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## A Note from Our Co-Principal Investigator

Dear Project Viva family,

If you have completed a Project Viva survey or participated in a visit recently, you may have seen some different kinds of questions than we have asked in the past.

Although it may feel like there are many changes happening within the study, Project Viva's core identity remains the same, as captured in our tagline: "A study of health for the next generation." That is, we are interested in how experiences and behaviors, especially in early life, affect a range of health conditions later in life.

But we also want to keep Project Viva up to date by allowing us to ask, and answer, the latest scientific questions. One area that has emerged as an important predictor of lifelong health is [adverse childhood experiences \(ACEs\)](#). ACEs are stressful traumatic events occurring in childhood.

The effects of ACEs on a variety of health outcomes in adult life was examined first in a population of Kaiser Permanente members in Southern California in the late 1990's. [This retrospective analysis](#) found correlations between ACEs and later-in-life health outcomes and behaviors including obesity, diabetes, and cardiovascular disease, substance use, and depression. ACEs are common – in a [survey](#) of almost 215,000 US adults from 23 states, 62% had at least one and 25% reported three or more ACEs.

Accumulating scientific evidence confirms that ACEs are an important predictor of the outcomes that are core measures in Project Viva. If you are a Viva mom, you may recall answering some similar questions when you completed your questionnaires during your Viva pregnancy. As we have continued to learn more about ACEs and overall health, the questions that we ask to collect this information have been further refined. Several of our recent questionnaires (such as the Age 19 questionnaire for Viva teens and Winter 2021 COVID questionnaire for Viva moms) offered the opportunity to answer further questions about ACEs. If you are a Viva mom who did not respond to the Winter COVID questionnaire, your Women's Health Visit 1 questionnaire includes questions about ACEs. Similarly, clinical providers such as pediatricians, obstetricians, and primary care doctors are increasingly screening for ACEs, as effective treatments exist to prevent adverse health outcomes among affected adults and families.

Remember, you can always choose not to participate in any part of Project Viva, whether it is a question on a questionnaire or a type of measurement. We appreciate hearing your questions, and any concerns about what we are doing. We look forward to sharing summary results about these and other measures in the coming months and years!

Warmly,

**Emily Oken, MD, MPH**

Co-Principal Investigator of Project Viva



# Timeline of Recent, Current, and Upcoming Visits and Surveys



RECENTLY COMPLETED	ONGOING NOW	COMING SOON
<ul style="list-style-type: none"> <li>• Mid-Teen Visit</li> <li>• COVID Surveys</li> <li>• Age 19 Survey</li> </ul>	<ul style="list-style-type: none"> <li>• Women's Health Visit 1</li> <li>• 2022 Annual Survey</li> </ul>	<ul style="list-style-type: none"> <li>• Women's Health Visit 1 (if not already completed)</li> <li>• 2023 Annual Survey</li> </ul>



RECENTLY COMPLETED	ONGOING NOW	COMING SOON
<ul style="list-style-type: none"> <li>• Mid-Teen Visit</li> <li>• COVID Surveys</li> <li>• Age 19 Survey</li> </ul>	<ul style="list-style-type: none"> <li>• 2022 Annual Survey</li> </ul>	<ul style="list-style-type: none"> <li>• Young Adult Visit</li> <li>• Mobile App</li> <li>• 2023 Annual Survey</li> </ul>

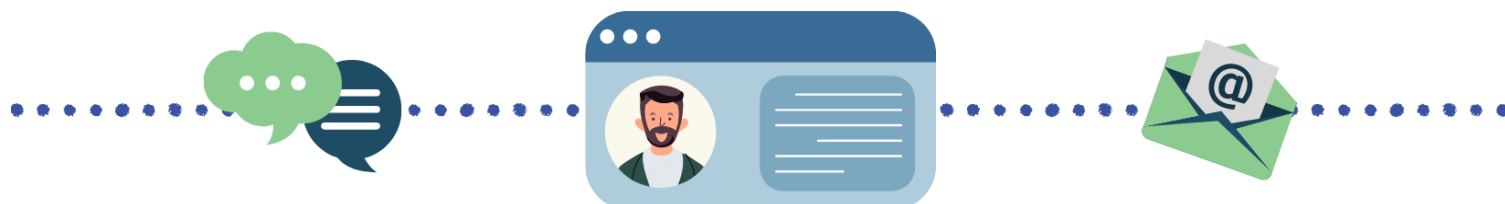


## Mobile App Coming Soon

For the first time ever, participants will have the opportunity to use their smartphones to participate in Project Viva! We are planning to use a smartphone app to collect research data and make study participation more convenient. Stay tuned for more details about the new smartphone app!

## Father's Contact Information

Thank you to everyone who has provided biological father/parental figure contact information. We appreciate the helpful feedback that you have shared about these questions and recognize that our participants have varied and unique relationships with their biological fathers (and in some cases do not consider these individuals fathers at all). If you have not already provided this information and feel comfortable sharing it with us, please be sure to answer the contact information questions in our ongoing 2022 Annual Survey, even if you are a mom participant who has already done so. As always, please feel free to skip any questions that you do not feel comfortable answering. **If for any reason you prefer that we not contact the biological father of a Viva child, please let us know, even if you have already provided contact information.** Please note that providing this contact information will not enroll the father/parental figure in Project Viva or in any way obligate them to participate; it will just allow us to contact them and invite them to be part of the study. We plan to start contacting the biological fathers and parental figures in 2023 to see if they are interested in participating. If you have any questions about our plans, please contact us!



# The 2022 Annual Survey: Updates and a Focus on Mental Health



## What is the Purpose of the 2022 Annual Survey?

Earlier this year, Project Viva launched its next phase of data collection with our 2022 Annual Survey. Project Viva conducts annual surveys to examine changes in participants throughout the years. Annual surveys allow us to get up-to-date information as both participants' lives and the current world events change over time. This year's survey asks questions about your physical and mental health and behaviors, your experiences that contribute to health throughout your life, your ability to access and use healthcare, and COVID-19 infection and vaccination.

## Participants Show an Interest in Mental Health

In our 2022 Annual Survey, we also asked what research topics you would be interested in learning more about. A large majority of participants reported mental health as a main topic of interest. Our current annual surveys are using various measures to examine mental health and this data will be analyzed after the closure of the surveys at the end of this year.

## COVID-19 Surveys Reveal Sources of Stress

Additionally, we recently collected information on mental health during our two previous COVID-19 surveys administered in 2021 and 2022. About 1,000 moms and young adults participated in each of the COVID-19 surveys. In these surveys, we asked participants about their stress and coping during the pandemic. One measure of stress that we administered is a scale designed to measure a person's evaluation of stressful situations. [The higher the score on this scale, the greater stress a participant is perceiving as experiencing in their life.](#) We found that young adult participants reported significantly higher scores, indicating greater perception of stress in their lives, as compared to mom participants.

We also examined the main sources of stress reported by young adults compared to mom participants. During both COVID-19 surveys, moms reported that their greatest sources of stress were primarily the pandemic's impact on their children and other family members, while young adults reported that their greatest sources of stress were primarily social distancing and being quarantined. To cope with stress, young adults reported that they practiced meditation, engaged in family activities, increased their eating, and increased their time reading. Moms reported that they coped by talking with friends and increasing their television watching and screen time.

## Next Steps

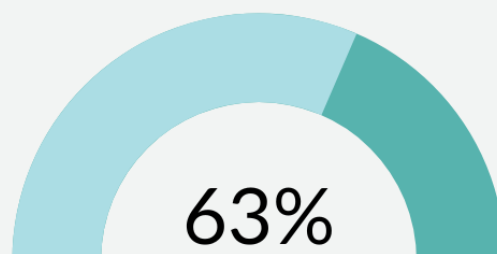
We look forward to continuing to examine mental health and will share results with you when we complete our data collection and analysis. If you have not yet completed the Annual Survey, it will be open until the end of 2022, so please complete it at your earliest convenience. We emailed the survey to the rest of the cohort in early July of this year, so keep an eye out for that if you have not yet received the survey!

### ANNUAL SURVEY COMPLETION NUMBERS

For Both Moms and Young Adults

Total Surveys Sent	2,416
Total Surveys Completed	502
Survey Completion Goal	800

### COMPLETION PROGRESS TOWARDS GOAL





**ECHO**  
Environmental influences  
on Child Health Outcomes  
A program supported by the NIH

## ◀◀ UPDATES ▶▶

Welcome back to the ECHO Corner! Learn more about Project Viva's collaboration with the nationwide ECHO Program here!

### ANNUAL SURVEY

The 2022 Annual Survey is currently open for moms and young adults to complete. If you have not had a chance to complete this survey yet, it is a great opportunity to contribute to Project Viva and ECHO research.

If you have not previously provided a consent response for the ECHO program, there will be an ECHO-specific addendum at the beginning of the survey. This addendum is NOT related to your participation in Project Viva or your participation in this survey. As a reminder, [ECHO](#) is a research program launched by the National Institutes of Health ([NIH](#)) that is striving to understand the effects of environmental influences on child health and development. You will not see an addendum if you have already provided a response to an ECHO consent in a previous visit or survey. This is an exciting opportunity to participate in nationwide research and help improve lives across the country.

### RECENT FINDING

#### Youth Well-being During the COVID-19 Pandemic

##### What happened during the study?

The researchers collected survey data that asked each participant about their family's COVID-19 pandemic experience from May 2020 to May 2021. They looked at how pandemic-related sources of stress (also called "hardships") were related to caregiver and child stress.

##### What were the study results?

Families with more COVID-19 pandemic-related hardships had higher levels of caregiver and child stress and lower child life satisfaction. For adolescents, having anxiety and/or depression was a risk factor associated with lower life satisfaction during the pandemic.

##### Where can I learn more?

[Access the full journal article](#), titled, "Youth well-being during the COVID-19 pandemic" in Pediatrics.

##### Interested in hearing more about our research?

Follow us on Twitter, [@ProjectViva](#) [DPM](#).

### REMOTE BIOSPECIMEN COLLECTION



We also may follow up to ask for your participation in collecting urine samples remotely if you did not have an opportunity to share urine biospecimens during the Mid-Teen Visit. If you are interested, we will send a collection kit to your home, which can be shipped for free to our laboratory. You will receive an additional \$5 e-gift card incentive for the collection. Please contact us to learn more details!



### AGE 19 QUESTIONNAIRE WRAP-UP



After over two years of collecting survey responses, the Age 19 Questionnaire closed this past June. Thank you to everyone who completed this. The survey covered a range of topics including questions about your household, mental health, job and schooling, and daily activities. We hope to share preliminary results with you in the next few months!

# FEATURED FINDING

## ***Maternal Diet Quality During Pregnancy and Child Cognition and Behavior***



Given babies receive all their nutrients from their mothers while in the womb, there is a connection between a pregnant mother's diet and the brain development of the child. What is less concretely understood is the specific relationship between the mother's dietary patterns while pregnant and the child's behavior and cognition. Cognition can be broadly defined as the mental action or process of acquiring knowledge and understanding through thought and experience.

Maternal dietary patterns were collected through questionnaires completed by Viva moms during early and mid-pregnancy. The nutritional quality of these dietary patterns was assessed by investigators through a modified version of the Mediterranean Diet Score (MDS) and the Alternate Healthy Eating Index (AHEI). Child cognition was assessed using various standardized tests and questionnaires completed by Viva children and moms at infancy, early childhood, and mid-childhood. [Investigators found that a mother consuming a better-quality diet during pregnancy was associated with their child having better visual spatial skills at early childhood and better intelligence and executive function at mid-childhood.](#)



To read more Viva findings, [visit our website.](#)

***Thank you for Reading!***



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