PARENT’S PERSPECTIVES ON CHILDREN AND COVID-19

Insights from the 2022 Parenting in Tumultuous Times (PITT) Survey

DR. JESSICA MCCORORY CALARCO & ELIZABETH M. ANDERSON
DEPARTMENT OF SOCIOLOGY

INDIANA UNIVERSITY
DEPARTMENT OF SOCIOLOGY
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Despite evidence that children can contract, transmit, and become seriously ill from Covid-19 (Broadfoot 2022; CDC 2022a; ONS 2022; Ortaliza et al. 2022), and despite the effectiveness of both vaccines and high-quality face masks (Jehn et al. 2021; Howard et al. 2021; Walter et al. 2021), rates of childhood vaccination against Covid-19 remain far lower than rates of adult vaccination (CDC 2022b; NYT 2022), and many families have resisted efforts to maintain mask requirements in schools, childcare centers, and other spaces for children (Astor 2022). To help explain these patterns, we examine parents’ health decisions during the pandemic, and we consider how those decisions are related to parents’ perceptions of Covid-19, masks, and vaccines. We base these analyses on data from a novel survey conducted from mid-December 2021 through mid-January 2022 (the height of the Omicron wave) with 2,009 US-based parents of children under 18 who were recruited through Qualtrics panels.

First, we find that low rates of childhood vaccination and masking are driven in large part by the decisions of white mothers without bachelor’s degrees. With respect to vaccines, white mothers without bachelor’s degrees are significantly less likely than any other subgroup of parents to:

1) Report that they have at least one child who is vaccinated or will be vaccinated as soon as possible. (31% vs. 55% of parents overall).
2) Say that Covid-19 vaccines are very necessary for their children (27% vs. 48% overall).
3) Support school-required Covid-19 vaccines (30% vs. 54% overall), and
4) Be vaccinated themselves (39% vs. 64% overall).

Similarly, and with respect to masks, white women without bachelor’s degrees are significantly less likely than all other groups of parents to:

1) Report that their children are wearing masks indoors (47% vs. 67% overall) and
2) Support school mask mandates (55% vs. 74% overall).

Our data suggest that white mothers without bachelor’s degrees may play this outsized role in resisting vaccines and masks for children because they are the subgroup of parents least likely to identify as Democrats or Democrat-leaning Independents, the group with the lowest involvement in paid work (thereby reducing their exposure to workplace mask and vaccine mandates), one of the groups that engages most heavily with social media, and simultaneously the group that has reduced their consumption of mainstream news about Covid-19 more than any other group.

At the other end of the spectrum, we find that Asian American and Pacific Islander (AAPI) parents with bachelor’s degrees report the highest levels of vaccination/intended vaccination for their children (78% for women; 97% for men), the highest levels of vaccination for themselves (92% for women; 97% for men), the highest levels of mask-wearing among children (78% for women; 87% for men), and the highest levels of support for mask mandates (90% for women and men) and vaccine mandates in schools (77% for women; 95% for men). These patterns may be driven in part by high levels of engagement in paid work (especially for fathers), as well as high levels of trust in the CDC, low levels of engagement with social media, and high levels of continued engagement with mainstream news and information about Covid-19 (especially for mothers).

Second, we identify three key pathways that may lead parents to avoid masking and vaccinating their children against Covid-19. These include:

1) Low levels of concern about Covid-19 as a serious threat to the wellbeing of children and “healthy” people,
2) High levels of concern about the safety and efficacy of Covid-19 vaccines and masks for children, and
3) Disengagement from and lack of trust in sources of news and information regarding Covid-19.
These three pathways are all closely linked to parents’ decisions regarding masks and vaccines. These three pathways, however, do not always run in parallel. Rather, the first two pathways are disproportionately common among white mothers without bachelor’s degrees, while the second pathway includes a wider range of parents from other social groups.

Finally, we find that unvaccinated parents and parents with unvaccinated children are as likely and in some cases more likely than other parents to be engaging in high-risk activities like eating meals at restaurants, visiting with family and friends indoors, and attending large-group gatherings.

Thus, while we might expect vaccinated parents and parents with vaccinated children to feel safer returning to pre-pandemic activities, we find instead that unvaccinated parents and parents without vaccinated children are driving the “return to normal.”
INTRODUCTION

During the early stages of the pandemic, data suggested that children were less likely than adults to contract or transmit Covid-19 (Goldstein et al. 2020; Lee et al. 2020). Since that time, however, new evidence has emerged showing that children contract and transmit Covid-19 at rates similar to those of adults and that age discrepancies in the early data were a function of the fact that: 1) children had fewer opportunities for in-person contact due to the closure of childcare centers, schools, and activities, and 2) children were less likely than adults to be tested for Covid-19 (CDC 2021).

Those consequences for children were made particularly apparent during the more serious Delta and Omicron waves that began in the summer of 2021 and continued through the writing of this report in February 2022. In January 2022, during the peak of the Omicron wave, an average of 881 children in the US were being admitted to the hospital with Covid-19 every day, and many of those were children under the age of 5, who were not yet eligible to be vaccinated at the time (Broadfoot 2022). By February 2022, 970 children in the US had died from Covid-19 (CDC 2022a), and Covid-19 was among the top seven causes of death for children in the US (Ortaliza et al. 2022). Studies have also shown that children may be developing long Covid symptoms—fatigue, shortness of breath, and cognitive impairments that last for weeks or months or more—at rates similar to adults (ONS 2022).

Despite the new findings, however, and despite rising rates of infection, hospitalization, and death among children during the Delta and Omicron waves, rates of Covid-19 vaccination among children remained far lower than vaccination rates among adults in the US. Covid-19 vaccines for children ages 12-17 were approved in May 2021 and for children ages 5-11 in November 2021. As of February 2022, however, only about two-thirds of children ages 12-17 (67%) and one third of children ages 5-11 (32%) had received at least one dose of the vaccine, and only some of those in each group (57% of those ages 12-17 and 25% of those ages 5-11) had completed the two-dose vaccine series (CDC 2022b). By contrast, and among US adults ages 18 and up, more than 80 percent had received at least one dose of the vaccine, and 72 percent were fully vaccinated (CDC 2022b; NYT 2022).

Meanwhile, and despite both the potential consequences for children and the low vaccination rates among children in the US, families in many communities resisted efforts to close schools during the Delta and Omicron waves, and many also pushed to end school mask mandates if those mandates had not already been removed (Astor 2022).

These findings raise questions about how parents perceive the risks of Covid-19 for children and how those perceptions may be contributing to low rates of vaccination among children and resistance to vaccine and mask mandates in schools. Meanwhile, and despite both the potential consequences for children and the low vaccination rates among children in the US, families in many communities resisted efforts to close schools during the Delta and Omicron waves, and many also pushed to end school mask mandates if those mandates had not already been removed (Astor 2022).

These findings raise questions about how parents perceive the risks of Covid-19 for children and how those perceptions may be contributing to low rates of vaccination among children and resistance to vaccine and mask mandates in schools.

Research Questions

• What health decisions did parents make during the COVID-19 pandemic?
• How were these health decisions related to parent’s perceptions of Covid-19, masks, and vaccines?
We answer these questions using data from the Parenting in Tumultuous Times (PITT) Survey, an online survey that was fielded from December 15, 2021 through January 15, 2021.

**Sample**

Participants were recruited through Qualtrics panels and were eligible for the survey if they were living in the US, were at least 18 years of age, and had at least one in their household under the age of 18. Quotas were used to ensure representation of parents of different genders, racial/ethnic groups, educational attainment levels, and regional locations. Mothers, Black parents, and parents who have not completed bachelor’s degrees were oversampled to allow for more nuanced analyses of variations within these groups. 3,553 respondents clicked the link to begin the survey. 1,554 of these respondents were excluded because they did not meet the eligibility criteria, because they exceeded the quotas, because they did not complete the full survey, or because they failed the quality checks. The final sample includes 2,009 parents. Post-stratification weights were then developed to align the final sample (based on gender, race/ethnicity, educational attainment, age, and regional location) with data on parents of children under 18 from the 2021 American Community Survey. Weights are applied in all analyses presented in this report.

**Questionnaire**

The PITT Study was approved by the Indiana University Institutional Review Board, under Protocol #13111. The PITT survey questionnaire included 194 questions, with a median duration of approximately 27 minutes. Six of the eighteen question blocks included questions about parents’ perceptions of and decisions regarding Covid-19 (e.g., concerns regarding Covid-19, vaccine-related attitudes and decisions, mask-related attitudes and decisions, social distancing-related attitudes and decisions, pandemic schooling-related attitudes, and decisions, household risk/infection status).

Some questions were adapted from prior surveys, including the Kaiser Family Foundation’s Vaccine Monitor Survey. Others were developed for the purpose of these analyses.

**Analysis**

We begin by analyzing parents’ perceptions of the risks of Covid-19 for their children and their families more generally.

Next, we consider how parents perceive Covid-19 vaccines, including their necessity for children, their effectiveness, and their potential risks.

We also consider parents’ vaccine decisions, their support for vaccine mandates, and their willingness to comply with vaccine mandates for children.

We then conduct similar analyses for parents’ perceptions of and decisions regarding mask-wearing.

Finally, we examine parents’ engagement with news about Covid-19 and their trust in various sources of information about the pandemic.

All analyses are weighted. First, preliminary analyses were conducted through the Qualtrics platform, which can be used to produce weighted crosstabs with chi-square tests and z-tests of group means. Results were then confirmed in SPSS.
Children are much more likely to experience serious complications from Covid-19 than from Covid-19 vaccines (Lau and Galea 2021; Lewis 2021). Yet, we find that most parents do not perceive Covid-19 itself as a greater risk to children. Parents were asked: “Which of these do you think poses a greater risk of serious harm to your children?” Overall, and as shown in Figure 1.1, 48 percent of parents perceive getting Covid-19 as the greater risk, 32 percent perceive getting Covid-19 and Covid-19 vaccines as equal risks, and 21 percent perceive getting Covid-19 vaccines the greater risk.

These perceptions of Covid-19 risks to children also vary across parents, as shown in Figures 1.1 and 1.2. Men, for example, are significantly more likely than women to see Covid-19 as the bigger threat to children (53% vs. 43%, p<0.05). Asian American or Pacific Islander (AAPI) parents are significantly more likely than white, Black, and Latino parents to perceive Covid-19 as the greater threat (68% vs. 50%, 39%, and 38%, p<0.05). Parents with advanced degrees and bachelor’s degrees are significantly more likely than parents without bachelor’s degrees to perceive Covid-19 as the bigger threat (68% and 60% vs. 36%, p<0.05). And Democrat/Democrat-leaning parents are significantly more likely than Republican/Republican-leaning parents and parents affiliated with neither party to perceive Covid-19 as the bigger threat to children (63% vs. 36% and 34%; p<0.05). Similar patterns can be seen with respect to variations by employment, income, relationship status, religion, and household composition, with full-time employed parents, high-income parents, married/cohabiting parents, parents who do not identify as Evangelical Christians, parents who do not have young children, and parents in houses that have not contracted Covid-19 disproportionately seeing Covid-19 as a bigger risk to children than vaccines (p<0.05).
1. Perceptions of Covid-19 as a Risk for Children

Figure 1.1: Perceptions of the Relative Risks of Covid-19 and Covid-19 Vaccines for Children

*Weighted proportions*
1. Perceptions of Covid-19 as a Risk for Children

Figure 1.2: Parents Saying Covid-19 is a Greater Risk to their Children than Covid-19 Vaccines

*Weighted means and 95% confidence intervals
1. Perceptions of Covid-19 as a Risk for Children

Figures 1.3 and 1.4 also highlight variations in parents’ perceptions across subgroups by gender, race/ethnicity, and education. White, Black, and Latina mothers without bachelor’s degrees and Black fathers without bachelor’s degrees report particularly low levels of concern about the risks of Covid-19 for children relative to the potential risks of vaccines. AAPI parents with bachelor’s degrees, by contrast, are significantly more likely than other parents to perceive Covid-19 as a bigger risk to children than vaccines (p<0.05).

**Figure 1.3:** Perceptions of the Relative Risks of Covid-19 and Covid-19 Vaccines for Children by Gender, Race/Ethnicity, and Education

*Weighted proportions*
1. Perceptions of Covid-19 as a Risk for Children

Figure 1.4: Parents Saying Covid-19 is a Greater Risk to their Children than Covid-19 Vaccines by Gender, Race/Ethnicity, and Education

*Weighted means and 95% confidence intervals

Women

<table>
<thead>
<tr>
<th>Gender</th>
<th>Race/Ethnicity</th>
<th>Education</th>
<th>Mean</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td>White alone</td>
<td>Bachelor's Degree</td>
<td>0.72</td>
<td>0.66-0.78</td>
</tr>
<tr>
<td></td>
<td>Bachelor's Degree</td>
<td>No Bachelor's Degree</td>
<td>0.68</td>
<td>0.62-0.73</td>
</tr>
<tr>
<td>Women</td>
<td>Hispanic or Latina</td>
<td>Bachelor's Degree</td>
<td>0.70</td>
<td>0.64-0.76</td>
</tr>
<tr>
<td></td>
<td>Bachelor's Degree</td>
<td>No Bachelor's Degree</td>
<td>0.66</td>
<td>0.60-0.72</td>
</tr>
<tr>
<td>Women</td>
<td>Black alone</td>
<td>Bachelor's Degree</td>
<td>0.70</td>
<td>0.64-0.76</td>
</tr>
<tr>
<td></td>
<td>Bachelor's Degree</td>
<td>No Bachelor's Degree</td>
<td>0.66</td>
<td>0.60-0.72</td>
</tr>
<tr>
<td>Women</td>
<td>AAPI alone</td>
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<td>0.70-0.80</td>
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<tr>
<td></td>
<td>Bachelor's Degree</td>
<td>No Bachelor's Degree</td>
<td>0.70</td>
<td>0.64-0.75</td>
</tr>
</tbody>
</table>
Globally, more than 5 million children have lost a parent or other primary caregiver to Covid-19 (Unwin et al. 2022), and estimates suggest that one in every four Covid deaths in the United States results in the loss of a parent or caregiver for a child (Victor 2021). Covid-19 is also highly transmissible within households, and children play a key role in that transmission (Li et al. 2021). Thus, we might expect parents to be highly concerned not only about the risks of Covid-19 for their children but also about the risks for other household members, as well. Parents were asked how concerned they were about the possibility of someone in their household (re)contracting Covid-19. As shown in Figures 2.1 and 2.2, 19 percent of parents reported being extremely concerned, 22 percent very concerned, 31 percent somewhat concerned, 14 percent not very concerned, and 14 percent are not at all concerned. Thus, only about four in ten parents (41 percent) reported being highly concerned about the possibility of Covid-19 (re)infection.

Concerns about Covid-19 (re)infections also vary across parents. Black, Latino, and AAPI parents report significantly higher levels of concern than do white parents (p<0.05). Parents with higher levels of education and parents who are working for pay full-time also report disproportionately high levels of concern, as do higher-income parents, married or cohabiting parents, Democrat/Democrat-leaning parents, religious parents, parents with children ages 5-11, parents in households that have people in high-risk groups, and parents in households with people who have previously contracted Covid-19 (p<0.05).

Notably, parents who are vaccinated and parents whose children are vaccinated or will be ASAP also report significantly higher levels of concern than unvaccinated and non-vaccinating parents (p<0.05). These findings are surprising given that vaccines help to protect against serious complications and suggest that lack of concern about Covid-19 may be contributing to low vaccination rates.
2. Concern about Covid-19 (Re)Infection

Figure 2.1: Concern (1-5) with the Possibility of a Household Member (Re)Contracting Covid-19

Question: “How concerned are you about the possibility that someone in your household might get infected (or reinfected) with COVID-19?” (1 = Not At All Concerned; 2 = Not Very Concerned; 3 = Somewhat Concerned; 4 = Very Concerned; 5 = Extremely Concerned)
2. Concern about Covid-19 (Re)Infection

Figure 2.2: Concern (1-5) with the Possibility of a Household Member (Re)Contracting Covid-19

*Weighted proportions

- Not at all concerned
- Not very concerned
- Somewhat concerned
- Very concerned
- Extremely concerned

Household Member had Covid
- Not Household Member had Covid
- High Risk Household Member
- No High Risk Household Members
- Parent Unvaccinated
- Parent Vaccinated
- At least one child vaccinated or will be right away
- No child vaccinated, none will be right away
- No Children Ages 0-4
- Children Ages 0-4
- No Children Ages 5-11
- Children Ages 5-11
- No Children Ages 12-17
- Children Ages 12-17
- Married or Cohabiting
- Not Married or Cohabiting
- Republican or Leans Republican
- Independent or Other Party
- Democrat or Leans Democrat
- Evangelical Christian
- Religious, Non-Evangelical
- Non-Religious
- Bachelor’s Degree
- No Bachelor’s Degree
- Advanced Degree
- Bachelor’s Degree
- No Bachelor’s Degree
- Employed Full Time
- Part Time or Self Employed
- Not Working for Pay
- Household Income Under $25K
- $25K-$49K
- $50K-$74K
- $75K-$99K
- $100K-$149K
- $150K or more
- Not Married or Cohabiting
- Married or Cohabiting
- Religious, Non-Evangelical
- Non-Religious
- No Children Ages 0-4
- Children Ages 0-4
- No Children Ages 5-11
- Children Ages 5-11
- No Children Ages 12-17
- Children Ages 12-17
- Parent Vaccinated
- Parent Unvaccinated
- At least one child vaccinated or will be right away
- No child vaccinated, none will be right away
- No High Risk Household Members
- High Risk Household Member
- No Household Member had Covid
- Household Member had Covid

- Weighted proportions

Research Report Parents’ Perspectives on Children and Covid-19
2. Concern about Covid-19 (Re)Infection

As shown in Figure 2.3, parents’ concerns about the possibility of Covid-19 (re)infection also vary across subgroups. White mothers without bachelor’s degrees report significantly lower levels of concern than any other group of mothers (p<0.05). Similarly, white fathers without bachelor’s degrees also report the lowest rates of concern among fathers—significantly lower than any group of fathers except AAPI fathers without bachelor’s degrees (p<0.05).

**Figure 2.3:** Parents’ Concern (1-5) Regarding the Possibility of a Household Member (Re) Contracting Covid-19 by Gender, Race/Ethnicity, and Educational Attainment

*Weighted means and 95% confidence intervals*
Given the early public health messaging around children and Covid-19, parents may perceive children as being at lower risk with Covid-19 than adults are. Parents were asked to indicate which of the following statements better matched their views. “When it comes to Covid-19, children... 1) Do not need to take as many precautions as adults do, or 2) Should take at least as many precautions as adults do.” Overall, about one in five (19%) of parents reported that children do not need to take as many precautions as adults do.

As shown in Figure 3.1, these perceptions of age differences in the necessity of Covid-19 precautions also varied across parents from different social groups. White parents are significantly more likely than Black, Latino, or AAPI parents to believe that children do not need to take as many precautions as adults do (p<0.05). Republican/Republican-leaning parents, Evangelical Christian parents, parents with young children (ages 0-4), and parents in households that have previously contracted Covid-19 are also disproportionately likely to believe that children need fewer precautions than adults (p<0.05).

Notably, parents’ beliefs about children’s need for precautions are also closely linked to their vaccine decisions. Unvaccinated parents are significantly more likely than vaccinated parents to believe that children do not need to take as many Covid precautions than adults do (26% vs. 14%; p<0.05). Similarly, parents whose children are unvaccinated and who do not plan to vaccinate their children right away are significantly more likely than parents with at least one child who is vaccinated or who will be vaccinated right away to say that children need fewer precautions than adults do (25% vs. 13%; p<0.05). This suggests that beliefs about children’s need to take steps to protect themselves and others against Covid-19 may play a key role in shaping parents’ vaccine decisions for themselves and for their children.
# 3. Perceptions of Children’s Risk Relative to Adults’

**Figure 3.1: Agreement that Children Do Not Need to Take as Many Covid Precautions as Adults**

Question: “When it comes to Covid-19, children... 1) Do not need to take as many precautions as adults do, or 2) Should take at least as many precautions as adults do.”

*Weighted means and 95% confidence intervals*
3. Perceptions of Children’s Risk Relative to Adults’

As shown in Figure 3.2, parents’ perceptions of the relative need for precaution among children and adults also vary across subgroups by gender, race/ethnicity, and education. Among women, mothers without bachelor’s degrees are the most likely to say that children do not need to take as many precautions as adults do, followed by white mothers with bachelor’s degrees. AAPI mothers, meanwhile, are significantly less likely than any other group of mothers to believe that children can take fewer precautions than adults (p<0.05). Among men, fathers without bachelor’s degrees are significantly more likely (roughly twice as likely) as other fathers to say that children do not need to take as many precautions as adults (p<0.05).

**Figure 3.2:** Agreement that Children Do Not Need to Take as Many Covid Precautions as Adults by Gender, Race/Ethnicity, and Educational Attainment

*Weighted means and 95% confidence intervals*
4. Perceptions of Risks for “Healthy” People

Given that public health messaging has emphasized the importance of personal responsibility in managing risks (Tomori et al. 2021), some parents may believe that “healthy” people do not need to take as many Covid-related precautions as people with pre-existing conditions. Parents were asked to indicate which of the following statements better matched their views. “When it comes to Covid-19, healthy people... 1) Do not need to take as many precautions as people with pre-existing conditions, or 2) Should take at least as many precautions as people with pre-existing conditions.” Overall, one in five (20%) of parents reported that children do not need to take as many precautions as adults do.

As shown in Figure 4.1, these beliefs also varied across social groups. Men are significantly more likely than women to believe that healthy people do not need to take as many Covid precautions (p<0.05), and white parents are significantly more likely than Black, Latino, or AAPI parents to have those beliefs, as well (p<0.05). Republican/Republican-leaning parents, political Independent parents, parents who are married or cohabiting, parents in households with no people in high-risk groups, and people in households that have previously contracted Covid-19 are also disproportionately likely to believe that healthy people need fewer precautions than people with pre-existing conditions (p<0.05). Notably, parents’ beliefs about healthy people’s need for precautions are also closely linked to their vaccine decisions. Unvaccinated parents are significantly more likely than vaccinated parents to believe that healthy people do not need to take as many Covid precautions as people with pre-existing conditions (28% vs. 15%; p<0.05). Similarly, parents whose children are unvaccinated and will not be vaccinated right away are significantly more likely than parents with at least one child who is vaccinated or who will be vaccinated right away to say that healthy people do not need as many Covid precautions (27% vs. 12%; p<0.05). This suggests that beliefs about personal responsibility for health may play a key role in shaping parents’ vaccine decisions for themselves and for their children.

Key Finding: One in five parents thinks “healthy” people need fewer precautions.
### 4. Perceptions of Risks for “Healthy” People

#### Figure 4.1: Agreement that “Healthy People” Do Not Need to Take as Many Covid Precautions as People with Pre-Existing Conditions

**Question:** “When it comes to Covid-19, children... 1) Do not need to take as many precautions as adults do, or 2) Should take at least as many precautions as adults do.”

*Weighted means and 95% confidence intervals*
4. Perceptions of Risks for “Healthy” People

As shown in Figure 4.2, perceptions of the relative need for precaution among “healthy” people and people with pre-existing conditions also vary across subgroups by gender, race/ethnicity, and education. Among women, white mothers without bachelor’s degrees are the most likely to say that healthy people can take fewer precautions significantly more than almost any other group (p<0.05). Meanwhile, AAPI mothers with bachelor’s degrees are the least likely group of mothers to say that healthy people do not need to take as many precaution—significantly less likely than almost any group (p<0.05). Among men, white men without bachelor’s degrees are the most likely to agree with the idea that healthy people can take fewer precautions, with much lower levels of agreement among other men.

Figure 4.2: Agreement that “Healthy People” Do Not Need to Take as Many Covid Precautions as People with Pre-existing Conditions by Gender, Race/Ethnicity, and Educational Attainment

*Weighted means and 95% confidence intervals
Consistent with other studies revealing low vaccination rates among US children (CDC 2022a), these data reveal that nearly half of all parents have not vaccinated any of their children against Covid-19 and do not plan to vaccinate any of their children right away. Parents were first asked whether they have any children in each of the vaccine age groups: 0-4 years old, 5-11 years old, and 12-17 years old. For each age group, parents were then asked whether any of their children in that age group have received at least one dose of the Covid-19 vaccine. For each age group, parents who said their children were not vaccinated were then asked whether they planned to: 1) get those children vaccinated as soon as possible, 2) wait and see, or 3) definitely not get the vaccine for those children. Parents’ responses to these questions were recoded to create a binary variable distinguishing “vaccinating parents” (i.e., those who have at least one child who is already vaccinated or will be vaccinated as soon as possible) from “vaccine delaying/avoiding parents” (i.e., those who do not have any children who are already vaccinated and who do not plan to vaccinate any of their children as soon as possible).

Overall, and as shown in Figure 5.1, only slightly more than half (55%) of parents report that at least one of their children has been vaccinated or will be vaccinated as soon as possible. Parents’ vaccine decisions, however, also vary widely across groups. Men, for example, are significantly more likely than women to report that their children have been vaccinated or will be vaccinated as soon as possible (65% versus 47%, p<0.05). This discrepancy could reflect the fact that women are more likely than men to be unpartnered, and unpartnered parents are significantly less likely than married or cohabiting parents to be vaccinating parents (57% versus 49%, p<0.05). It could also reflect the fact that mothers are typically the ones who manage family health decisions and may thereby have more accurate information about their children’s vaccination status (Ranji and Salganicoff 2014; Reich 2014a, 2014b).
Parents’ vaccine decisions also vary in other ways. AAPI parents, parents with at least a bachelor’s degree, full-time employed parents, higher income parent, Democrat/Democrat-leaning parents, parents with older children (ages 12-17), parents who themselves are vaccinated, and parents in households with people in high-risk groups are all disproportionately likely to have at least one child who is vaccinated or will be vaccinated as soon as possible.

**Figure 5.1:** Parents’ Likelihood of Having At Least One Child Who is Vaccinated or Will Be Vaccinated As Soon as Possible

*Weighted means and 95% confidence intervals*
Parents' vaccine decisions also vary across subgroups by gender, race/ethnicity, and education, as shown in Figure 5.2. White women without bachelor’s degrees report significantly lower rates of vaccination/intended vaccination than any other group of parents—only about a third of them report that their children are vaccinated or will be right away (p<0.05). White men without bachelor’s degrees also report low rates of child vaccination/intended vaccination, but their rates are higher than those for similar white women and also similar to the rates for Black and Latino men without college degrees. At the other end of the spectrum, AAPI parents with bachelor’s degrees are significantly more likely than almost every other group of parents to report that their children are vaccinated or will be right away (p<0.05).

**Figure 5.2:** Parents’ Likelihood of Having At Least One Child Who is Vaccinated or Will Be As Soon as Possible by Gender, Race/Ethnicity, and Education

*Weighted means and 95% confidence intervals*
Parents’ vaccine decisions also vary across children from different age groups. Figure 5.3 reports vaccination decisions separately for children ages 12-17, ages 5-11, and ages 0-4. For children ages 12-17 and 5-11, it shows parents’ likelihood of saying that a child in that age group had received at least one dose of the vaccine. For children ages 0-4, for whom a vaccine was not yet available, it shows parents’ likelihood of saying that a child in that age group will receive the vaccine as soon as one is available to them. Rates of vaccination/intended vaccination are highest for children ages 12-17 (60%), followed by children ages 5-11 (43%), followed by children ages 0-4 (32%). Similar age-based patterns can be seen by parent gender, parent race/ethnicity, parent political affiliation, parent education, parent vaccination status, and whether the parent has any household members in high-risk groups.

Figure 5.3: Vaccination/Intended Vaccination, by Age Group

- Children Ages 12-17 Received Vaccine
- Children Ages 5-11 Received Vaccine
- Children Ages 0-4 Will Receive Vaccine Right Away

*Weighted means and 95% confidence intervals
Next, we consider how parents’ vaccine decisions vary based on their perceptions of the risks of Covid-19 for children. Recall that parents were asked whether they perceived getting Covid-19 or getting Covid-19 vaccines as a bigger risk for their children. As shown in Figure 5.4, the relationship between vaccines decisions and perceptions of relative risks is not as straightforward as we might expect. Parents who perceive Covid-19 as the greatest risk are significantly more likely than all other parents to have a child who is vaccinated or will be vaccinated as soon as possible (78%; p<0.05). Yet, parents who perceive Covid-19 vaccines as a greater threat than Covid-19 are actually significantly more likely to have at least one child who is vaccinated or will be vaccinated as soon as possible than are parents who perceive Covid-19 vaccines and Covid-19 as equal threats to their children’s wellbeing (47% vs. 29%, p<0.05).

**Figure 5.4:** Likelihood of Having at Least One Child Who Is Vaccinated or Will Be Right Away, by Perceptions of the Relative Threat Posed to Children by Covid-19 and Covid-19 Vaccines

*Weighted means and 95% confidence intervals*
Next, we consider how parents’ vaccine decisions vary based on their level of concern regarding the possibility of Covid-19 (re)infection. As shown in Figure 5.5, these concerns (or lack thereof) were closely linked to parents’ vaccine decisions for their children. Parents who are very concerned or extremely concerned about the possibility of someone in their household (re)contracting Covid-19 are significantly more likely than parents who are somewhat, not very, or not at all concerned to have at least one child who is vaccinated or will be right away (65% and 63% vs. 57%, 45%, and 35%, p<0.05). Vaccination confers protection against serious illness from Covid-19 (Lau and Galea 2021; Lewis 2021). Thus, we might expect parents with vaccinated children to be less concerned about Covid-19 infections than other parents. Instead, however, we see that parents whose children are not vaccinated and who do not intend to vaccinate right away are the ones least concerned about Covid-19.

**Figure 5.5: Likelihood of Having at Least One Child Who is Vaccinated or Will Be Right Away by Concern about Covid-19 (Re)Infection**

*Weighted means and 95% confidence intervals*
Next, we consider parents’ perceptions of the necessity of Covid-19 vaccines for children. Parents were asked “How necessary do you think it is for your children to get the vaccine for your children?” Overall, 19 percent of parents said Covid-19 vaccines are not at all necessary for their children, 14 percent said not very necessary, 19 percent said somewhat necessary, 23 percent said very necessary, and 25 percent said extremely necessary. Thus, less than half of parents (48%) perceive Covid-19 vaccines as being at least very necessary for their children.

Perceptions of the necessity of Covid-19 vaccines for children also vary across parents from different social groups. As shown in Figures 6.1 and 6.2, the perceived necessity of Covid-19 vaccines for children is significantly higher among fathers than among mothers (p<0.05), higher among AAPI parents than among white, Black, and Hispanic/Latino parents (p<0.05), higher among parents with higher levels of education (p<0.05), higher among full-time employed parents than among part-time or non-employed parents (p<0.05), and higher among higher-income parents (p<0.05). As shown in Figure 6.1, perceptions of the necessity of Covid-19 vaccines for children also vary with parents’ political affiliations, household composition, and vaccination status. Democrat/Democrat-leaning parents perceive vaccines as significantly more necessary than among Republican/Republican-leaning parents and parents who identify with neither party (p<0.05). Parents who do not have young children (ages 0-4), parents in households that have never contracted Covid-19, and parents with household members in high-risk groups also report disproportionately high levels of concern (p<0.05). Not surprisingly, parents’ perceptions of the necessity of childhood vaccines are also closely related to their own vaccination status and to the vaccination status of their children, with vaccinated and vaccinating parents seeing vaccines as significantly more necessary for children (p<0.05),

Figure 6.1: Parents’ Perceptions of the Necessity (1-5) of Covid-19 Vaccines for their Children

*Weighted means and 95% confidence intervals

Figure 6.2: Parents’ Perceptions (1-5) of the Necessity of Covid-19 Vaccines for their Children

*Weighted proportions

As shown in Figure 6.3, these patterns also across subgroups of parents by gender, race/ethnicity, and education. Among women, white mothers without bachelor’s degrees perceive vaccines as significantly less necessary for their children than do any other group of mothers (p<0.05). By contrast, AAPI mothers with bachelor’s degrees are significantly more likely than any other group of mothers to perceive vaccines as necessary for their kids (p<0.05). Among men, we see similar patterns, with white fathers without bachelor’s degrees perceiving vaccines as least necessary for their children. AAPI fathers, regardless of education, see vaccines as most necessary for their children, though their perceptions are similar to those of white men with college degrees. Notably, white men with college degrees are also significantly more likely than white women with college degrees to perceive the vaccine as necessary for their kids (p<0.05).

Figure 6.3: Parents’ Perceptions of the Necessity of Covid-19 Vaccines for their Children by Gender, Race/Ethnicity, and Educational Attainment

*Weighted means and 95% confidence intervals

Next, we considered how parents’ perceptions of the necessity of Covid-19 vaccines for children predicted their vaccine decisions. Not surprisingly, parents who perceive the Covid-19 vaccine as more necessary for their children are also significantly more likely to report that they have at least one child who has been vaccinated or will be vaccinated as soon as possible (p<0.05). Among parents who say the vaccine is “not at all” necessary, only 5 percent say they have a child who is vaccinated or will be right away. By contrast, among parents who say the vaccine is “extremely necessary,” 93 percent say they have a child who is vaccinated or will be right away.

Figure 6.4: Likelihood of Having a Child Who is Vaccinated or Will Be Right Away by Parent’s Perceptions of the Necessity of Covid-19 Vaccines for Their Children

*Weighted means and 95% confidence intervals
We also examined the link between parents’ concerns about Covid-19 (re)infections and their perceptions of the necessity of Covid-19 vaccines for their children. As shown in Figure 6.5 there is a significant and positive relationship between these two variables (p<0.05). In fact, the mean level of perceived necessity of Covid-19 vaccines for children among parents who report that they are extremely concerned about Covid-19 (re)infections is nearly twice the mean for parents who report that they are not at all concerned about Covid-19 re-infections.

**Figure 6.5:** Perceptions of the Necessity of Covid-19 Vaccines for their Children by Concerns about the Possibility of a Household Member (Re)Contracting Covid-19

*Weighted means and 95% confidence intervals*
7. Parents Explanations of their Vaccine Decisions

Key Findings: Many parents link vaccine decisions to lack of concern about Covid-19 and are treating Covid-19 like the flu.

Parents who reported that they had at least one child was not vaccinated and would not be vaccinated right away were asked: “You mentioned that some or all of your children are not vaccinated and that you are not planning to get the COVID-19 vaccine for them right away. How did you come to that decision? What factors did you consider?” The open-ended responses suggested that many parents opted not to vaccinate their children or were planning not to do so because they perceived their children to be at low risk of contracting, transmitting, or getting seriously ill from Covid-19 and thus did not believe that Covid-19 vaccines were necessary for their children’s wellbeing. Consider the following examples:

“Covid is not killing children the way it does elderly/immunocompromised.”
– White woman in Michigan; Married; Some college education; Independent; One child age 0-4 & one child age 5-11; Full-time homemaker; She, her husband, and her children are unvaccinated against Covid-19.

“Children are generally very healthy and if they do get the virus will heal with rest and nutrition. We have been told that the vaccine won’t keep you from getting our spreading the virus. I don’t believe in mass vaccinations when the vaccine hasn’t been tested.”
– White woman in Oregon; Married; High school diploma; Republican; Works full-time in retail; One child age 12-17; She, her husband, and her child are unvaccinated against Covid-19.

“Kids don’t have as severe symptoms as adults do to the virus and it just doesn’t affect them as badly.... My child has never been sick with anything and is very healthy otherwise. I would anticipate the coronavirus leaving her with mild symptoms and that she would recover quickly if she got it.”
– White woman in Hawaii; Married; Republican; Kaster’s degree; Full-time homemaker; One child age 5-11; She and her child are unvaccinated against Covid-19, but her husband is vaccinated against Covid-19.
7. Parents Explanations of their Vaccine Decisions

“I don't care to live in fear, it's just population control.”
– Black woman in Tennessee; In a relationship but never married; Some college no degree; Independent; One child age 0-4 and one child age 5-11; Self-employed stylist; She, her partner, and her children are unvaccinated against Covid-19.

“If children with no underlying conditions have minimal risk of complications or death from COVID, then they should not be required to get a vaccine that has not been studied in actual use for less than a few years. There may be long term effects of the vaccine that I am cautious about. Although COVID also may have long term effects, I feel it is a better decision to not get the vaccine.”
– White woman in California; Married; Bachelor’s degree; Republican, Three children ages 0-5; Employed part-time as a financial aid processor; She and her child are unvaccinated against Covid-19, but her husband is vaccinated.

“Well first off it was already proved that younger children are not likely to contract the virus and I believe in building natural immunities.”
– Asian American woman in Hawaii; Widowed; Associate’s degree; Independent near Democrat; Former accountant who lost her job and is currently unemployed and looking for work; One child age 5-11 and one child age 12-17; She is vaccinated against Covid-19, but her children are unvaccinated.

“Studies have shown that children under 16 that don’t already have comorbidity have little to no risk of serious illness or hospitalization. This is an endemic not a pandemic. You, the person reading this will get covid someday. This is something we will have to live with just like the flu.”
– White man in Utah; Married; Bachelor’s degree; Forward Party; Full-time consultant; One child age 0-4 and one child 5-11; He is vaccinated against Covid-19, but his wife and his children are unvaccinated.

“Literally science data says it is not needed in majority of scenarios.”
– Black man in Alaska; Married; Some college no degree; Independent; Project manager; Two children ages 5-11; He and his wife are vaccinated against Covid-19, but his children are unvaccinated.

“They already had covid and symptoms were very mild. Unless they get really sick with it, I don’t think they need it. I feel that they may have developed some immunity or at least resistance to COVID. I feel that if it’s needed then it be most necessary to people with serious respiratory or immune systems illnesses.”
– White woman in Arkansas; Cohabiting; Associate’s degree; Independent near Republican; Not employed and looking for work; Former hospital housekeeper; One child age 5-11 and three children ages 12-17; She, her partner, and their children are all unvaccinated against Covid-19.

“The virus infected all of us last year. The 4 of us spent 2 weeks at home together. we had fun! A virus will leave antibodies after the body kills it. Protecting it in the future. Even if it’s a variant, if you survive the first infection you’ll survive the next.”
– White man in Tennessee; Married; associate’s degree; Independent; Full-time delivery driver; Two children ages 5-11 He, his wife, and his children are all unvaccinated against Covid-19.
7. Parents Explanations of their Vaccine Decisions

“I am not willing to play Russian Roulette with my children’s lives over a virus that has between a 97% and 99.5% recovery rate.”
– White man in Indiana; Married; Bachelor’s degree; Republican; Small business owner; Two children ages 0-4 and one child age 5-11; He, his wife, and his children are all unvaccinated against Covid-19.

“The benefits of this vaccine (which are almost non existent) do not out weigh the risks of getting this vaccine.”
– White woman in Florida; Never married; Associate’s degree; Democrat; Part-time restaurant worker; One child age 5-11; She and her child are all unvaccinated against Covid-19.

“The statistics up until now and the fact that death rate and serious reaction is extremely low so I would rather be safe than sorry.”
– White woman in Florida; Never married; Associate’s degree; Democrat; Part-time restaurant worker; One child age 5-11; She and her child are all unvaccinated against Covid-19.

“We don’t venture far from home there is no reason for them to have it.”
– Native American woman in Texas; Cohabiting; Some college no degree; Independent near Republican; Not employed; One child age 5-11; She and her child are all unvaccinated against Covid-19, but her partner is vaccinated.

“They don’t need it.”
– Black woman in Georgia; Married; High school graduate; Democrat; Part-time cashier; One child age 0-4; She, her husband, and her child are all unvaccinated against Covid-19.

“Waiting to see if it’s needed.”
– White woman in Michigan, Married, Associate’s degree, Republican; Works part-time in hospitality; One child age 5-11; She and her husband are all unvaccinated against Covid-19, but their child is unvaccinated.

“No need for them at a young age to get more vaccines for something that will eventually be more like the flu--a seasonal event. They are in school now with no masks, I am sure they had it at sometime in the last two years.”
– Middle Eastern man in Florida; Married; Master’s degree; Democrat; Full-time sales director; One child age 0-4 and one child age 5-11; He and his wife are all vaccinated against Covid-19, but his children are unvaccinated.

“The vaccines are a guaranteed risk. Covid is not.”
– White man in Ohio; Married; Some college no degree; Independent; Full-time machine operator; One child 5-11 and three children 12-17; He, his wife, and his children are all unvaccinated against Covid-19.

“Don’t trust it long term, they’re still growing. We would lean toward it a little more if we lived in a higher infection rate area.”
– White woman in Florida; Cohabiting; Some college no degree; Republican; Two children ages 5-11; Full-time homemaker; She and her partner are vaccinated against Covid-19 but her children are unvaccinated.
As suggested by the open-ended responses, some parents perceive Covid-19 as a mild infection for child—similar to the flu. To investigate this idea that parents are treating Covid-19 like the flu, parents were asked: “Before the Covid-19 pandemic, how often did your children get flu vaccines?” with responses including: 1) never, 2) rarely, 3) some years, 4) most years, and 5) every year. As shown in Figure 7.1, parents who usually got flu vaccines for their children are significantly more likely than other parents to have at least one child who is vaccinated or will be vaccinated as soon as possible against Covid-19 (p<0.05).

**Figure 7.1:** Likelihood of Having at Least One Child Who is Vaccinated or Will Be Right Away by How Often Parents Obtained Flu Vaccines for their Children Pre-Pandemic

*Weighted means and 95% confidence intervals*
Parents’ open-ended responses also highlight parents’ concerns about the possibility of serious side effects from Covid-19 vaccines. Covid-19 vaccines come with a very small risk of complications, including myocarditis (Lewis 2021). Most of these myocarditis cases are also mild and resolve in days or weeks (Das et al. 2021).

Despite these low risks, however, many parents report being very concerned about the safety and side effects of Covid-19 vaccines for children. Parents were asked: “When it comes to getting the COVID-19 vaccine for your children, how concerned are you about vaccine safety and/or side effects?” Parents were given three response options: 1) not at all concerned, 2) somewhat concerned, and 3) very concerned. Fourteen percent of parents said they were “not at all concerned,” 35 percent said they were “somewhat concerned,” and 51 percent said they were “very concerned.”

Key Findings: Most parents express concerns about Covid-19 vaccine side effects, and parents who are concerned about vaccine safety are less likely to vaccinate their children.

As shown in Figures 8.1 and 8.2, parents’ concerns about the safety and side effects of Covid-19 vaccines for children also varied across parents from different groups. Women, Black, white, and Latino parents, parents without bachelor’s degrees, and parents from low-income families reported disproportionately high levels of concern (p<0.05). Similarly, Republican/Republican-leaning and parents who do not identify with either party, Evangelical Christians, parents with children ages 0-4, parents with children ages 5-11, parents who do not have children age 12-17, parents who are unvaccinated, parents whose children are unvaccinated and will not be vaccinated as soon as possible, and parents in households that have had Covid-19 are disproportionately concerned about vaccine side effects for children (p<0.05).
8. Concern about Covid-19 Vaccine Side Effects for Children

Figure 8.1: Concern (1-3) Regarding the Safety and Side Effects of Covid-19 Vaccines for Children

*Weighted means and 95% confidence intervals
8. Concern about Covid-19 Vaccine Side Effects for Children

Figure 8.2: Concern Regarding the Safety and Side Effects of Covid-19 Vaccines for Children

- Woman
- Man
- White alone
- Hispanic or Latino
- Black alone
- AAPI alone
- Advanced Degree
- Bachelor’s Degree
- No Bachelor’s degree
- Employed Full Time
- Employed Part-Time or Self Employed
- Not Working for Pay
- Household Income Under $25K
- $25K-$49K
- $50K-$74K
- $75K-$99K
- $100K-$149K
- $150K or more
- Not Married or Cohabiting
- Married or Cohabiting
- Republican or Leans Republican
- Independent or Other Party
- Democrat or Leans Democrat
- Evangelical
- Religious, Non-Evangelical
- Non-Religious
- No Children Ages 0-4
- Children Ages 0-4
- No Children Ages 5-11
- Children Ages 5-11
- No Children Ages 12-17
- Children Ages 12-17
- Parent Vaccinated
- Parent Unvaccinated
- At Least One Child Vaccinated or Will Be ASAP
- No Children Vaccinated and None Will Be ASAP
- No Household Member(s) in High Risk Group
- Household Member(s) in High Risk Group
- No Household Member had Covid
- Household Member had or likely had Covid

*Weighted proportions
**8. Concern about Covid-19 Vaccine Side Effects for Children**

As shown in Figure 8.3, these patterns also across subgroups of parents by gender, race/ethnicity, and education. Regardless of gender and race/ethnicity, parents without bachelor’s degrees report the greatest concerns about vaccine side effects. That said, many parents with bachelor’s degrees also report high levels of concern. The notable exception here is AAPI parents with bachelor’s degrees, who report the lowest levels of concern about vaccine side effects—significantly lower than nearly any other subgroup of parents (p<0.05).

**Figure 8.3:** Concern (1-3) about the Safety and Side Effects of Covid-19 Vaccines for Children by Gender, Race/Ethnicity and Educational Attainment

*Weighted means and 95% confidence intervals*
We also considered the link between parents’ concerns about the risk of side effects with Covid-19 vaccines for children and their decisions about whether and when to vaccinate their children against Covid-19. As shown in Figure 8.4, parents who express greater concerns about vaccine safety are significantly less likely to have at least one child who is vaccinated or will be as soon as possible (p<0.05).

**Figure 8.4:** Parents’ Likelihood of Having at Least One Child Who is Vaccinated or Will Be Right Away, by Concerns about the Safety/Side Effects of Covid-19 Vaccines for Children

*Weighted means and 95% confidence intervals*
8. Concern about Covid-19 Vaccine Side Effects for Children

Given this link between parents’ concerns about side effects and their likelihood of having a child who is vaccinated or will be right away, it is not surprising to see that many parents also mentioned concerns about side effects in their open-ended responses to questions about why they have not and do not plan to get their child the vaccine. Consider the following responses:

“*The ingredients in the jab are toxic and have killed and injured people.*”
– White woman in Iowa; married; Associate’s degree; Republican; One child age 0-4 and two children ages 5-11; Full-time homemaker; She, her husband, and her children are unvaccinated against Covid-19.

“As an adult, I felt more prepared to handle what the vaccine would do if I had any side effects. I also waited until it has been around for a while and after my pregnancy had ended. I worry about what the vaccine could potentially do to a baby so I would have to wait to see how babies are affected.”
– Black woman in Indiana; In a relationship but not cohabiting; High school graduate; Independent near Democrat; One child age 0-4; Part-time retail sales associate; She and her partner are vaccinated against Covid-19 but her child is unvaccinated, and she does not plan to vaccinate her child right away.

“There is no long term data on side effects.”
– White woman in Ohio; Cohabiting; Some college no degree; Republican; One child age 0-4 and three children ages 5-11; Full-time bartender; She and her partner are vaccinated against Covid-19 but their children are not.

“Not sure yet. Still trying to see what side affects or other things that might happen from taking it.”
– Latino man in New Mexico; Not in a relationship and never married; High school graduate; Democrat; One child age 5-11; He is vaccinated against Covid-19, but his child is unvaccinated.

“We take extra precautions and I think that’s enough. The vaccine is new and I don’t want my family to be the test animals.”
– White woman in Oklahoma; Married; Some college no degree; Republican; One child age 0-4 and one child age 5-11; Self-employed handyman; She and her husband and their children are all unvaccinated against Covid-19.

“Because I don’t think they need that garbage. They are perfectly fine the way they are right now.”
– Asian American woman in Arizona; Married; High school graduate; Republican; One child age 0-5, one child age 6-11, and one child age 12-17; Full-time homemaker; She and her husband are vaccinated against Covid-19, but their children are unvaccinated.

“Because I’m not putting my child life at risk of the side effects of the shot.”
– White man in Indiana; Married; Some college no degree; Independent; One child age 0-4; Disabled and unable to work; He, his wife, and their child are all unvaccinated against Covid-19.

“Risk to their health from unknown side effects of vaccine and disruption of daily life if they couldn’t go to school or daycare.”
– White woman in South Dakota; Cohabiting; Some college no degree; Independent near Republican; Two children ages 5-11 and one child age 12-17; Full-time retail worker; She, her partner, and their children are all unvaccinated against Covid-19.

Parents’ open-ended responses also point to parents’ doubts about the effectiveness of Covid-19 vaccines for children. Covid-19 vaccines are highly effective at preventing severe illness, hospitalization, and death (Walter et al. 2021). Yet, they are not as effective at preventing people from contracting or transmitting current strains of Covid-19, a shift that contributed to the delay in approval of a Covid vaccine for children ages 0-4 (Ferdinands et al. 2021; Reuters 2022). As a result, many parents have doubts about the effectiveness of Covid-19 vaccines for their children. Parents were asked: “When it comes to getting the COVID-19 vaccine for your children, how concerned are you about How effective do you think the Covid-19 vaccine is for protecting your children from COVID-19?” Overall, 20 percent of parents said the vaccine is “not at all effective,” 13 percent said it is “not very effective,” 26 percent said “somewhat effective,” 23 percent said very effective, and 19 percent said “extremely effective.”

As shown in Figure 9.1, parents’ beliefs about vaccine efficacy also varied across parents from different groups. Men, AAPI parents, full-time employed parents, higher-income parents, married/cohabiting parents, Democrat/Democrat-leaning parents, religious parents, parents who do not have young children (ages 0-4), parents of older children (ages 12-17), parents in households with people in high-risk groups, and parents in households that have not contracted Covid-19 all report high levels of trust in the effectiveness of Covid-19 vaccines for children (p<0.05). Parents’ perceptions of the effectiveness of Covid-19 vaccines for children are also strongly and significantly linked to their personal vaccine decisions (p<0.05). Sixty-one percent of vaccinated parents perceive the vaccines to be at least very effective, compared to 13 percent of unvaccinated parents. Similarly, 72 percent of parents with at least one child who is vaccinated or will be as soon as possible see the vaccines at least very effective, compared to 13 percent among parents whose children neither vaccinated nor will be right away.

Key Findings: Only four in ten parents see Covid vaccines as very effective for children, and parents who doubt vaccine’s efficacy are less likely to vaccinate their children.

Figure 9.1: Perceived Efficacy (1-5) of Covid-19 Vaccines for Children

*Weighted means and 95% confidence intervals

As shown in Figure 9.2, these patterns also vary across subgroups of parents by gender, race/ethnicity, and education. Among women, white mothers without bachelor’s degrees believe that vaccines are significantly less effective than do mothers in any other group (p<0.05). AAPI mothers with bachelor’s degrees perceive vaccines as most effective—significantly more than any other group of mothers (p<0.05). Among men, white fathers without bachelor’s degrees perceive vaccines as least effective—significantly less than any other group of fathers except Latino fathers without bachelor’s degrees (p<0.05). By contrast, AAPI fathers with bachelor’s degrees view vaccines as most effective, though white and Latino men with bachelor’s degrees and AAPI fathers without bachelor’s degrees also report high levels of perceived effectiveness, as well.

Figure 9.2: Perceived Efficacy (1-5) of Covid-19 Vaccines for Children by Gender, Race/Ethnicity, and Education

*Weighted means and 95% confidence intervals

We also considered the link between parents’ perceptions of the effectiveness of Covid-19 vaccines for children and their decisions about whether and when to vaccinate their children against Covid-19. As shown in Figure 9.3, parents who express greater trust in vaccine effectiveness are significantly more likely to have at least one child who is vaccinated or will be as soon as possible (p<0.05). In fact, parents who believe that vaccines are extremely effective are more than ten times as likely as parents who perceive the vaccines as not at all effective to have a child who is vaccinated or will be right away (89% vs. 6%, p<0.05).

Figure 9.3: Proportion of Parents With at Least One Child Who is Vaccinated or Will Be Right Away by Perceptions of the Effectiveness of Covid-19 Vaccines for Children

*Weighted means and 95% confidence intervals

Given this link between parents’ concerns about the effectiveness of Covid-19 vaccines and their likelihood of having a child who is vaccinated or will be right away, it is not surprising to see that many parents also mentioned questions about vaccine effectiveness in their open-ended responses to questions about why they have not and do not plan to get their child the vaccine. Consider the following responses:

“My research. Consistently, true, accurate information from The Frontline Doctors. Children are NOT [a]ffected by COVID. Children are vaccinated at alarming rates already. COVID jab is NOT effective in stopping spread. COVID jab had 1000’s if not 1,000,000 vax injuries/death and still being forced in the population. No other vax has harmed this many ppl and still being forced in people. The government has NEVER been so tyrannical for ANY vax.”
– White woman in Alaska; Married; High school graduate; Republican; Two children ages 12-17; Full-time homemaker; She, her husband, and their child are all unvaccinated against Covid-19.

“I am not putting man made chemicals in our bodies just to get covid anyways.”
– White woman in Oklahoma; married; Some college no degree; Republican; One child age 5-11; Not employed, looking for work; Former poultry processor at a frozen food company; She, her husband, and their child are all unvaccinated against Covid-19.

“Apparently the vaccine is not proven to get rid of covid or it’s symptoms”
– Black woman in Florida; Not in a relationship and never married; High school graduate; Democrat; One child age 0-4; Part-time customer service agent; She and her child are unvaccinated against Covid-19.

“It’s not effective. As people my family know personally got the. Vaccine and still died from covid. I don’t trust it.”
– White woman in Pennsylvania; Married; Bachelor’s degree; Republican; Full-time homemaker; One child age 5-11; She, her husband, and their child are all unvaccinated against Covid-19.

“I’m worried about the long-term [e]ffects. Also, new strains keep arriving and I don’t believe the shot(s) will be effective.”
– White woman in Ohio; Cohabiting; High school graduate; Independent near Republican; One child age 5-11; She, her partner, and their child are unvaccinated against Covid-19.

“Vaccines aren’t as effective as first thought and reported to be.”
– White man in Wisconsin; Married; Bachelor’s degree; Independent; Three children ages 12-17; Full-time jail officer; He is vaccinated against Covid-19 but his wife and his children are unvaccinated.

“I’m not sure if it’s effective.”
– White woman in Texas; Married; Associate’s degree; Republican; One child age 5-11 and one child age 12-17; Full-time nurse; She and her husband are vaccinated against Covid-19 but their children are unvaccinated.
People who are unvaccinated face a higher risk of serious illness, hospitalization, and death than people who are vaccinated against Covid-19 (Danza 2022). Vaccinated children, for example, are significantly less likely than unvaccinated children to develop multisystem inflammatory syndrome (MIS-C) (Lubell 2022). Thus, we might expect parents with unvaccinated children to take more precautions. In reality, however, parents with unvaccinated children are not taking more precautionary measures and in some cases are taking fewer precautionary measures than people with any children who have already received the vaccine. Parents were asked to indicate which activities they had done in the past two weeks. As shown in Figure 10.1, overall, 54 percent of parents ate/drank inside restaurants, bars, or cafes, 71 percent had in-home visits with people who are not part of their household, and 49 percent attended in-person gatherings with more than 10 people. Recall that this survey was conducted at the height of the Omicron surge (Dec 2021-Jan 2022). Parents with unvaccinated children were as likely or more likely than parents whose children were all vaccinated to have engaged in these activities. In fact, parents with unvaccinated children were even significantly more likely than parents with only vaccinated children to have in-home visits with non-household members (73% vs. 67%; p<0.05).
10. Precaution Measures by Child’s Vaccination Status

Figure 10.1: Proportion of Parents Who Participated in Various Activities by their Children’s Vaccination Status

- Attended a Large In-Person Gathering (10+ People)
- In-Home Visits with Non-Household Members
- Ate/Drank Inside a Restaurant, Bar or Café

*Weighted means and 95% confidence intervals

Note: Parents whose children are under the age of 5 and ineligible for the Covid-19 vaccination at the time of data collection are included in the “at least one unvaccinated child category.”
Next, we consider rates of vaccination among US parents. In the United States, more than 80 percent of adults ages 18-65 have received at least one dose of the Covid-19 vaccine (CDC 2022b). National data also show that adult women are more likely than adult men to be vaccinated (Ungar 2021).

Vaccinations among parents of children under 18 follow a different pattern, with lower rates overall and particularly among mothers. Sixty-three percent of parents said they had received at least one dose of a Covid-19 vaccine, including 70 percent of fathers and only 58 percent of mothers. Among mothers with children ages 0-4, these rates are even lower—only 53 percent. That’s significantly lower (p<0.05) than among mothers whose children are all ages 5-17 (62%), and significantly lower than among fathers with children ages 0-4 (63%) and fathers with older children (73%).

These patterns may reflect the fact that mothers of young children have significantly lower rates of employment than fathers do (BLS 2021) and may thereby be less likely to face employer vaccine mandates. Consistent with that possibility, Figure 11.1 shows that full-time employed mothers and fathers have similar vaccination rates (73% and 77%) and that part-time employed and non-employed mothers and fathers have rates of vaccination that are similar to each other but significantly lower (p<0.05) than vaccination rates among full-time employed parents.

**Key Finding:** Mothers are less likely than fathers to be vaccinated against Covid-19.
Gender, children’s ages, and employment status are not the only factors related to parents’ vaccination status. Vaccination rates are significantly higher (p<0.05) among AAPI parents than among white, Black, and Latino parents (93% versus 63%, 56%, and 60%) and among parents with bachelor’s or advanced degrees than among parents without bachelor’s degrees (81% and 88% versus 49%). Vaccination rates among parents also varied based on parents’ political affiliations and the health of their household members and were closely linked to parents’ vaccine decisions/intentions for their children. Democrats/Democrat-leaning Independents were significantly more likely to be vaccinated than people who identify with neither party (p<0.05, 50%). Parents with household members in high risk groups were also significantly more likely to be vaccinated than parents in other households (p<0.05, 69% versus 57%). Vaccination rates were also significantly higher among parents who have at least one child who is vaccinated or whom they plan to vaccinate right away than among parents who have no vaccinated children and who do not plan to vaccinate any of those children right away (p<0.05, 87% versus 34%). There were no differences in vaccination rates between parents in households that have contracted Covid-19 and parents in households that have not (63% versus 64%).

Figure 11.1: Likelihood of Having at Least One Dose of the Covid-19 Vaccine by Gender and Employment

[Bar chart showing likelihood of having at least one dose of the Covid-19 vaccine by gender and employment status.]
11. Covid-19 Vaccination Among Parents

Figure 11.2: Likelihood of Having at Least One Dose of the Covid-19 Vaccine

*Weighted means and 95% confidence intervals
11. Covid-19 Vaccination Among Parents

As shown in Figure 11.3, vaccination rates also across subgroups by gender, race/ethnicity, and educational attainment. White mothers without bachelor’s degrees have the lowest rates of vaccination overall (38%)—significantly lower than any other group (p<0.05). Among fathers, white, Black, and Latino fathers without bachelor’s degrees all report similarly low vaccination rates. AAPI parents, by contrast (particularly AAPI parents with bachelor’s degrees) report the highest levels of vaccination, significantly higher than any other group (p<0.05).

Figure 11.3: Likelihood of Having at Least One Dose of the Covid-19 Vaccine by Gender, Race/Ethnicity, and Education

*Weighted means and 95% confidence intervals
School vaccination requirements have long played a key role in promoting public health and reducing the spread of diseases among children and in the population as a whole (Estep and Greenberg 2020; Reich 2014b). Yet, even before the pandemic, a small but vocal contingent of parents opposed such requirements and sought to either change or exempt themselves from those rules (Estep and Greenberg 2020; Reich 2014a, 2014b). Thus, we also consider parents’ support for efforts to require Covid-19 vaccines for students in schools. Parents were asked: “Do you think schools in your community should require children to receive the COVID-19 vaccine as soon as it is authorized and available for their age group?” (yes or no). Overall, a slight majority (54%) of parents support vaccine mandates in schools.

That said, there were also substantial variations across parents in support for school vaccine mandates, as shown in Figure 12.1. Fathers are significantly more likely than mothers to support vaccine mandates (65% versus 45%, p<0.05). AAPI parents are also significantly more likely to support vaccine mandates than white, Black, or Hispanic/Latino parents (81% versus 52%, 52%, and 55%, p<0.05). Parents with higher levels of education, full-time employed parents, married/cohabiting parents, and higher-income parents are also disproportionately likely to support school vaccine mandates (p<0.05). Parents’ support for school vaccine mandates also varies with parents’ political affiliations, with their household composition and risk factors for Covid-19, as well as with their vaccine decisions for themselves and their children. Democrat and Democrat-leaning parents are nearly twice as likely as Republican and Republican-leaning parents to support vaccine mandates in schools (p<0.05). Parents who do not have young children (ages 0-4), parents who are vaccinated, parents with at least one child who is vaccinated or will be as soon as possible, parents in households with people in high-risk groups, and parents in households that have not had Covid-19 all disproportionately support school vaccine mandates (p<0.05).

Key Finding: Parents who are less concerned about Covid-19 are less supportive of vaccine mandates.
12. School Vaccine Mandates

Figure 12.1: Likelihood of Supporting School Vaccine Mandates

*Weighted means and 95% confidence intervals
As shown in Figure 12.2 parents’ support for school vaccine mandates also varies across subgroups by gender, race/ethnicity, and educational attainment. White mothers without bachelor’s degrees are significantly less likely than any other subgroup of parents to support school vaccine mandates (p<0.05), and white fathers without bachelor’s degrees are less likely to support such mandates than any other group of men (p<0.05). AAPI parents with bachelor’s degrees (and AAPI fathers without bachelor’s degrees), by contrast, are the group most likely to support school vaccine mandates, though support is significantly higher among AAPI fathers than among AAPI mothers with bachelor’s degrees (p<0.05).

**Figure 12.2:** Likelihood of Supporting School Vaccine Mandates by Gender, Race/Ethnicity, and Education

*Weighted means and 95% confidence intervals
By leading parents to perceive Covid-19 vaccines as unnecessary for children, parents’ lack of concern about Covid-19 (re)infection may also limit parents’ support for Covid-19 vaccine mandates. Consistent with that possibility, and as shown in Figure 12.3, we find a significant and positive relationship between parents’ concerns about the possibility of Covid-19 (re)infection and their likelihood of agreeing that schools should require Covid-19 vaccines (p<0.05). In fact, parents who are extremely concerned about Covid-19 are more than twice as likely to support vaccine mandates as parents who are not at all concerned.

**Figure 12.3:** Likelihood of Supporting School Vaccine Mandates by Concerns about the Possibility of a Household Member (Re)Contracting Covid-19

*Weighted means and 95% confidence intervals*
13. Willingness to Comply with Covid-19 Vaccine Mandates

Despite high levels of opposition to vaccine mandates, most parents with unvaccinated children report that they would be willing to vaccinate their child if they were required to do so for school, childcare, or extracurricular activities. For each age group (0-4, 5-11, 12-17), parents with unvaccinated children in that age group were asked: “Would you get them the Covid-19 vaccine if it were required for school, childcare, or extracurricular activities?” (yes or no). Forty-eight percent of parents with unvaccinated children said they would get the vaccine for their children if required to do so. Such willingness, however, also varied across parents, as shown in Figure 13.1.

**Key Finding:** Almost half of parents with unvaccinated kids would vaccinate if required.

**Figure 13.1:** Likelihood that Parents Would Get Covid-19 Vaccine for Currently Unvaccinated Children if They Were Required to Do So for School, Childcare, or Extracurricular Activities

*Weighted means and 95% confidence intervals*
As shown in Figure 13.2, parents’ willingness to comply with vaccine mandates for children also varies across subgroups by gender, race/ethnicity, and educational attainment. Similar to the pattern for support for vaccine mandates overall, we see that white mothers without bachelor’s degrees are the least likely to say they would comply with vaccine mandates for children—significantly less than any other group of mothers (p<0.05). In this case, however, their level of compliance is not statistically different from that of white fathers without bachelor’s degrees. AAPI parents with bachelor’s degrees, by contrast, are the subgroup most likely to say they would comply with vaccine mandates for children, with compliance among AAPI fathers with bachelor’s degrees even higher than support among AAPI mothers with bachelor’s degrees.

**Figure 13.2:** Likelihood of Complying with Child Vaccine Mandates, among Parents with Unvaccinated Children by Gender, Race/Ethnicity, and Education

*Weighted means and 95% confidence intervals*
Next, we consider parents’ reports of their children’s mask use during the Omicron wave. Parents were asked: “The last time your children were indoors and around people you don’t live with, did they wear a mask or face covering?” Response options were: 0) not at all, 1) part of the time, and 2) the whole time. Overall, 47% of parents said their children wore masks the whole time, 21% said part of the time, and 32% said not at all.

Despite high overall levels of mask-wearing, there were also variations in children’s mask use. Women were significantly less likely than men to report that their children wore masks (at least part of the time) when they were last indoors with non-household members (63% vs. 76%; p<0.05). White parents were also significantly less likely than other parents to report mask-wearing, and Latino parents were less likely than Black and AAPI parents to report mask-wearing, as well (61%, 76%, 84%, 83%, p<0.05). Parents with higher levels of education, parents working for pay at least part-time, Democrat/Democrat-leaning parents, religious parents (especially Evangelical Christian parents), parents without young children (ages 0-4), parents with older children (ages 12-17), parents who have household members in high-risk groups, and parents whose households have not previously had Covid-19 were all disproportionately likely to report that their children wore masks at least part of the time when they were last indoors around a non-household member (p<0.05). The patterns by income are less clear, with disproportionately high mask rates among the lowest and highest-income parents (p<0.05). Notably, vaccinated parents and vaccinating parents also reported disproportionately high rates of child mask-wearing (p<0.05). This suggests that most vaccinated and vaccinating parents are continuing to have their children wear masks, despite having the added protection of the vaccines and that roughly half of unvaccinated and vaccine avoiding/delaying parents are not having their children wear masks, despite the added risks their families face.

Key Findings: Most parents report that their children are wearing masks indoors, but children of parents who are less concerned about Covid-19 are less likely to wear masks indoors.
14. Children’s Mask Wearing

**Figure 14.1:** Likelihood of Children Wearing Masks at Least Part of the Time Indoors When Last Around Non-Household Members

*Weighted means and 95% confidence intervals*
As shown in Figure 14.2, children’s mask wearing also varies across subgroups by gender, race/ethnicity and educational attainment. Among women, white mothers without bachelor’s degrees are least likely to report that their children wore masks—significantly less likely than any other group of mothers (p<0.05). Among men, white fathers without bachelor’s degrees are also significantly less likely than any other group of fathers to say that their children wore masks (p<0.05). Rates of reported mask-wearing are similar for white fathers and mothers without bachelor’s degrees, though among some other groups of parents (white parents with bachelor’s degrees and Hispanic parents without bachelor’s degrees), women are significantly less likely to report child mask-wearing than men.

**Figure 14.2**: Likelihood of Children Wearing Masks at Least Part of the Time Indoors When Last Around Non-Household Members by Gender, Race/Ethnicity and Education

*Weighted means and 95% confidence intervals*
Next, we considered how parents’ reports of their children’s mask-wearing varied with their level of concern about Covid-19 (re)infections. Recall that parents were asked: “The last time your children were indoors and around people you don’t live with, did they wear a mask or face covering?” Response options were: 0) not at all, 1) part of the time, and 2) the whole time. As shown in Figure 14.3, there is also a significant and positive relationship between parents’ concerns about their household members (re)contracting Covid-19 and their children’s mask-wearing, with more-concerned parents being more likely to have children who wore masks for more of the time the last time they were indoors around non-household members.

**Figure 14.3:** Children’s Mask-Wearing by Concerns about the Possibility of a Household Member (Re)Contracting Covid-19

*Weighted means and 95% confidence intervals*
Next, we considered parents’ support for school mask mandates during the Omicron waves. Parents were asked: “Do you think schools in your community should require all students to wear masks when they are at school, or not?” (yes or no). Overall, a large majority (74%) of parents supported requiring masks in schools.

That said, there were also important variations in parental support. Fathers, for example, were significantly more likely than mothers to support mask mandates (78% vs. 71%, p<0.05)—a reversal of gender patterns observed one year earlier during the December 2020 peak (Calarco and Anderson 2021). AAPI, Black, and Latino parents were also significantly more likely to support mask mandates than white parents (87%, 86%, and 80% vs. 67%, p<0.05). Parents with higher levels of education and parents who are employed full-time were also disproportionately likely to support school mask mandates (p<0.05).

Parents’ support for school mask mandates also varies with parents’ political affiliations, and with their household composition. Democrat/Democrat-leaning parents are nearly twice as likely as Republican/Republican-leaning parents to support vaccine mandates in schools (91% vs. 54%; p<0.05). Parents who do not have young children (ages 0-4), parents in households with people in high-risk groups, and parents in households that have not had Covid-19 all disproportionately support school vaccine mandates (p<0.05).

Notably, and as with patterns of children’s mask-wearing, support for school mask mandates was also significantly and substantially higher among vaccinated parents (77% vs. 54%, p<0.05) and among vaccinating parents (82% vs. 52%, p<0.05) than among unvaccinated and vaccine avoiding/delaying parents. This suggests that opposition to school mask mandates was not driven by parents who are “vaxxed and done” (Thompson 2022).

Key Findings: Most parents supported school mask mandates during the Omicron wave of Covid-19, but parents who are less concerned about Covid-19 are less likely to support school mask mandates.
15. School Mask Mandates

Figure 15.1: Likelihood of Supporting School Mask Mandates

*Weighted means and 95% confidence intervals
As shown in Figure 15.2, support for mask mandates also varies across subgroups by gender, race/ethnicity and educational attainment. Among women, white mothers without bachelor’s degrees are significantly less likely than any other group of mothers to support mask mandates (p<0.05). White mothers with bachelor’s degrees are also significantly less likely than Black, Latina, and AAPI mothers with bachelor’s degrees to support school mask mandates (p<0.05). Among men, white fathers without bachelor’s degrees are significantly less likely than any other group of fathers to support mask mandates (p<0.05). Like white mothers with bachelor’s degrees, white fathers with bachelor’s degrees are also significantly less likely to support mask mandates than Black fathers, Latino fathers, and AAPI fathers with bachelor’s degrees (p<0.05).

**Figure 15.2:** Likelihood of Supporting School Mask Mandates by Gender, Race/Ethnicity and Education

*Weighted means and 95% confidence intervals*
Next, we consider how concerns about Covid-19 (re)infection predict parents’ support for Covid-19 mask mandates. As shown in Figure 15.3, there is a significant and positive relationship between parents’ concerns about the possibility of their household members (re)contracting Covid-19 and their likelihood of agreeing that schools should require masks for all students ($p<0.05$). In fact, parents who are extremely concerned about Covid-19 were more than twice as likely (93% vs. 42%) to support mask mandates as parents who are not at all concerned.

**Figure 15.3:** Likelihood of Supporting School Mask Mandates by Concerns about the Possibility of a Household Member (Re)Contracting Covid-19

*Weighted means and 95% confidence intervals*
Covid-19 concerns are unlikely to be the only factor influencing parents’ attitudes and decisions regarding children’s mask-wearing. Rather, concerns about the potential impact of mask-wearing on children may also play a role. To date, reviews of scientific research have found no evidence that mask-wearing causes substantial or widespread harm to children (Eberhart et al. 2021; Moyer 2022). Research has also shown that mask wearing is associated with lower spread of Covid-19 (Brooks and Butler 2021).

Despite this evidence, however, news reports suggest that at least some parents have concerns about mask-wearing for children (Kamenetz 2022). Thus, we asked: “When it comes to your children wearing masks, how concerned are you about each of the following?” Response options included: 1) not at all concerned, 2) somewhat concerned, and 3) very concerned, and parents were asked to rate seven different potential consequences of masks.

As shown in Figure 16.1, mask costs were the only factor that elicited concern from less than half of all parents (34%). All other factors elicited concern from at least half of parents and in some cases more than two thirds of parents. The most common concern was children’s discomfort or difficulty wearing masks correctly (73% of parents at least somewhat concerned), followed by masks’ impact on children’s oxygen intake (68% of parents at least somewhat concerned), and masks’ impact on children’s social and emotional skills (64% of parents at least somewhat concerned). Different types of concerns about masks varied across parents in different ways, with concerns about mask costs following patterns distinct from other types of concerns. Thus, and in the interest of brevity, and clarity we present detailed analyses of variations in concerns about: 1) mask costs, 2) masks’ impact on children’s oxygen intake, and 3) masks’ impact on children’s social and emotional skills.
As shown in Figure 16.2, concerns about masks’ impact on children’s social and emotional skills and on their immune systems tended to follow different patterns from concerns about mask costs. Women, for example, were significantly more likely than men to express concerns about masks’ impact on children’s immune systems and social emotional skills (p<0.05), while men were significantly more likely than women to express concerns about the costs of masks (p<0.05). With respect to variations by race and ethnicity, Black and Latino parents were significantly more likely than white parents to express concerns about mask costs (p<0.05), but concerns about masks’ impact on children’s social/emotional skills and immune systems were similar across racial and ethnic groups. Concerns about mask costs were significantly higher among parents with advanced degrees than among parents without bachelor’s degrees, which could be a function of differences in the types of masks parents were using for their children (e.g., KN95 versus cloth masks). By contrast, concerns about masks’ impact on children’s immune systems and social/emotional skills were similar for parents with advanced degrees and parents without bachelor’s degrees, but somewhat lower for parents with bachelor’s degrees. Full-time employed parents express significantly greater concerns about mask costs (p<0.05) but not about masks’ impact on children’s immune systems or social/emotional skills. High-income and low-income parents both express significantly greater concerns about mask costs than parents in the middle of the income spectrum (p<0.05), which could be a function of the types of masks parents are purchasing. And Democrat/Democrat-leaning parents express disproportionately high concerns about mask costs but disproportionately low concerns about masks’ impact on children’s immune systems and social/emotional skills (p<0.05).
16. Mask Concerns

Figure 16.2: Parents’ Concerns about Masks (1 = not concerned, 2 = somewhat concerned, 3=very concerned)

*Weighted means and 95% confidence intervals

- Masks’ Impact on children’s social and emotional skills
- Masks’ impact on children’s immune systems
- The cost of masks
As shown in Figure 16.3, Evangelical Christian parents are significantly more concerned than other parents about both mask costs and masks’ impact on children’s immune systems and social/emotional skills (p<0.05). The same is true for parents of young children (ages 0-4) and elementary-aged children (ages 5-11) (p<0.05). Vaccinated parents and vaccinating parents are disproportionately more concerned about mask costs and disproportionately less concerned about masks’ impact on children’s immune systems and social/emotional skills (p<0.05). Parents in households with high-risk members are disproportionately concerned about the cost of masks, as are parents in households that previously had Covid (p<0.05).

**Figure 16.3: Parents’ Concerns about Masks (1 = not concerned, 2 = somewhat concerned, 3 = very concerned)**

*Weighted means and 95% confidence intervals*
16. Mask Concerns

As shown in Figure 16.4, parents’ mask concerns are also associated with their reports of their children’s mask-wearing, albeit in disparate ways. Parents who report greater concerns about masks’ impact on children’s immune systems and on their social and emotional skills are less likely to report that their children wore masks the last time they were indoors around non-household members (p<0.05). Parents’ concerns about children’s difficulty and discomfort wearing masks, masks’ impact on children’s oxygen intake, masks’ impact on children’s language development, and masks’ impact on children’s academic achievement follow similar patterns, though they are not shown here in the interest of clarity and brevity. By contrast, parents who report greater concerns about mask costs are significantly more likely to report that their children wore masks (p<0.05). Taken together, these patterns suggest that concerns about the costs of masks are not sufficient to deter parents from masking their children but that other types of parental concerns about masks may ultimately limit children’s mask use.

**Figure 16.4:** Parents’ Likelihood of Reporting that their Children Wore Masks Indoors, by Parents’ Concerns about Masks

*Weighted means and 95% confidence intervals*
16. Mask Concerns

As shown in Figure 16.5, parents’ mask concerns are also associated with their likelihood of supporting school mask mandates. Parents who report greater concerns about masks’ impact on children’s immune systems and on their social and emotional skills are less likely to support school mask mandates (p<0.05). Parents’ concerns about children’s difficulty and discomfort wearing masks, masks’ impact on children’s oxygen intake, masks’ impact on children’s language development, and masks’ impact on children’s academic achievement follow similar patterns, though they are not shown here in the interest of clarity and brevity. By contrast, parents who report greater concerns about mask costs are significantly more likely to support school mask mandates (p<0.05). Taken together, these patterns suggest that concerns about the costs of masks are not sufficient to deter parents from supporting school mask mandates but that other types of parental concerns about masks may ultimately lead parents to oppose required masking in school.

Figure 16.5: Parents’ Likelihood of Supporting School Mask Mandates, by Parents’ Concerns about Masks

*Weighted means and 95% confidence intervals
News fatigue is a common response to tragedies like Covid-19 (Fitzpatrick 2022). Yet, the Omicron wave brought with it heightened risks that may have prompted increased news consumption instead. Thus, we examined parents’ self-reports of how their consumption of Covid-19 news changed from the beginning of the pandemic to the Omicron wave. Parents were asked: “Compared to how closely you were following the news about COVID-19 at the beginning of the pandemic, how closely are you following the news about COVID-19 right now?”

Overall, 19 percent of parents said they are following the news much less closely, 20 percent said they are following the news somewhat less closely, 32 percent they are following the news about as closely, 14 percent said somewhat more closely, and 15 percent said much more closely.

Parents’ news consumption patterns varied across different groups. As shown in Figure 17.1 and 17.2, and consistent with prior research on gendered patterns of news avoidance (Toff and Palmer 2019), women were significantly more likely than men to report reducing their consumption of Covid-19 news (p<0.05). White parents were significantly more likely than Black, Latino, and AAPI parents to reduce their news consumption (p<0.05). Parents with lower levels of education, parents who are not working full-time for pay, parents with lower levels of education, unpartnered parents, Republican/Republican-leaning and politically Independent parents, non-religious parents, parents without young children (ages 0-4), unvaccinated parents, parents with children who neither vaccinated nor will be right away, and parents in households whose members are not in high-risk groups are also disproportionately likely to report that they reduced their consumption of Covid-19 news (p<0.05).

Key Findings: Four in ten parents have stopped following news about Covid-19 as closely as they did at the beginning of the pandemic. Furthermore, parents who have reduced their consumption of Covid-19 news are less concerned about Covid-19, less likely to mask their children, and less likely to vaccinate their children.

**Figure 17.1:** Parents’ Self-Reported Changes in News Consumption

*Weighted proportions*

Figure 17.2: Likelihood of Reporting Reduced News Consumption

*Weighted means and 95% confidence intervals
Changes in parents’ news consumption also varied across subgroups of parents by gender, race/ethnicity and educational attainment. White mothers without bachelor’s degrees were significantly more likely than any other group of mothers to report that they reduced their consumption of news about Covid-19 (p<0.05). White mothers with bachelor’s degrees were also significantly more likely to reduce their news consumption than Black, Latina, and AAPI mothers with bachelor’s degrees. Men, meanwhile, were generally less likely than women from similar racial/ethnic and education groups to report reduced news consumption, though gender patterns for AAPI parents trend in the opposite way.

**Figure 17.3:** Likelihood of Reporting Reduced News Consumption by Gender, Race/Ethnicity, and Educational Attainment.

*Weighted means and 95% confidence intervals*
Next, we consider how parents’ concerns about Covid-19 were related to their self-reported changes in news consumption. As shown in Figure 17.4, parents who reduced or maintained their early pandemic level of news consumption also reported significantly lower levels of concern about Covid-19 (re)infections than did parents who increased their news consumption over time (p<0.05). This suggests that parents who are less concerned about Covid-19 may have stopped following the news because they did not see it as important to do so, or, by contrast, that parents who stopped following the news as closely came to see Covid-19 as less concerning.

**Figure 17.4:** Concern about the Possibility that a Household Member will (Re)Contract Covid-19, by Self-Reported Changes in Covid-19 News Consumption

*Weighted means and 95% confidence intervals*
Next, we consider how parents’ self-reported changes in news consumption are related to parents’ decisions about whether to vaccinate their children. As shown in Figure 17.5, parents who increased their news consumption are significantly more likely to report that their children wore masks the last time they were indoors around non-household members (p<0.05).

**Figure 17.5:** Parents’ Likelihood of Reporting that their Children Wore Masks, by Self-Reported Changes in News Consumption

*Weighted means and 95% confidence intervals*
Next, we consider how parents’ self-reported changes in news consumption are related to parents’ decisions about whether to vaccinate their children. As shown in Figure 17.6, parents who increased their news consumption are significantly more likely to have a child who is vaccinated or will be right away than are parents who maintained the same level of news consumption or reduced their news consumption over time (p<0.05).

**Figure 17.6:** Likelihood of Having a Child Who is Vaccinated or Will Be as Soon as Possible by Self-Reported Changes in News Consumption

*Weighted means and 95% confidence intervals*
Previous research has shown that trust plays a key role in vaccine decisions and that variations in trust contribute to inequalities in participation in vaccine campaigns (Freimuth et al. 2017; Larson et al. 2018; Reich 2014b). Thus, we examine how parents’ trust in various sources of information about Covid-19 is associated with variations in parents’ vaccine decisions for their children. Parents were asked: “How much do you trust each of the following as a source of information about COVID-19?” Parents could respond: 1) not at all, 2) somewhat, or 3) a great deal for each of 10 potential information sources.

Overall, parents put the highest level of trust in physicians and nurses (92% trust at least somewhat), followed by the CDC (83%), and their own close friends and family members, (82%) and then chiropractors and other alternative medical providers (75%). Donald Trump was the information source that generated the least trust from parents (42%), followed by people on social media (49%), religious leaders (43%), and Fox News (57%). As shown in Figure 18.1, parents are significantly more likely to report that they have at least one child who is vaccinated or will be right away if they put higher trust in: the Centers for Disease Control (CDC), Joe Biden, CNN, Fox News, Physicians and Nurses, Chiropractors and other alternative medical providers, their close friends and family members, and the people they follow on social media (p<0.05). Notably, and by contrast, parents are significantly less likely to report that their children are vaccinated or will be right away if they put higher levels of trust in Donald Trump (p<0.05).

Key Finding: Parents who trust information sources more are more likely to vaccinate and mask their kids, unless the source is Donald Trump.
18. Trust in Information Sources

Similarly, and as shown in Figures 18.1 and 18.2, parents who report greater trust in the Centers for Disease Control (CDC), Joe Biden, CNN, Fox News, Physicians and Nurses, Chiropractors and other alternative medical providers, their close friends and family members, the people they follow on social media, and religious leaders are significantly more likely to report that their children wore masks when they were last indoors with non-household members (p<0.05). Meanwhile, and by contrast, parents who say they put more trust in Donald Trump are significantly less likely to say their children wore masks (p<0.05).

**Figure 18.1:** Likelihood of Having at Least One Child Who is Vaccinated or Will Be Right Away, by Trust in Covid Information Sources

*Weighted means and 95% confidence intervals
18. Trust in Information Sources

Figure 18.2: Likelihood of Reporting that Child Wore a Mask Indoors, by Trust in Sources of Covid-19 Information

*Weighted means and 95% confidence intervals
Thus far, we have seen that low rates of childhood vaccination and masking are driven in large part by the decisions of white mothers without bachelor’s degrees. With respect to vaccines, white mothers without bachelor’s degrees are significantly less likely than any other subgroup of parents to: 1) report that they have at least one child who is vaccinated or will be vaccinated as soon as possible (31% vs. 55% of parents overall), 2) say that Covid-19 vaccines are very necessary for their children (27% vs. 48% overall), 3) support school-required Covid-19 vaccines (30% vs. 54% overall), and 4) be vaccinated themselves (39% vs. 64% overall). Similarly, and with respect to masks, white women without bachelor’s degrees are significantly less likely than all other groups of parents to: 1) report that their children are wearing masks indoors (47% vs. 67% overall) and 2) support school mask mandates (55% vs. 74% overall).

These patterns raise questions about why white mothers without bachelor’s degrees are particularly unlikely to vaccinate or mask their children against Covid-19. What we find, in turn, is that white mothers without bachelor’s degrees are distinct from other groups of mothers in their political affiliations and in their paid work and family arrangements—differences that may help explain the patterns we observe.

With respect to politics, and in contrast to typical gendered patterns of political affiliation (Pew Research Center 2020), we find that white mothers without bachelor’s degrees are the subgroup of parents least likely to identify as Democrats or Democrat-leaning Independents (24%). As shown in Figure 19.1, they are significantly less likely to identify as Democrats or Democrat-leaning Independents than any other subgroup of parents except white fathers without bachelor’s degrees (30%) and AAPI mothers without bachelor’s degrees (29%).
19. The Politics of (White) Motherhood

Figure 19.1: Likelihood of Identifying as a Democrat or Democrat-Leaning Independent, Weighted Means by Gender, Race/Ethnicity, and Education

*Weighted means and 95% confidence intervals
With respect to paid work and family arrangements, and as shown in Tables 19.2 and 19.3, we also find that white mothers without bachelor’s degrees are the subgroup of parents who have the lowest engagement in paid work. Before the pandemic, they were less likely than any other subgroup of parents to be doing any work for pay (62% vs. 82% overall)—significantly less likely than any group except AAPI women without bachelor’s degrees (p<0.05). Given the Covid-related layoffs disproportionately experienced by Black and Latina women and women without college degrees (Dagher 2021), these patterns of non-employment shifted somewhat during the pandemic. However, at the time of the survey, white mothers without bachelor’s degrees were still the group least likely to be working for pay full-time (26% vs. 53% overall)—significantly less than any group except AAPI mothers without bachelor’s degrees (p<0.05).

Figure 19.2: Likelihood of Working for Pay Pre-Pandemic (Feb 2020) by Gender, Race/Ethnicity, and Education

*Weighted means and 95% confidence intervals
This limited engagement in paid work may have helped create the conditions necessary for white mothers without bachelor’s degrees to disproportionately reject the necessity of masks and vaccines. By being out of the labor force, these mothers were likely less subject to the kinds of mask and vaccine mandates put in place by many employers (MacFarquhar 2020; Patel 2020). The closure of social spaces like schools, libraries, and restaurants may also have left these mothers particularly disconnected from people outside their own households (Calarco et al. 2020), limiting their empathy for the plight of other families and also the pressure they faced to make decisions that they perceived were best for themselves and their families rather than best for society as a whole.
Being less engaged in paid work may also increase time white mothers without bachelor’s degrees spend on social media. Studies have shown that social media has been a key source of misinformation and disinformation about Covid-19, masks, and vaccines (Ayers et al. 2021). Parents were asked: “How many times do you check social media on a typical day? Social media includes apps and platforms such as Facebook, Instagram, Twitter, SnapChat, YouTube, and TikTok,” with six response options ranging from (1) none to (6) more than 15 times a day. Figure 19.4 shows parents’ mean responses by subgroup and reveals that white mothers without bachelor’s degrees, despite being the group most likely to report that they reduced their consumption of Covid-19 news during the pandemic, are also among the subgroups of parents who spend the most time on social media each day. Thus, these women may have reduced their active consumption of official news about Covid-19 while still passively encountering information (and misinformation) online.

Figure 19.4: Time Spent on Social Media by Gender, Race/Ethnicity, and Education

*Weighted means and 95% confidence intervals
19. The Politics of (White) Motherhood

Because they are particularly unlikely to identify as Democrats or Democrat-leaning Independents, white mothers without bachelor’s degrees may also be more inclined to trust Covid information from right-wing sources like Donald Trump. Recall that, unlike trust in other sources, trust in Trump is associated with lower rates of vaccination and mask-wearing for children. The data show, in turn, that white mothers without bachelor’s degrees are among the subgroups of parents who put the greatest level of trust in Covid-19 information that they encounter from the former President.

**Figure 19.5: Trust in Covid-19 Information from Donald Trump by Gender, Race/Ethnicity, and Education**

*Weighted means and 95% confidence intervals*
In a related vein, being less likely to identify as a Democrat or Democrat-leaning Independent may also lead white mothers without bachelor’s degrees to have particularly low levels of trust in the CDC. Recall that trust in sources like the CDC is associated with higher rates of vaccination and mask-wearing for children. The data show, in turn, that white mothers without bachelor’s degrees, like other mothers without bachelor’s degrees, and like white men without bachelor’s degrees, put significantly lower levels of trust in the CDC than do parents with bachelor’s degrees.

**Figure 19.6:** Trust in Covid-19 Information from the CDC by Gender, Race/Ethnicity, and Education

*Weighted means and 95% confidence intervals*
Despite evidence that children can contract, transmit, and become seriously ill from Covid-19 (Broadfoot 2022; CDC 2022a; ONS 2022; Ortaliza et al. 2022), and despite the effectiveness of both vaccines and high-quality face masks (Jehn 2021; Howard et al. 2021; Walter et al. 2021), rates of childhood vaccination against Covid-19 remain far lower than rates of adult vaccination (CDC 2022b; NYT 2022), and many families have resisted efforts to maintain mask requirements in schools, childcare centers, and other spaces for children (Astor 2022). To help explain these patterns, we examine parents’ health decisions during the pandemic and consider how those decisions are related to parents’ perceptions of Covid-19, masks, and vaccines. We base these analyses on data from a novel Qualtrics Panel survey conducted from mid-December 2021 through mid-January 2022 (during the height of the Omicron wave) with 2,009 US-based parents of children under 18.

**Patterns of Parental Decision-Making**

Examining parents’ pandemic decision-making, we find that low rates of childhood vaccination and masking are driven primarily by white mothers, especially white mothers without bachelor’s degrees. With respect to vaccines, white mothers without bachelor’s degrees are significantly less likely than any other group of parents to report that they have at least one child who is vaccinated or will be vaccinated as soon as possible (31% vs. 55% of parents overall), significantly less likely than any other group of parents to say that Covid-19 vaccines are very necessary for their children (27% vs. 48% overall), significantly less likely than any other group of parents to support school-required Covid-19 vaccines (30% vs. 54% overall), and significantly less likely than any other group of parents to be vaccinated themselves (39% vs. 64% of parents overall). Similarly, and with respect to masks, white women without bachelor’s degrees are significantly less likely than all other groups of parents to report that their children are wearing masks indoors (47% vs. 67% overall), and also significantly less likely than any other group of parents to support school mask mandates (55% vs. 74% of parents overall).

Our data suggest that white mothers without bachelor’s degrees may play this outsized role in resisting vaccines and masks for children because they are distinct from other subgroups of parents in terms of their politics and their paid work and family arrangements. White mothers without bachelor’s degrees are the subgroup of parents with the lowest involvement in paid work, the subgroup least likely to identify as Democrats or Democrat-leaning Independents, one of the groups that engages most heavily with social media, and the subgroup that was mostly likely to reduce its consumption of mainstream news about Covid-19 from the start of the pandemic to the Omicron wave. These dynamics are likely interrelated. As previous research has shown, financial dependence on husbands and male partners tends to push women into more conservative political positions (Stout et al. 2017). Being less involved in paid work, meanwhile, meant that white mothers with bachelor’s degrees were also less likely than other parents to be subject to the kinds of mask and vaccine mandates put in place by many employers (MacFarquhar 2020; Patel 2020), which may have limited their perceptions of the necessity and effectiveness of masks and vaccines. The pandemic may also have left these mothers particularly disconnected from people outside their own households, limiting their empathy for the plight of other families and also the pressure they faced to make decisions that they perceived were best for themselves and their families rather than best for society as a whole. That disconnection, in turn, may also have prompted white mothers without bachelor’s degrees to engage more with social media, where they may have encountered more of the misinformation and disinformation being spread (particularly by right-wing sources like Donald Trump) about masks and vaccines (Ayers et al. 2021).
These same forces may also help to explain why AAPI parents with bachelor’s degrees fall at the other end of the spectrum in terms of masks and vaccines. AAPI parents with bachelor’s degrees report the highest levels of vaccination or intended vaccination for their children (78% for women; 97% for men), the highest levels of vaccination for themselves (92% for women; 97% for men), the highest levels of mask-wearing among children (78% for women; 87% for men), and the highest levels of support for mask mandates (90% for women and men) and vaccine mandates in schools (77% for women; 95% for men). AAPI parents with bachelor’s degrees are not the subgroup most likely to identify as Democrat/Democrat-leaning Independents or the group least likely to trust Donald Trump. However, AAPI fathers with bachelor’s degrees do have the highest levels of engagement in paid work. AAPI mothers with bachelor’s degrees, meanwhile, report particularly low levels of engagement with social media, particularly low levels of reduced engagement with mainstream news and information about Covid-19, and particularly high levels of trust in the CDC. That said, there may also be other cultural or situational factors that also contribute to these patterns, which future research should explore in more depth.

**Processes of Parental Decision-Making**

Next, we identify three key processes that may lead parents to avoid masking their children and getting them vaccinated against Covid-19. These include:

1) Low levels of concern about Covid-19 as a serious threat to the wellbeing of children and “healthy” people,
2) High levels of concern about the safety and efficacy of Covid-19 vaccines and masks for children,
3) Disengagement from and lack of trust in sources of news and information regarding Covid-19.

First, low levels of concern about Covid-19 as a serious threat to the wellbeing of children and “healthy” people appear to be creating the perception that Covid-19 vaccines are unnecessary for most children. Parents who are not highly concerned about Covid-19 are significantly less likely to have vaccinated (or plan to vaccinate) their children, significantly less likely to perceive vaccines as necessary for their children, significantly less likely to have their children wear masks, and significantly less likely to support vaccine and mask mandates in schools.

Second, high levels of concern about the safety and efficacy of Covid-19 vaccines for children appear to be leading most parents to believe that the risks of Covid-19 vaccines for children equal or outweigh the risks of Covid-19 itself. Parents who are highly concerned about the potential risks of vaccines and masks for children, meanwhile, are also significantly less likely to vaccinate or mask their children and less likely to support efforts to require those protections in schools.

Third, disengagement from and lack of trust in sources of news and information regarding Covid-19 may be fueling lack of concern about Covid-19 as a threat to children and impeding efforts to combat misinformation about the risks of vaccines. We find that nearly four in ten parents have reduced their consumption of Covid-19 news since the start of the pandemic, and we find that these reductions—and a lack of trust in sources of information about the pandemic more generally—are associated with a lower likelihood of vaccinating and masking children against Covid-19.
Together, these three processes appear to be discouraging parents from vaccinating or planning to vaccinate their children as soon as possible, and from supporting efforts to continue mask-wearing in schools. These three pathways, however, do not always run in parallel. Rather, some pathways are more common among parents from particular groups. The pathway involving lack of concern about Covid-19 as a risk to children and “healthy” people, for example, appears to be particularly common among white parents, especially white mothers without bachelor’s degrees. The pathway involving concerns about vaccine and mask risks, by contrast, appears to be somewhat more universal, involving many highly educated parents, Black and Latino parents, and, to a lesser extent, Asian American and Pacific Islander (AAPI) parents (especially mothers), as well. Finally, the third pathway, involving disengagement from Covid-19 news, may be related to the first pathway, as it is particularly common among mothers, especially white mothers without bachelor’s degrees.

The Consequences of Parental Decision-Making

These data also highlight the potential consequences of parents’ decisions around masks and vaccines for children under 18. We find, for example, that during the Omicron wave, unvaccinated parents and parents with unvaccinated children were as likely and in some cases more likely than other parents to be engaging in high-risk activities like eating meals at restaurants, visiting with family and friends indoors, and attending large-group gatherings. Thus, while we might expect vaccinated parents and parents with vaccinated children to feel safer engaging in these activities during a time of peak transmission, we find instead that unvaccinated parents and parents without vaccinated children are likely driving the push for a “return to normal,” instead.

Author Biographies

Jessica McCrory Calarco is an associate professor of sociology at Indiana University and a director of the Council on Contemporary Families.

Elizabeth M. Anderson is a graduate student in sociology at Indiana University.
REFERENCES


Methodology for the 2022 Parenting in Tumultuous Times Survey

- Qualtrics surveyed 2,009 US-based parents with children under the age of 18 living at home, including oversamples of mothers, Black parents, and parents without college degrees.
- Quota-based sampling was used to ensure representation of parents of different genders, racial/ethnic groups, educational attainment levels, and regional locations.
- Qualtrics controlled and weighted the data based on gender, race/ethnicity, age, educational attainment, and region to match estimates from the 2021 American Community Survey for the population of US parents of children under 18.
- Surveys were optimized for viewing on a range of internet-connected devices, including laptops/desktops, tablets, and smartphones.
- The survey was administered December 15, 2021-January 15, 2022.
- The survey was administered in English.
- Qualtrics recruited participants from Qualtrics panels, inviting them to complete the survey for predetermined rewards.
- Qualtrics performed quality checks to ensure panelist identity and screen out participants who engaged in undesirable behavior, such as completing multiple surveys, “speeding” through the survey, or providing low-quality responses to open-ended questions.
- 3,553 panel members began the survey. 1,544 participants either failed the screening questions (i.e., they were not US-based parents ages 18 or older with children under 18 years of age living in their home), exceeded the quotas, abandoned the survey prior to completion, or were screened out during quality checks. This resulted in a final sample of 2,009 participants.
- The margin of error for the entire survey is estimated to be +/-2.2% at a 95% confidence interval. Group means presented in this report are depicted with error bars indicating 95% confidence intervals.
- Table A1 includes the weighted and unweighted sample demographics, as well as the margins of error for groups included in these analyses. Table A2 includes weighted and unweighted demographics and margins of error for the gender x race/ethnicity x education subgroups used in these analyses.
Table A1: Weighted and Unweighted Sample Characteristics.

<table>
<thead>
<tr>
<th></th>
<th>Unweighted N</th>
<th>Unweighted Percent</th>
<th>Weighted Percent</th>
<th>Margin of Error</th>
</tr>
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<tr>
<td>Women</td>
<td>1444</td>
<td>71.9%</td>
<td>54.4%</td>
<td>+/-2.6%</td>
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<td>Men</td>
<td>557</td>
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<td>45.1%</td>
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<td>Gender Nonbinary</td>
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<td>0.5%</td>
<td>+/-34.6%</td>
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<td>AAPI Alone</td>
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<td>6.2%</td>
<td>8.3%</td>
<td>+/-8.8%</td>
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<td>12.1%</td>
<td>+/-4.4%</td>
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<tr>
<td>Hispanic or Latino/a</td>
<td>254</td>
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</tr>
<tr>
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<td>1005</td>
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<tr>
<td>Multiracial or Other Racial Group</td>
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<td>2.3%</td>
<td>+/-8.7%</td>
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<tr>
<td>No Bachelor’s Degree</td>
<td>1320</td>
<td>65.7%</td>
<td>57.6%</td>
<td>+/-2.7%</td>
</tr>
<tr>
<td>Bachelor’s Degree</td>
<td>417</td>
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<td>24.1%</td>
<td>+/-4.8%</td>
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<td>Advanced Degree</td>
<td>272</td>
<td>13.5%</td>
<td>18.3%</td>
<td>+/-5.9%</td>
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<tr>
<td>Employed Full Time</td>
<td>930</td>
<td>46.3%</td>
<td>52.7%</td>
<td>+/-3.2%</td>
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<tr>
<td>Employed Part Time or Self-Employed</td>
<td>388</td>
<td>19.3%</td>
<td>17.8%</td>
<td>+/-5.0%</td>
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<tr>
<td>Not Working for Pay</td>
<td>664</td>
<td>33.1%</td>
<td>28.3%</td>
<td>+/-3.8%</td>
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<tr>
<td>Household Income under $25,000</td>
<td>685</td>
<td>34.1%</td>
<td>31.1%</td>
<td>+/-3.7%</td>
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<td>$25,000-$49,999</td>
<td>465</td>
<td>23.1%</td>
<td>19.7%</td>
<td>+/-4.5%</td>
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<tr>
<td>$50,000-$74,999</td>
<td>317</td>
<td>15.8%</td>
<td>15.2%</td>
<td>+/-5.5%</td>
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<tr>
<td>$75,000-$99,999</td>
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<td>11.4%</td>
<td>13.5%</td>
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<td>$100,000-$149,999</td>
<td>178</td>
<td>8.9%</td>
<td>11.4%</td>
<td>+/-7.3%</td>
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<tr>
<td>$150,000 or more</td>
<td>135</td>
<td>6.7%</td>
<td>9.3%</td>
<td>+/-8.4%</td>
</tr>
<tr>
<td>Married</td>
<td>994</td>
<td>49.5%</td>
<td>56.2%</td>
<td>+/-3.1%</td>
</tr>
<tr>
<td>Cohabiting</td>
<td>373</td>
<td>18.6%</td>
<td>16.4%</td>
<td>+/-5.1%</td>
</tr>
<tr>
<td>Not Married or Cohabiting</td>
<td>642</td>
<td>31.9%</td>
<td>27.4%</td>
<td>+/-3.9%</td>
</tr>
<tr>
<td>Democrat or Democrat-Leaning</td>
<td>936</td>
<td>46.6%</td>
<td>45.5%</td>
<td>+/-3.2%</td>
</tr>
<tr>
<td>Independent or Other Party (No Lean)</td>
<td>552</td>
<td>27.5%</td>
<td>26.5%</td>
<td>+/-4.2%</td>
</tr>
<tr>
<td>Republican or Republican-Leaning</td>
<td>521</td>
<td>25.9%</td>
<td>28.1%</td>
<td>+/-4.3%</td>
</tr>
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Table A1: Weighted and Unweighted Sample Characteristics. (Continued)

<table>
<thead>
<tr>
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<th>Unweighted N</th>
<th>Unweighted Percent</th>
<th>Weighted Percent</th>
<th>Margin of Error</th>
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<tbody>
<tr>
<td>Evangelical Christian</td>
<td>776</td>
<td>38.6%</td>
<td>38.7%</td>
<td>+/-3.5%</td>
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<tr>
<td>Religious, Non-Evangelical</td>
<td>721</td>
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<td>37.7%</td>
<td>+/-3.6%</td>
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<td>Non-Religous</td>
<td>512</td>
<td>25.5%</td>
<td>23.5%</td>
<td>+/-4.3%</td>
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<tr>
<td>Has Children Ages 0-4</td>
<td>894</td>
<td>44.5%</td>
<td>38.5%</td>
<td>+/-3.3%</td>
</tr>
<tr>
<td>Has Children Ages 5-11</td>
<td>1085</td>
<td>54.0%</td>
<td>55.3%</td>
<td>+/-3.0%</td>
</tr>
<tr>
<td>Has Children Ages 12-17</td>
<td>900</td>
<td>44.8%</td>
<td>50.9%</td>
<td>+/-3.3%</td>
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<tr>
<td>Household Member in High-Risk Group</td>
<td>1026</td>
<td>51.1%</td>
<td>50.8%</td>
<td>+/-3.1%</td>
</tr>
<tr>
<td>No Household Members in High-Risk Groups</td>
<td>955</td>
<td>47.5%</td>
<td>48.0%</td>
<td>+/-3.2%</td>
</tr>
<tr>
<td>Household Member(s) Had/Likely Had Covid</td>
<td>827</td>
<td>41.2%</td>
<td>41.8%</td>
<td>+/-3.4%</td>
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<tr>
<td>No Household Members Have Had Covid</td>
<td>1182</td>
<td>58.8%</td>
<td>58.2%</td>
<td>+/-2.9%</td>
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</table>
Table A2: Subgroup Representation

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<th>Unweighted %</th>
<th>Weighted %</th>
<th>Margin of Error</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Women</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AAPI alone</td>
<td>Bachelor's</td>
<td>45</td>
<td>2.2%</td>
<td>2.5% +/14.6%</td>
</tr>
<tr>
<td></td>
<td>No Bachelor's</td>
<td>45</td>
<td>2.2%</td>
<td>1.9% +/14.6%</td>
</tr>
<tr>
<td>Black alone</td>
<td>Bachelor's</td>
<td>65</td>
<td>3.2%</td>
<td>1.3% +/12.2%</td>
</tr>
<tr>
<td></td>
<td>No Bachelor's</td>
<td>290</td>
<td>14.4%</td>
<td>5.3% +/5.8%</td>
</tr>
<tr>
<td>Hispanic or Latino</td>
<td>Bachelor's</td>
<td>46</td>
<td>2.3%</td>
<td>3.0% +/14.4%</td>
</tr>
<tr>
<td></td>
<td>No Bachelor's</td>
<td>143</td>
<td>7.1%</td>
<td>8.3% +/8.2%</td>
</tr>
<tr>
<td>White alone</td>
<td>Bachelor's</td>
<td>236</td>
<td>11.7%</td>
<td>11.4% +/-6.4%</td>
</tr>
<tr>
<td></td>
<td>No Bachelor's</td>
<td>475</td>
<td>23.6%</td>
<td>19.1% +/4.5%</td>
</tr>
<tr>
<td><strong>Men</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AAPI alone</td>
<td>Bachelor's</td>
<td>22</td>
<td>1.1%</td>
<td>3.0% +/-20.9%</td>
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<tr>
<td></td>
<td>No Bachelor's</td>
<td>12</td>
<td>0.6%</td>
<td>0.9% +/-28.3%</td>
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<td>Black alone</td>
<td>Bachelor's</td>
<td>42</td>
<td>2.1%</td>
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<td>100</td>
<td>5.0%</td>
<td>3.6% +/-9.8%</td>
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<td>Bachelor's</td>
<td>20</td>
<td>1.0%</td>
<td>1.8% +/-21.9%</td>
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<td>43</td>
<td>2.1%</td>
<td>7.3% +/-14.9%</td>
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<td>Bachelor's</td>
<td>186</td>
<td>9.3%</td>
<td>16.8% +/-7.2%</td>
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<tr>
<td></td>
<td>No Bachelor's</td>
<td>106</td>
<td>5.3%</td>
<td>9.0% +/-9.5%</td>
</tr>
</tbody>
</table>

1 The PITT sample also includes 8 parents who identify as gender nonbinary and 125 parents who identify as multiracial or with other racial/ethnic groups. These parents are included in the full sample but are not shown as part of subgroup analyses due to small cell sizes.