pss8_rr", "pss9_rr", "pss10_r")])
```

**3.17** Below is a list of statements that describe children. We would like to know if your child has had problems with these behaviors over the past 6 months. Please answer all the items the best that you can. Please **DO NOT SKIP ANY ITEMS**. Think about your child as you read each statement and circle your response. **brief#**

	<b>1</b> Never	<b>2</b> Sometimes	<b>3</b> Often
1 Overreacts to small problems	N	S	O
2 When given three things to do, only remembers the first or last	N	S	O
3 Is not a self-starter	N	S	O
4 Leaves playroom a mess	N	S	O
5 Resists or has trouble accepting a different way to solve a problem with schoolwork, friends, chores, etc.	N	S	O
6 Becomes upset with new situations	N	S	O
7 Has explosive, angry outburst	N	S	O
8 Tries the same approach to a problem over and over even when it does not work	N	S	O
9 Has a short attention span	N	S	O
10 Needs to be told to begin a task even when willing	N	S	O
11 Does not bring home homework, assignment sheets, materials, etc.	N	S	O
12 Acts upset by a change in plans	N	S	O
13 Is disturbed by change of teacher or class	N	S	O
14 Does not check work for mistakes	N	S	O
15 Has good ideas but cannot get them on paper	N	S	O
16 Has trouble coming up with ideas for what to do in play or free time	N	S	O
17 Has trouble concentrating on chores, schoolwork, etc.	N	S	O
18 Does not connect doing tonight's homework with grades	N	S	O
19 Is easily distracted by noises, activity, sights, etc.	N	S	O
20 Becomes tearful easily	N	S	O
21 Makes careless errors	N	S	O
22 Forgets to hand in homework, even when completed	N	S	O
23 Resists change of routine, foods, places, etc.	N	S	O
24 Has trouble with chores or tasks that have more than one step	N	S	O
25 Has outbursts for little reason	N	S	O
26 Mood changes frequently	N	S	O
27 Needs help from an adult to stay on task	N	S	O
28 Gets caught up in details and misses the big picture	N	S	O
29 Keeps room messy	N	S	O
30 Has trouble getting used to new situations (classes, groups, friends)	N	S	O
31 Has poor handwriting	N	S	O
32 Forgets what he/she/they was/were doing	N	S	O
33 When sent to get something, forgets what he/she/they is/are supposed to get	N	S	O
34 Is unaware of how his/her/their behavior affects or bothers others	N	S	O
35 Has good ideas but does not get job done (lacks follow-through)	N	S	O
36 Becomes overwhelmed by large assignments	N	S	O
37 Has trouble finishing tasks (chores, homework)	N	S	O
38 Acts wilder or sillier than others in groups (birthday parties, recess)	N	S	O
39 Thinks too much about the same topic	N	S	O
40 Underestimates time needed to finish tasks	N	S	O
41 Interrupts others	N	S	O

### 3.17 Continued

	1 Never	2 Sometimes	3 Often
42 Does not notice when his/her/their behavior causes negative reactions	N	S	O
43 Gets out of seat at the wrong times	N	S	O
44 Gets out of control more than friends	N	S	O
45 Reacts more strongly to situations than other children	N	S	O
46 Starts assignments or chores at the last minute	N	S	O
47 Has trouble getting started on homework or chores	N	S	O
48 Has trouble organizing activities with friends	N	S	O
49 Blurts things out	N	S	O
50 Mood is easily influenced by the situation	N	S	O
51 Does not plan ahead for school assignments	N	S	O
52 Has poor understanding of own strengths and weaknesses	N	S	O
53 Written work is poorly organized	N	S	O
54 Acts too wild or "out of control"	N	S	O
55 Has trouble putting the brakes on his/her/their actions	N	S	O
56 Gets in trouble if not supervised by an adult	N	S	O
57 Has trouble remembering things, even for a few minutes	N	S	O
58 Has trouble carrying out the actions needed to reach goals (saving money for special item, studying to get a good grade)	N	S	O
59 Becomes too silly	N	S	O
60 Work is sloppy	N	S	O
61 Does not take initiative	N	S	O
62 Angry or tearful outbursts are intense but end suddenly	N	S	O
63 Does not realize that certain actions bother others	N	S	O
64 Small events trigger big reactions	N	S	O
65 Talks at the wrong time	N	S	O
66 Complains there is nothing to do	N	S	O
67 Cannot find things in room or school desk	N	S	O
68 Leaves a trail of belongings wherever he/she/they goes	N	S	O
69 Leaves messes that others have to clean up	N	S	O
70 Becomes upset too easily	N	S	O
71 Lies around the house a lot ("couch potato")	N	S	O
72 Has a messy closet	N	S	O
73 Has trouble waiting for turn	N	S	O
74 Loses lunch box, lunch money, permission slips, homework, etc.	N	S	O
75 Cannot find clothes, glasses, shoes, toys, books, pencils, etc.	N	S	O
76 Tests poorly even when knows correct answers	N	S	O
77 Does not finish long-term projects	N	S	O
78 Has to be closely supervised	N	S	O
79 Does not think before doing	N	S	O
80 Has trouble moving from one activity to another	N	S	O
81 Is fidgety	N	S	O
82 Is impulsive	N	S	O
83 Cannot stay on the same topic when talking	N	S	O
84 Gets stuck on one topic or activity	N	S	O
85 Says the same things over and over	N	S	O
86 Has trouble getting through morning routine in getting ready for school	N	S	O

### #3.17 Behavior Rating Inventory of Executive Function (BRIEF )

Items are from: Gioia, G. A., Isquith, P. K., Guy, S. C., & Kenworthy, L. (2000). Test Review: Behavior Rating Inventory of Executive Function. *Child Neuropsychology*, 6, 235-238.

If more than 14 items are missing, then the BRIEF cannot be scored.

If more than 2 items are missing from a scale, then the scale cannot be scored.

```
# Calculate total count of non-missing values for all variables from brief_1 to brief_72
parenttwin$BRTotalN <- rowSums(!is.na(parenttwin[, paste0("brief", 1:72)]))

##### INHIBIT
# Initialize the P_BRIEF_Inhib column with NA values
parenttwin$P_BRIEF_Inhib <- rep(NA, nrow(parenttwin))
# Initialize the BRIHN column with NA values
parenttwin$BRIHN <- rep(NA, nrow(parenttwin))
# Reiterate
for (i in 1:nrow(parenttwin)) {
  # Check if BRTotalN for the current row is greater than or equal to 58
  if (parenttwin$BRTotalN[i] >= 58) {
    # Count the number of non-missing values for specific variables
    parenttwin$BRIHN[i] <- sum(!is.na(parenttwin[i, c("brief38", "brief41", "brief43",
"brief44", "brief49", "brief54", "brief55", "brief56", "brief59", "brief65")]))

    # Check the value of BRIHN for the current row
    if (parenttwin$BRIHN[i] == 10) {
      # Calculate P_BRIEF_Inhib as the sum of the listed variables
      parenttwin$P_BRIEF_Inhib[i] <- sum(parenttwin[i, c("brief38", "brief41", "brief43",
"brief44", "brief49", "brief54", "brief55", "brief56", "brief59", "brief65")], na.rm = TRUE)
    } else if (parenttwin$BRIHN[i] == 9) {
      # Calculate P_BRIEF_Inhib as the sum of the listed variables plus 1
      parenttwin$P_BRIEF_Inhib[i] <- sum(parenttwin[i, c("brief38", "brief41", "brief43",
"brief44", "brief49", "brief54", "brief55", "brief56", "brief59", "brief65")], na.rm = TRUE)
+ 1
    } else if (parenttwin$BRIHN[i] == 8) {
      # Calculate P_BRIEF_Inhib as the sum of the listed variables plus 2
      parenttwin$P_BRIEF_Inhib[i] <- sum(parenttwin[i, c("brief38", "brief41", "brief43",
"brief44", "brief49", "brief54", "brief55", "brief56", "brief59", "brief65")], na.rm = TRUE)
+ 2
    } else {
      # Set P_BRIEF_Inhib to NA if BRIHN is neither 10, 9, nor 8
      parenttwin$P_BRIEF_Inhib[i] <- NA
    }
  } else {
    # Set P_BRIEF_Inhib to NA if BRTotalN is less than 58
    parenttwin$P_BRIEF_Inhib[i] <- NA
  }
}
parenttwin$P_BRIEF_Inhib
```

**##### SHIFT:**

```
# Initialize
parenttwin$P_BRIEF_Shift <- rep(NA, nrow(parenttwin))
parenttwin$BRSHN <- rep(NA, nrow(parenttwin))
# Reiterate
for (i in 1:nrow(parenttwin)) {
  # Check if BRTotalN for the current row is greater than or equal to 58
  if (parenttwin$BRTotalN[i] >= 58) {
    # Count the number of non-missing values for specific variables
    parenttwin$BRSHN[i] <- sum(!is.na(parenttwin[i, c("brief5", "brief6", "brief8",
"brief12", "brief13", "brief23", "brief30", "brief39")]))

    # Check the value of BRSHN for the current row
    if (parenttwin$BRSHN[i] == 8) {
      # Calculate P_BRIEF_Shift as the sum of the listed variables
      parenttwin$P_BRIEF_Shift[i] <- sum(parenttwin[i, c("brief5", "brief6", "brief8",
"brief12", "brief13", "brief23", "brief30", "brief39")], na.rm = TRUE)
    } else if (parenttwin$BRSHN[i] == 7) {
      # Calculate P_BRIEF_Shift as the sum of the listed variables plus 1
      parenttwin$P_BRIEF_Shift[i] <- sum(parenttwin[i, c("brief5", "brief6", "brief8",
"brief12", "brief13", "brief23", "brief30", "brief39")], na.rm = TRUE) + 1
    } else if (parenttwin$BRSHN[i] == 6) {
      # Calculate P_BRIEF_Shift as the sum of the listed variables plus 2
      parenttwin$P_BRIEF_Shift[i] <- sum(parenttwin[i, c("brief5", "brief6", "brief8",
"brief12", "brief13", "brief23", "brief30", "brief39")], na.rm = TRUE) + 2
    } else {
      # Set P_BRIEF_Shift to NA if BRIHN is neither 10, 9, nor 8
      parenttwin$P_BRIEF_Shift[i] <- NA
    }
  } else {
    # Set P_BRIEF_Shift to NA if BRTotalN is less than 58
    parenttwin$P_BRIEF_Shift[i] <- NA
  }
}
```

**parenttwin\$P\_BRIEF\_Shift****#####Emotional Control**

```
# Initialize
parenttwin$P_BRIEF_Emo <- rep(NA, nrow(parenttwin))
parenttwin$BREC� <- rep(NA, nrow(parenttwin))
# Iterate over each row
for (i in 1:nrow(parenttwin)) {
  # Check if BRTotalN for the current row is greater than or equal to 58
  if (parenttwin$BRTotalN[i] >= 58) {
    # Count the number of non-missing values for specific variables
    parenttwin$BREC�[i] <- sum(!is.na(parenttwin[i, c("brief1", "brief7", "brief20",
"brief25", "brief26", "brief45", "brief50", "brief62", "brief64", "brief70")]))

    # Check the value of BREC� for the current row
    if (parenttwin$BREC�[i] == 10) {
      # Calculate P_BRIEF_Emo as the sum of the listed variables
      parenttwin$P_BRIEF_Emo[i] <- sum(parenttwin[i, c("brief1", "brief7", "brief20",
"brief25", "brief26", "brief45", "brief50", "brief62", "brief64", "brief70")], na.rm = TRUE)
    } else if (parenttwin$BREC�[i] == 9) {
      # Calculate P_BRIEF_Emo as the sum of the listed variables plus 1
      parenttwin$P_BRIEF_Emo[i] <- sum(parenttwin[i, c("brief1", "brief7", "brief20",
"brief25", "brief26", "brief45", "brief50", "brief62", "brief64", "brief70")], na.rm = TRUE)
+ 1
    } else if (parenttwin$BREC�[i] == 8) {
      # Calculate P_BRIEF_Emo as the sum of the listed variables plus 2
      parenttwin$P_BRIEF_Emo[i] <- sum(parenttwin[i, c("brief1", "brief7", "brief20",
"brief25", "brief26", "brief45", "brief50", "brief62", "brief64", "brief70")], na.rm = TRUE)
+ 2
    } else {
      # Set P_BRIEF_Emo to NA if BREC� is neither 10, 9, nor 8
      parenttwin$P_BRIEF_Emo[i] <- NA
    }
  } else {
    # Set P_BRIEF_Emo to NA if BRTotalN is less than 58
    parenttwin$P_BRIEF_Emo[i] <- NA
  }
}
# View the P_BRIEF_Emo column
parenttwin$P_BRIEF_Emo
```

#### ##### Initiate

```
# Initialize
parenttwin$P_BRIEF_Initiate <- rep(NA, nrow(parenttwin))
parenttwin$BRINN <- rep(NA, nrow(parenttwin))
# Iterate over each row
for (i in 1:nrow(parenttwin)) {
  # Count the number of non-missing values for specific variables
  parenttwin$BRINN[i] <- sum(!is.na(parenttwin[i, c("brief3", "brief10", "brief16",
"brief47", "brief48", "brief61", "brief66", "brief71")]))
  # Check if BRTotalN for the current row is greater than or equal to 58
  if (parenttwin$BRTotalN[i] >= 58) {
    # Check the value of BRINN for the current row
    if (parenttwin$BRINN[i] == 8) {
      # Calculate P_BRIEF_Initiate as the sum of the listed variables
      parenttwin$P_BRIEF_Initiate[i] <- sum(parenttwin[i, c("brief3", "brief10", "brief16",
"brief47", "brief48", "brief61", "brief66", "brief71")], na.rm = TRUE)
    } else if (parenttwin$BRINN[i] == 7) {
      # Calculate P_BRIEF_Initiate as the sum of the listed variables plus 1
      parenttwin$P_BRIEF_Initiate[i] <- sum(parenttwin[i, c("brief3", "brief10", "brief16",
"brief47", "brief48", "brief61", "brief66", "brief71")], na.rm = TRUE) + 1
    } else if (parenttwin$BRINN[i] == 6) {
      # Calculate P_BRIEF_Initiate as the sum of the listed variables plus 2
      parenttwin$P_BRIEF_Initiate[i] <- sum(parenttwin[i, c("brief3", "brief10", "brief16",
"brief47", "brief48", "brief61", "brief66", "brief71")], na.rm = TRUE) + 2
    } else {
      # Set P_BRIEF_Initiate to NA if BRINN is neither 8, 7, nor 6
      parenttwin$P_BRIEF_Initiate[i] <- NA
    }
  } else {
    # Set P_BRIEF_Initiate to NA if BRTotalN is less than 58
    parenttwin$P_BRIEF_Initiate[i] <- NA
  }
}
parenttwin$P_BRIEF_Initiate
```

#### #####Working Memory

```
# Initialize
parenttwin$P_BRIEF_Wm <- rep(NA, nrow(parenttwin))
parenttwin$BRWMN <- rep(NA, nrow(parenttwin))
# Iterate over each row
for (i in 1:nrow(parenttwin)) {
  # Count the number of non-missing values for specific variables
  parenttwin$BRWMN[i] <- sum(!is.na(parenttwin[i, c("brief2", "brief9", "brief17",
"brief19", "brief24", "brief27", "brief32", "brief33", "brief37", "brief57")]))

  # Check if BRTotalN for the current row is greater than or equal to 58
  if (parenttwin$BRTotalN[i] >= 58) {
    # Check the value of BRWMN for the current row
    if (parenttwin$BRWMN[i] == 10) {
      # Calculate P_BRIEF_Wm as the sum of the listed variables
      parenttwin$P_BRIEF_Wm[i] <- sum(parenttwin[i, c("brief2", "brief9", "brief17",
"brief19", "brief24", "brief27", "brief32", "brief33", "brief37", "brief57")], na.rm = TRUE)
    } else if (parenttwin$BRWMN[i] == 9) {
      # Calculate P_BRIEF_Wm as the sum of the listed variables plus 1
      parenttwin$P_BRIEF_Wm[i] <- sum(parenttwin[i, c("brief2", "brief9", "brief17",
"brief19", "brief24", "brief27", "brief32", "brief33", "brief37", "brief57")], na.rm = TRUE)
+ 1
    } else if (parenttwin$BRWMN[i] == 8) {
      # Calculate P_BRIEF_Wm as the sum of the listed variables plus 2
      parenttwin$P_BRIEF_Wm[i] <- sum(parenttwin[i, c("brief2", "brief9", "brief17",
"brief19", "brief24", "brief27", "brief32", "brief33", "brief37", "brief57")], na.rm = TRUE)
+ 2
    } else {
      # Set P_BRIEF_Wm to NA if BRWMN is neither 10, 9, nor 8
      parenttwin$P_BRIEF_Wm[i] <- NA
    }
  } else {
    # Set P_BRIEF_Wm to NA if BRTotalN is less than 58
    parenttwin$P_BRIEF_Wm[i] <- NA
  }
}
parenttwin$P_BRIEF_Wm
```

#### #####Plan/Organize

```
# Initialize
parenttwin$P_BRIEF_Plan <- rep(NA, nrow(parenttwin))
parenttwin$BRPlanN <- rep(NA, nrow(parenttwin))
# Iterate over each row
for (i in 1:nrow(parenttwin)) {
  # Count the number of non-missing values for specific variables
  parenttwin$BRPlanN[i] <- sum(!is.na(parenttwin[i, c("brief11", "brief15", "brief18",
"brief22", "brief28", "brief35", "brief36", "brief40", "brief46", "brief51", "brief53",
"brief58")]))

  # Check if BRTotalN for the current row is greater than or equal to 58
  if (parenttwin$BRTotalN[i] >= 58) {
    # Check the value of BRPlanN for the current row
    if (parenttwin$BRPlanN[i] == 12) {
      # Calculate P_BRIEF_Plan as the sum of the listed variables
      parenttwin$P_BRIEF_Plan[i] <- sum(parenttwin[i, c("brief11", "brief15", "brief18",
"brief22", "brief28", "brief35", "brief36", "brief40", "brief46", "brief51", "brief53",
"brief58")], na.rm = TRUE)
    } else if (parenttwin$BRPlanN[i] == 11) {
      # Calculate P_BRIEF_Plan as the sum of the listed variables plus 1
      parenttwin$P_BRIEF_Plan[i] <- sum(parenttwin[i, c("brief11", "brief15", "brief18",
"brief22", "brief28", "brief35", "brief36", "brief40", "brief46", "brief51", "brief53",
"brief58")], na.rm = TRUE) + 1
    } else if (parenttwin$BRPlanN[i] == 10) {
      # Calculate P_BRIEF_Plan as the sum of the listed variables plus 2
      parenttwin$P_BRIEF_Plan[i] <- sum(parenttwin[i, c("brief11", "brief15", "brief18",
"brief22", "brief28", "brief35", "brief36", "brief40", "brief46", "brief51", "brief53",
"brief58")], na.rm = TRUE) + 2
    } else {
      # Set P_BRIEF_Plan to NA if BRPlanN is neither 12, 11, nor 10
      parenttwin$P_BRIEF_Plan[i] <- NA
    }
  } else {
    # Set P_BRIEF_Plan to NA if BRTotalN is less than 58
    parenttwin$P_BRIEF_Plan[i] <- NA
  }
}
parenttwin$P_BRIEF_Plan
```

#### #####Organization of Materials

```
# Initialize
parenttwin$P_BRIEF_Organize <- rep(NA, nrow(parenttwin))
parenttwin$BROrganizeN <- rep(NA, nrow(parenttwin))
# Iterate over each row
for (i in 1:nrow(parenttwin)) {
  # Count the number of non-missing values for specific variables
  parenttwin$BROrganizeN[i] <- sum(!is.na(parenttwin[i, c("brief4", "brief29", "brief67",
"brief68", "brief69", "brief72")]))
  # Check if BRTotalN for the current row is greater than or equal to 58
  if (parenttwin$BRTotalN[i] >= 58) {
    # Check the value of BROrganizeN for the current row
    if (parenttwin$BROrganizeN[i] == 6) {
      # Calculate P_BRIEF_Organize as the sum of the listed variables
      parenttwin$P_BRIEF_Organize[i] <- sum(parenttwin[i, c("brief4", "brief29", "brief67",
"brief68", "brief69", "brief72")], na.rm = TRUE)
    } else if (parenttwin$BROrganizeN[i] == 5) {
      # Calculate P_BRIEF_Organize as the sum of the listed variables plus 1
      parenttwin$P_BRIEF_Organize[i] <- sum(parenttwin[i, c("brief4", "brief29", "brief67",
"brief68", "brief69", "brief72")], na.rm = TRUE) + 1
    } else if (parenttwin$BROrganizeN[i] == 4) {
      # Calculate P_BRIEF_Organize as the sum of the listed variables plus 2
      parenttwin$P_BRIEF_Organize[i] <- sum(parenttwin[i, c("brief4", "brief29", "brief67",
"brief68", "brief69", "brief72")], na.rm = TRUE) + 2
    } else {
      # Set P_BRIEF_Organize to NA if BROrganizeN is neither 6, 5, nor 4
      parenttwin$P_BRIEF_Organize[i] <- NA
    }
  } else {
    # Set P_BRIEF_Organize to NA if BRTotalN is less than 58
    parenttwin$P_BRIEF_Organize[i] <- NA
  }
}
parenttwin$P_BRIEF_Organize
```

#### #####Monitor

```
# Initialize
parenttwin$P_BRIEF_Monitor <- rep(NA, nrow(parenttwin))
parenttwin$BRMonitorN <- rep(NA, nrow(parenttwin))
# Iterate over each row
for (i in 1:nrow(parenttwin)) {
  # Count the number of non-missing values for specific variables
  parenttwin$BRMonitorN[i] <- sum(!is.na(parenttwin[i, c("brief14", "brief21", "brief31",
"brief34", "brief42", "brief52", "brief60", "brief63")]))
  # Check if BRTotalN for the current row is greater than or equal to 58
  if (parenttwin$BRTotalN[i] >= 58) {
    # Check the value of BRMonitorN for the current row
    if (parenttwin$BRMonitorN[i] == 8) {
      # Calculate P_BRIEF_Monitor as the sum of the listed variables
      parenttwin$P_BRIEF_Monitor[i] <- sum(parenttwin[i, c("brief14", "brief21", "brief31",
"brief34", "brief42", "brief52", "brief60", "brief63")], na.rm = TRUE)
    } else if (parenttwin$BRMonitorN[i] == 7) {
      # Calculate P_BRIEF_Monitor as the sum of the listed variables plus 1
      parenttwin$P_BRIEF_Monitor[i] <- sum(parenttwin[i, c("brief14", "brief21", "brief31",
"brief34", "brief42", "brief52", "brief60", "brief63")], na.rm = TRUE) + 1
    } else if (parenttwin$BRMonitorN[i] == 6) {
      # Calculate P_BRIEF_Monitor as the sum of the listed variables plus 2
      parenttwin$P_BRIEF_Monitor[i] <- sum(parenttwin[i, c("brief14", "brief21", "brief31",
"brief34", "brief42", "brief52", "brief60", "brief63")], na.rm = TRUE) + 2
    } else {
      # Set P_BRIEF_Monitor to NA if BRMonitorN is neither 8, 7, nor 6
      parenttwin$P_BRIEF_Monitor[i] <- NA
    }
  } else {
    # Set P_BRIEF_Monitor to NA if BRTotalN is less than 58
    parenttwin$P_BRIEF_Monitor[i] <- NA
  }
}
parenttwin$P_BRIEF_Monitor
```

#### ##### Subscales and global composite

```
parenttwin$P_BRIEF_Behreg <- rowSums(parenttwin[, c("P_BRIEF_Inhib", "P_BRIEF_Shift",
"P_BRIEF_Emo")])

parenttwin$P_BRIEF_Meta <- rowSums(parenttwin[,c("P_BRIEF_Initiate", "P_BRIEF_Wm",
"P_BRIEF_Plan", "P_BRIEF_Organize", "P_BRIEF_Monitor")])

parenttwin$P_BRIEF_GlobalComposite <- rowSums(parenttwin[, c("P_BRIEF_Behreg",
"P_BRIEF_Meta" )])
```

#### #####Negativity Scale

```
# Initialize P_BRIEF_Negativity variable
parenttwin$P_BRIEF_Negativity <- 0
# Iterate over each row
for (i in 1:nrow(parenttwin)) {
  # Check each variable and increment P_BRIEF_Negativity if the condition is met
  parenttwin$P_BRIEF_Negativity[i] <- parenttwin$P_BRIEF_Negativity[i] + ifelse(parenttwin
$brief8[i] == 3, 1, 0)
  parenttwin$P_BRIEF_Negativity[i] <- parenttwin$P_BRIEF_Negativity[i] + ifelse(parenttwin
$brief13[i] == 3, 1, 0)
  parenttwin$P_BRIEF_Negativity[i] <- parenttwin$P_BRIEF_Negativity[i] + ifelse(parenttwin
$brief23[i] == 3, 1, 0)
  parenttwin$P_BRIEF_Negativity[i] <- parenttwin$P_BRIEF_Negativity[i] + ifelse(parenttwin
$brief30[i] == 3, 1, 0)
  parenttwin$P_BRIEF_Negativity[i] <- parenttwin$P_BRIEF_Negativity[i] + ifelse(parenttwin
$brief62[i] == 3, 1, 0)
  parenttwin$P_BRIEF_Negativity[i] <- parenttwin$P_BRIEF_Negativity[i] + ifelse(parenttwin
$brief71[i] == 3, 1, 0)
  parenttwin$P_BRIEF_Negativity[i] <- parenttwin$P_BRIEF_Negativity[i] + ifelse(parenttwin
$brief80[i] == 3, 1, 0)
  parenttwin$P_BRIEF_Negativity[i] <- parenttwin$P_BRIEF_Negativity[i] + ifelse(parenttwin
$brief83[i] == 3, 1, 0)
  parenttwin$P_BRIEF_Negativity[i] <- parenttwin$P_BRIEF_Negativity[i] +
ifelse(parenttwin$brief85[i] == 3, 1, 0)
}
# View the P_BRIEF_Negativity column
parenttwin$P_BRIEF_Negativity
```

**\*\*\*scores of 5 or more should be considered elevated and a cause for careful review of the protocol. Scores at or above a 7 likely reflect either an excessively negative perception of the child or that the child may have substantial executive dysfunction.**

#### #####Inconsistency

```
# Initialize P_BRIEF_Inconsistency as NA for all rows
parenttwin$P_BRIEF_Inconsistency <- NA

# Iterate over each row
for (i in 1:nrow(parenttwin)) {
  # Compute absolute differences between pairs of variables and store them in new
variables
  parenttwin$BR725[i] <- abs(parenttwin$brief7[i] - parenttwin$brief25[i])
  parenttwin$BR1122[i] <- abs(parenttwin$brief11[i] - parenttwin$brief22[i])
  parenttwin$BR2717[i] <- abs(parenttwin$brief27[i] - parenttwin$brief17[i])
  parenttwin$BR3332[i] <- abs(parenttwin$brief33[i] - parenttwin$brief32[i])
  parenttwin$BR3859[i] <- abs(parenttwin$brief38[i] - parenttwin$brief59[i])
  parenttwin$BR4165[i] <- abs(parenttwin$brief41[i] - parenttwin$brief65[i])
  parenttwin$BR4263[i] <- abs(parenttwin$brief42[i] - parenttwin$brief63[i])
  parenttwin$BR4454[i] <- abs(parenttwin$brief44[i] - parenttwin$brief54[i])
  parenttwin$BR5360[i] <- abs(parenttwin$brief53[i] - parenttwin$brief60[i])
  parenttwin$BR5544[i] <- abs(parenttwin$brief55[i] - parenttwin$brief44[i])

  # Sum the absolute differences, removing missing values
  parenttwin$P_BRIEF_Inconsistency[i] <- sum(parenttwin$BR725[i], parenttwin$BR1122[i],
parenttwin$BR2717[i], parenttwin$BR3332[i], parenttwin$BR3859[i], parenttwin$BR4165[i],
parenttwin$BR4263[i], parenttwin$BR4454[i], parenttwin$BR5360[i], parenttwin$BR5544[i],
na.rm = TRUE)
}

# View the P_BRIEF_Inconsistency column
parenttwin$P_BRIEF_Inconsistency
```

**\*\*\* Inconsistency < 6 is Acceptable; 7 to 8 is "Questionable"; >= 9 "Inconsistent" '**

# **NatPAT COVID-19 2022 Survey Twin**

## **Section 1: All about you**

**Questions refer to children's resources for resilience, perceived stress, ability to bounce back, anxiety, comfortable level with technology, and frequency of technology use.**

# Section 1

## All about you

**1.1** Here are some statements that may or may not describe what you are like. Circle the number that shows how much you agree or disagree that it describes you. For example, do you agree that you have people you want to be like? Circle a 3 if you agree, a 2 if you think it describes you some of the time, and a 1 if you do not agree. Ask if you don't know what a word means!

cyrm#

	1 Do not agree	2 Some- times agree	3 Agree
1 Do you have people you want to be like?	1	2	3
2 Do you share with people around you?	1	2	3
3 Is doing well in school important to you?	1	2	3
4 Do you know how to behave / act in different situations (such as school, home, and church or mosque)?	1	2	3
5 Do you feel that your parent(s)/ caregiver(s) know where you are and what you are doing all of the time?	1	2	3
6 Do you feel that your parent(s) / caregiver(s) know a lot about you (for example, what makes you happy, what makes you scared)?	1	2	3
7 Is there enough to eat in your home when you are hungry?	1	2	3
8 Do you try to finish activities that you start?	1	2	3
9 Do you know where your family comes from or know your family's history?	1	2	3
10 Do other children like to play with you?	1	2	3
11 Do you talk to your family about how you feel (for example, when you are hurt or feeling scared)?	1	2	3
12 When things don't go your way, can you fix it without hurting yourself or other people (for example, without hitting others or saying nasty things)?	1	2	3
13 Do you have friends that care about you?	1	2	3
14 Do you know where to go to get help?	1	2	3
15 Do you feel you fit in with other children?	1	2	3
16 Do you think your family cares about you when times are hard (for example, if you are sick or have done something wrong)?	1	2	3
17 Do you think your friends care about you when times are hard (for example, if you are sick or have done something wrong)?	1	2	3
18 Are you treated fairly?	1	2	3
19 Do you have chances to show others that you are growing up and can do things by yourself?	1	2	3
20 Do you know what you are good at?	1	2	3
21 Do you participate in religious activities (such as church, mosque)?	1	2	3
22 Do you think it is important to help out in your community?	1	2	3
23 Do you feel safe when you are with your family?	1	2	3
24 Do you have chances to learn things that will be useful when you are older (like cooking, working, and helping others)?	1	2	3
25 Do you like the way your family celebrates things (like holidays or learning about your culture)?	1	2	3
26 Do you like the way your community celebrates things (like holidays, festivals)?	1	2	3

## #1.1 Child Youth Resilience Measure (CYRM)

Items are from The Child and Youth Resilience Measure (CYRM) Child Version (Retrieved from: <https://www.phenxtoolkit.org/protocols/view/301001>).

Original measure: Ungar, M., & Liebenberg, L. (2011). Assessing Resilience Across Cultures Using Mixed Methods: Construction of the Child and Youth Resilience Measure. *Journal of Mixed Methods Research*, 5(2), 126–149.

CYRM user manual can be found here: [https://cym.resilienceresearch.org/files/CYRM\\_&\\_ARM-User\\_Manual.pdf](https://cym.resilienceresearch.org/files/CYRM_&_ARM-User_Manual.pdf)

### **## Personal resilience based on CYRM user manual**

```
twin$CYRM_personal_sum <- rowSums(twin[, c("cyrm2", "cyrm3", "cyrm4",  
"cyrm10", "cyrm13", "cyrm15", "cyrm17", "cyrm18", "cyrm19", "cyrm24")])
```

### **# Caregiver/relational resilience based on CYRM user manual**

```
twin$CYRM_relational_sum <- rowSums (twin[, c("cyrm5", "cyrm6", "cyrm7",  
"cyrm11", "cyrm16", "cyrm23", "cyrm25")])
```

**1.2** These questions are about how you felt during the last week. Please circle the answer that best fits you.

psschild#	1 Never	2 A little	3 Some- times	4 A lot
1	1	2	3	4
2*	1	2	3	4
3	1	2	3	4
4	1	2	3	4
5*	1	2	3	4
6*	1	2	3	4
7	1	2	3	4
8	1	2	3	4
9*	1	2	3	4
10*	1	2	3	4
11	1	2	3	4
12*	1	2	3	4
13*	1	2	3	4

**1.3** Here are some more statements that describe what you are like. Circle the number that shows how much you agree or disagree that each statement describes you. Ask if you don't know what a word means!

brs_child#	1 Strongly disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly agree
1	1	2	3	4	5
2*	1	2	3	4	5
3	1	2	3	4	5
4*	1	2	3	4	5
5	1	2	3	4	5
6*	1	2	3	4	5

**1.4** Please put a circle around the answer that shows how often each of these things happen to you.

There are no right or wrong answers.

scas#	1 Never	2 Some- times	3 Often	4 Always
1	1	2	3	4
2	1	2	3	4
3	1	2	3	4
4	1	2	3	4
5	1	2	3	4
6	1	2	3	4
7	1	2	3	4
8	1	2	3	4

## #1.2 Perceived Stress Scale - Children (PSS-C)

Items are from White, B. P. (2014). The perceived stress scale for children: A pilot study in a sample of 153 children. *International Journal of Pediatrics and Child Health*, 2(2), 45-52.

```
## recode items
twin$psschild2_r <- 5 - twin$psschild2
twin$psschild5_r <- 5 - twin$psschild5
twin$psschild6_r <- 5 - twin$psschild6
twin$psschild9_r <- 5 - twin$psschild9
twin$psschild10_r <- 5 - twin$psschild10
twin$psschild12_r <- 5 - twin$psschild12
twin$psschild13_r <- 5 - twin$psschild13

# sum scores based on White (2014)
twin$stress_sum <- rowSums(twin[, c("psschild1", "psschild2_r", "psschild3",
  "psschild4", "psschild5_r", "psschild6_r", "psschild7", "psschild8",
  "psschild9_r", "psschild10_r", "psschild11", "psschild12_r",
  "psschild13_r") ] - 13
```

## #1.3 Brief Resilience Scale (BRS)

Items are from: Smith, B. W., Dalen, J., Wiggins, K., Tooley, E., Christopher, P., & Bernard, J. (2008). The brief resilience scale: assessing the ability to bounce back. *International journal of behavioral medicine*, 15, 194-200.

## #1.4 Child Anxiety Scale

Items are from: Spence, S. H., Barrett, P. M., & Turner, C. M. (2003). Psychometric properties of the Spence Children's Anxiety Scale with young adolescents. *Journal of anxiety disorders*, 17(6), 605-625.

Note. The original Scale has 44 items in total.

**1.5** These are questions about how comfortable you are with technology. Technology includes using computers or smart phones and tablets (for example, iPads). Technology also includes using social media, educational apps, playing video games, and using the internet. Please indicate how much you agree or disagree with the following statements about how you use technology:

technology#	1 Strongly disagree	2 Disagree	3 Neither agree nor disagree	4 Agree	5 Strongly agree
1	1	2	3	4	5
2	1	2	3	4	5
3	1	2	3	4	5
4	1	2	3	4	5
5	1	2	3	4	5
6	1	2	3	4	5
7	1	2	3	4	5
8	1	2	3	4	5
9	1	2	3	4	5
10	1	2	3	4	5
11	1	2	3	4	5
12	1	2	3	4	5
13	1	2	3	4	5

**1.6** These are questions about how often you use technology. Remember, technology includes using computers or smart phones and tablets (for example, iPads). Technology also includes using social media, educational apps, playing video games, and using the internet. Please circle one option for each statement about how you use technology:

usetech#	1 None of the day	2 A little bit of the day	3 Some of the day	4 Most of the day
1	1	2	3	4
2	1	2	3	4
3	1	2	3	4
4	1	2	3	4

## #1.5 Child Comfortable with Technology

## #1.6 Frequency of using Technology

Items are adapted from Dornisch, M. (2013). The digital divide in classrooms: Teacher technology comfort and evaluations. *Computers in the Schools*, 30(3), 210-228.

*\*Note. Items in #1.5 are modified in this questionnaire. The sum score created here is not validated in the original publication.*

```
twin$technology_sum <- rowSums(twin[, paste0("technology", 1:13)])  
twin$usetech_sum <- rowSums(twin[, paste0("usetech", 1:4)])
```

## **Section 2: Hw COVID-19 has affected you**

**Questions refer to COVID-19 impacts on children's daily routines, social connection, stress, and adverse life events.**

# Section 2

## How COVID-19 has affected you

**2.1 Compared to before** the COVID-19 outbreak in March, 2020, how much are you now doing the following. Please only circle one number per row. **beforecovid#**

	1 Less	2 Same amount	3 More
1 Eating	1	2	3
2 Sleeping	1	2	3
3 Spending time outside	1	2	3
4 Spending time with friends in-person	1	2	3
5 Spending time with friends remotely (e.g., online, social media, texting)	1	2	3
6 Spending time watching TV, playing video/computer games, or using social media for educational purposes, including school work	1	2	3
7 Spending time watching TV, playing video/computer games, or using social media for non-educational purposes	1	2	3

**2.2 Compared to before** the COVID-19 outbreak on March 13, 2020, do you now feel ... **beforecovidfeel**

- 1  Much less connected to friends, family, and community (e.g., people living in your neighborhood)
- 2  Less connected to friends, family, and community (e.g., people living in your neighborhood)
- 3  No change
- 4  More connected to friends, family, and community (e.g., people living in your neighborhood)
- 5  Much more connected to friends, family, and community (e.g., people living in your neighborhood)

**2.3** Please indicate how much you think the COVID-19 outbreak had either a good or bad impact on your life. **covidimpact**

- 1  Bad impact
- 2  Somewhat bad impact
- 3  No impact
- 4  Somewhat good impact
- 5  Good impact

**2.4 Since the COVID-19 outbreak** in March, 2020, how often have you ...

	1 Not at all	2 Rarely	3 Sometimes	4 Often	5 Very often
1 Had difficulty sleeping?	1	2	3	4	5
2 Been startled easily?	1	2	3	4	5
3 Had angry outbursts?	1	2	3	4	5
4 Felt a sense of time slowing down?	1	2	3	4	5
5 Felt in a daze?	1	2	3	4	5
6 Tried to avoid thoughts and feelings about COVID-19?	1	2	3	4	5
7 Tried to avoid reading or watching information about COVID-19?	1	2	3	4	5
8 Had bad dreams about COVID-19?	1	2	3	4	5
9 Been upset when you see something that reminds you of COVID-19?	1	2	3	4	5
10 Felt happy and satisfied with your life?	1	2	3	4	5

Type text here

## **#2.1-#2.4**

Items are adapted from ECHO Impacts of COVID-19 Outbreak on Child Self-Report (Retrieved from: <https://www.phenxtoolkit.org/protocols/view/960203?origin=search>)

**2.5** These questions are about certain things that may have happened to you **since the COVID-19 outbreak** in March, 2020. If any of these things has happened to you, please circle the answer that matches how much you were affected by it. If any of these things has not happened to you, please circle “did not happen.”

<b>adversecovid#</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>-98</b> Did not happen
		Not at all	A little	Some	A lot	
<b>1</b>	Someone in your family died	1	2	3	4	5
<b>2</b>	Family member was seriously sick or injured	1	2	3	4	5
<b>3</b>	Close friend died	1	2	3	4	5
<b>4</b>	Close friend was very sick	1	2	3	4	5
<b>5</b>	Caregiver lost a job	1	2	3	4	5
<b>6</b>	Caregiver got a new job	1	2	3	4	5
<b>7</b>	Caregivers argued more than before	1	2	3	4	5
<b>8</b>	One caregiver was away from home more often	1	2	3	4	5
<b>9</b>	Caregivers separated	1	2	3	4	5
<b>10</b>	Caregivers got divorced	1	2	3	4	5
<b>11</b>	School closed/switched to online	1	2	3	4	5
<b>12</b>	Family moved	1	2	3	4	5

## #2.5 Adverse Life Events Scale

Items are adapted from: Tiet, Q. Q., Bird, H. R., Davies, M., Hoven, C., Cohen, P., Jensen, P. S., & Goodman, S. (1998). Adverse life events and resilience. *Journal of the American Academy of Child and Adolescent Psychiatry*, 37(11), 1191-1200.

Full scale can be found here: <https://www.phenxtoolkit.org/protocols/view/211501>

## **Section 3: Your friends, school, and neighborhood**

**Questions refer to children's peer affiliations, school social environment, and neighborhood environment.**

# Section 3

## Your friends, school, and neighborhood

**3.1** In the following set of questions, we will be asking you what your friends are like. Please circle the number that matches your answer. In answering each question please think about ALL of your friends, rather than just one or two friends.

friends#

	4 All my friends are like that	3 Most of my friends are like that	2 Just a few of my friends are like that	1 None of my friends are like that
1 My friends work hard to get good grades in school.	1	2	3	4
2 My friends break the rules.	1	2	3	4
3 My friends are popular with other kids.	1	2	3	4
4 My friends drink alcohol or beer.	1	2	3	4
5 My friends are very smart.	1	2	3	4
6 My friends get into trouble with the police.	1	2	3	4
7 My friends are good at sports.	1	2	3	4
8 My friends smoke cigarettes or chew tobacco.	1	2	3	4
9 My friends do their homework and study a lot.	1	2	3	4
10 My friends steal things from others.	1	2	3	4
11 My friends get invited to all the parties.	1	2	3	4
12 My friends use drugs.	1	2	3	4
13 My friends get good grades in school.	1	2	3	4
14 My friends get into fights with other kids.	1	2	3	4
15 Other kids look up to (respect) my friends.	1	2	3	4
16 My friends know where to buy drugs.	1	2	3	4
17 My friends are liked by their teachers.	1	2	3	4
18 My friends get in trouble at school.	1	2	3	4
19 My friends attend the same school as me.	1	2	3	4
20 My friends are older than me.	1	2	3	4

**3.2** Please answer these questions about your school.

aboutscool#

	1 Strongly disagree	2 Disagree	3 Neither agree nor disagree	4 Agree	5 Strongly agree
1 Teachers understand my problems	1	2	3	4	5
2 Teachers and staff seem to take a real interest in my future	1	2	3	4	5
3 Teachers are available when I need to talk with them	1	2	3	4	5
4 It is easy to talk with teachers	1	2	3	4	5
5 Students get along well with teachers	1	2	3	4	5
6 At my school, there is a teacher or some other adult who notices when I'm not there	1	2	3	4	5
7 Teachers at my school help us children with our problems	1	2	3	4	5
8 My teachers care about me	1	2	3	4	5

### 3.2 Continued

	1	2	3	4	5
	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
9 My teacher makes me feel good about myself	1	2	3	4	5
10 My schoolwork is exciting	1	2	3	4	5
11 Students can make suggestions on courses that are offered	1	2	3	4	5
12 Students are publicly recognized for their outstanding performances in speech, drama, art, music, etc.	1	2	3	4	5
13 If this school had an extra period during the day, I would take an additional academic class	1	2	3	4	5
14 This school makes students excited about learning	1	2	3	4	5
15 Students are frequently rewarded or praised by teachers, principals and staff for following school rules	1	2	3	4	5
16 I usually understand my homework assignments	1	2	3	4	5
17 Teachers make it clear what work needs to be done to get the grade I want	1	2	3	4	5
18 I believe that teachers expect all students to learn	1	2	3	4	5
19 I feel that I can do well in this school	1	2	3	4	5
20 My teachers believe that I can do well in my schoolwork	1	2	3	4	5
21 I try hard to succeed in my classes	1	2	3	4	5
22 Classroom rules are applied equally	1	2	3	4	5
23 Problems in this school are solved by students and staff	1	2	3	4	5
24 Students get in trouble if they do not follow school rules	1	2	3	4	5
25 The rules of the school are fair	1	2	3	4	5
26 School rules are enforced consistently and fairly	1	2	3	4	5
27 My teachers make it clear to me when I have misbehaved in class	1	2	3	4	5
28 Discipline is fair	1	2	3	4	5
29 The schoolgrounds are kept clean	1	2	3	4	5
30 My school is neat and clean	1	2	3	4	5
31 My school buildings are generally pleasant and well maintained	1	2	3	4	5
32 My school is usually clean and tidy	1	2	3	4	5
33 I am happy with the kinds of students who go to my school	1	2	3	4	5
34 I am happy, in general, with the other students who go to my school	1	2	3	4	5
35 At my school, the same person always gets to help the teacher	1	2	3	4	5
36 At my school, the same kids get chosen every time to take part in after-school or special activities	1	2	3	4	5
37 The same kids always get to use things, like a computer, a ball, or a piano when we play	1	2	3	4	5
38 I am happy about the number of tests I have	1	2	3	4	5
39 I am happy about the amount of homework I have	1	2	3	4	5

### #3.1 Peer Affiliation (PA)

Items are adapted from: Hicks, B. M., DiRago, A. C., Iacono, W. G., & McGue, M. (2009). Gene-environment interplay in internalizing disorders: consistent findings across six environmental risk factors. *Journal of Child Psychology and Psychiatry*, 50(10), 1309-1317.

*\*Note. Items 1, 6, 7, 9 were reversely scored in the data entry system. These need to be recoded before creating subscale scores.*

```
twin$friends1_r <- 5 - twin$friends1
twin$friends6_r <- 5- twin$friends6
twin$friends7_r <- 5- twin$friends7
twin$friends9_r <- 5- twin$friends9
```

```
twin$PA_positive_avg <- rowMeans(twin[, c("friends1_r", "friends3",
"friends5", "friends7_r", "friends9_r", "friends11", "friends13",
"friends15", "friends17", "friends19")])
```

```
twin$PA_negative_avg <- rowMeans(twin[, c("friends2", "friends4",
"friends6_r", "friends8", "friends10", "friends12", "friends14",
"friends16", "friends18", "friends20")])
```

#### ##Scales based on Florida Twin Project

```
twin$PA_good_avg <- rowMeans(twin[, c("friends3", "friends7_r",
"friends11", "friends15")])
twin$PA_school_avg <- rowMeans(twin[, c("friends1_r", "friends5",
"friends9_r", "friends13", "friends17")])
twin$PA_bad_avg <- rowMeans(twin[, c("friends2", "friends4", "friends6_r",
"friends8", "friends10", "friends12", "friends14", "friends16", "friends18",
"friends20")])
```

### #3.2 School Social Environment

Items are from Zullig, K. J., Huebner, E. S., & Patton, J. M. (2011). Relationships among school climate domains and school satisfaction. *Psychology in the Schools*, 48(2), 133-145.

More information here: <https://www.phenxtoolkit.org/protocols/view/211001?origin=search>

```
twin$SSE_teacherRelation_avg <- rowMeans(twin[, paste0("aboutschoo", 1:9)])
twin$SSE_connect_avg <- rowMeans(twin[, paste0("aboutschoo", 10:15)])
twin$SSE_acadSupport_avg <- rowMeans(twin[, paste0("aboutschoo", 16:21)])
twin$SSE_discipline_avg <- rowMeans(twin[, paste0("aboutschoo", 22:28)])
twin$SSE_physicalEnv_avg <- rowMeans(twin[, paste0("aboutschoo", 29:32)])
twin$SSE_socialEnv_avg <- rowMeans(twin[, paste0("aboutschoo", 33:34)])
twin$SSE_exclusion_avg <- rowMeans(twin[, paste0("aboutschoo", 35:37)])
twin$SSE_acadSatisfy_avg <- rowMeans(twin[, paste0("aboutschoo",
38:39)])
```

**3.3** Please answer these questions about your neighborhood. Circle the number that best describes your feelings.

		1	2	3	4
	neighborhood#	Not at all true	A little true	Sort of true	Very true
1*	There are plenty of safe places to walk or spend time outdoors in my neighborhood.	1	2	3	4
2	Every few weeks, some kid in my neighborhood gets beat up or mugged.	1	2	3	4
3	Every few weeks, some adult gets beat-up or mugged in my neighborhood.	1	2	3	4
4	I have seen people using or selling drugs in my neighborhood.	1	2	3	4
5	In the morning or later in the day, I often see drunk people on the street in my neighborhood.	1	2	3	4
6*	Most adults in my neighborhood respect the law.	1	2	3	4
7*	I feel safe when I walk around my neighborhood by myself during the day.	1	2	3	4
8	People who live in my neighborhood often damage or steal each other's property.	1	2	3	4
9*	I feel safe when I walk around my neighborhood by myself at night.	1	2	3	4
10	In my neighborhood, the people with the most money are the drug dealers.	1	2	3	4

**>>>>> THANK YOU! THIS IS THE END OF THIS SURVEY <<<<<<**

**>>>> Please put both this survey and the signed assent form in the return envelope <<<<**

### #3.3 Neighborhood Environment Scale (NES)

Items used in this questionnaire are from: Elliot, D. S., Huizinga, D., & Ageton, S. S. (1985). Explaining delinquency and drug use. Beverly Hills, CA: Sage Publications.

```
#### recode items
```

```
twin$neighborhood1_r <- 5 - twin$neighborhood1
twin$neighborhood6_r <- 5 - twin$neighborhood6
twin$neighborhood7_r <- 5 - twin$neighborhood7
twin$neighborhood9_r <- 5 - twin$neighborhood9
```

```
twin$neighborhood_avg <- rowMeans(twin[, c("neighborhood1_r", "neighborhood2",
                                           "neighborhood3", "neighborhood4",
                                           "neighborhood5", "neighborhood6_r",
                                           "neighborhood7_r", "neighborhood8",
                                           "neighborhood9_r", "neighborhood10")])
```