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Parents' Perceptions of Schools' COVID-19 Mitigation Strategies: A Phenomenological Study

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Abstract

BACKGROUND—At the onset of the COVID-19 pandemic, schools closed across the U.S. Given the impact of virtual learning and lost access to school resources, schools eventually reopened with COVID-19 mitigation protocols in place. This qualitative study sought to understand parental perceptions of school-based COVID-19 mitigation strategies.

METHODS—Using a phenomenology approach, nine focus groups were completed with 40 parents of children in grades K-8 representing eight Maryland counties. Based on acceptance of masking policies (as indicated on a survey), parents were sorted into two groups – lower and higher masking acceptance. A thematic analysis was conducted for each group and themes were compared between the two groups.

RESULTS—The main themes were related to parents' general sentiments regarding COVID-19, compliance, pandemic-related changes over time, changes in personal opinions, and in-person learning. Both groups described challenges related to inconsistent COVID-19 mitigation policies and practices, the challenges of rapid and frequent changes in guidelines during the pandemic, and the benefits of in-person learning.

IMPLICATIONS FOR SCHOOL HEALTH POLICY, PRACTICE, AND EQUITY—Study findings may help to inform future efforts to implement public health messaging and strategies through schools.

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HUMAN SUBJECTS APPROVAL STATEMENT

The Johns Hopkins School of Medicine Institutional Review Board approved the study protocol (IRB00290237), and study participants provided written informed consent. Focus group participants further provided verbal consent prior to focus group participation.

Conflict of interest

All authors declare there are no conflicts of interest.

CONCLUSIONS—Parents of elementary and middle school children, regardless of general acceptance of masking policies, shared concerns about implementation and guidance regarding school-based mitigation strategies.

Keywords

School health; parents; COVID-19; mitigation strategies; health policy; health communication

In early 2020, the COVID-19 pandemic disrupted the lives of people all over the world, including school-aged children and their families. In the U.S., the threat of COVID-19 led to nationwide school closures for extended periods of time.[1] The negative impact these school closures had on students' academic performance, social-emotional development, and mental health has been well-documented.[2,3] Many students lost supports and services commonly provided by schools, including meals, school-based physical and mental health care, and resources for students with disabilities.[2,4] As a result, school closures exacerbated existing health and educational inequities.[4–7] Given the important role of schools in children's health and wellbeing, and the benefits of in-person school for student learning and development,[8] school districts worked to identify and implement strategies to reduce the risk of viral transmission in schools.[4,6]

When it comes to children's health and safety, parents play an important role (note that this group may include other primary caregivers and guardians). Parents are key sources of information and influence children's health-related attitudes and behaviors, including those recommended to reduce the risk of severe COVID-19.[9] For example, college students reported their parents' input and advice as a major influencer of their vaccination decision-making.[10]

Parent engagement also shapes a child's educational experience and learning environment.[11] Parents play a key role in either enabling or impeding policy implementation at their children's schools.[12] This is likely to be particularly true during public health emergencies, such as COVID-19.[13] Prior studies suggest many factors help explain variation in attitudes about COVID-19 mitigation. For example, a systematic review found that demographic factors (such as age, gender, income, and education), personal factors (such as health status, exposure to mass media, and political affiliation), geographical factors, and timing (stage of the pandemic) relate to COVID-19 risk perceptions.[14] The review also found that higher risk awareness generally predicted greater engagement in preventive behaviors and mitigation compliance. In other studies, political party affiliation, racial and ethnic identity, and gender were linked with Americans' mask-wearing behaviors during the COVID-19 pandemic.[15–17] Taken together, these studies suggest that a variety of factors may play a role in parents' perceptions and decision-making related to COVID-19. A greater understanding of perceptions of and compliance with school-based mitigation strategies, including the role of parents, is needed.

Recent quantitative analyses from the Parents and Communities as Experts (PACE) Study, which examined parental perceptions of school-based COVID-19 mitigation strategies, found that support for COVID-19 mitigation strategies in schools was correlated with child racial identity, parent vaccination status, political affiliation, and perception of the school's

pandemic response.[17] Additionally, parents turned to their doctors, family members, and schools as trusted messengers of COVID-19 information.[18] Leveraging qualitative methods to understand parental perceptions of school mitigation strategies can provide contextual information on underlying feelings and beliefs that may support preventive behaviors.

In this study, we use data from focus groups with parents of children in public K-8 schools in eight Maryland counties enrolled in the PACE Study to describe parents' perceptions of in-school mitigation strategies. This study was designed to examine similarities and differences in parent perceptions by acceptance of masking policies (two groups as indicated on a survey – lower and higher masking acceptance). Findings from this study may provide valuable insight for future school-based public health messaging and strategies that reach all parents.

METHODS

Participants

The PACE Study was designed to elucidate how parents/guardians of elementary and middle school students in Maryland navigated the return to in-person school during the 2021–22 school year following statewide restrictions on in-person school. The study was part of a larger National Institutes of Health (NIH) Rapid Acceleration of Diagnostics-Underserved Populations (RADx-UP) Return to School initiative. Consistent with the broader goals of the NIH RADx-UP initiative, we sought to understand the perspectives of a wide variety of parents, including historically excluded groups. The PACE Study focused on eight school districts in Maryland (each corresponding to a county), chosen because they have the highest rates of students in poverty, the largest proportion of students from minoritized and historically excluded racial and ethnic groups, or a location in a rural county. The Johns Hopkins School of Medicine Institutional Review Board approved the study protocol, and participants provided written informed consent.

Within the eight target counties, any parent or caregiver of a public school student in grades K-8 was eligible for the study. The PACE Study took a mixed methods approach including a survey and focus groups. The analysis presented here used survey results to stratify parents for focus groups and analysis, but primarily focuses on findings from the focus groups with parents.

A web- and mail-based survey was fielded between January 2022 and July 2022 to assess parents' perceptions of and attitudes toward 22 school-based COVID-19 mitigation strategies as well as barriers and facilitators to returning to and remaining in in-person school.[17–19] The survey, available in English and Spanish, was mailed to a random sample of households likely to have at least one child in grades K-8. A web-based version of the survey was publicized on social media, via schools and community organizations, and at community events.

Survey results were used to identify focus group participants with a range of perceptions regarding the acceptability of school COVID-19 mitigation strategies. Study participants who completed the survey (n=567) were asked if they would be interested in participating

in a focus group. Those who expressed interest (n=184) were assigned to one of two strata based on their school-based masking acceptability score from the survey (low, high). Participants were clustered according to their opinions on masking because, of the 22 school-based mitigation strategies queried on the survey, masking had among the greatest variation in responses across the acceptability spectrum.[17] Masking acceptability scores were generated using responses to the question "Please indicate how acceptable or unacceptable each strategy is for you/your family (that is, if you feel that the strategy should or should not be implemented, regardless of whether or not it is being done in your school)," followed by six different school locations or environments (e.g., masking on buses, masking in hallways). The responses were scored on a 5-point Likert scale from "Very unacceptable" = 1 to "Very acceptable" = 5. A sum score was generated ranging from 6 to 30. Participants were stratified into two groups based on the sum score: low (6–21) and high (22–30). The tiers were decided on by factoring in that the scores overall skewed toward the "acceptable" range to ensure a sufficient number of people per stratum.

Of those who agreed to be contacted for a focus group, 181 provided contact information and were contacted through at least one recruitment e-mail. Focus groups were conducted until saturation was reached on key components of the focus group guide. Ultimately, 40 parents participated in nine focus groups between May and July 2022 (with all eight target Maryland counties represented). There were three groups (n=14) in the lower masking acceptability (LMA) stratum and six groups (n=26) in the higher masking acceptability (HMA) stratum. Participants reported their gender, race, ethnicity, and education on the survey using questions based on NIH Common Data Elements.[20] Each participant in the first three focus groups received a $25 e-gift card as compensation; the incentive was increased to $50 for the remaining six groups due to recruitment challenges.

Data Collection

The semi-structured focus group guide was organized into three sections: 1) perceptions of COVID-19 mitigation strategies, 2) perceptions of in-person learning, and 3) perceptions of communication from schools (see Supplementary Material). Parents were asked about their perceptions of how their children's schools were implementing COVID-19 policies, their feelings about mitigation strategies in general, the benefits and challenges of in-person learning, and effective methods for communicating public health information to families. After development and IRB approval, the guide was pilot tested with a community advisory board of parents, school staff, and other key partners. Following pilot testing, one question was reworded to stimulate more discussion, and a note was made to have the facilitator encourage participants to respond verbally rather than using the chat function. Focus groups were conducted remotely using commercial videoconferencing software, and participants verbally consented prior to being recorded. The average length of a focus group was 46.2 minutes. All focus groups were led by the same investigator (JD). At least one other team member attended each focus group and took notes. The focus group lead and note-taker held a debriefing soon after each focus group.

Data Analysis

Focus groups were transcribed from the audio recordings, and the transcripts were reviewed and de-identified before being imported into ATLAS.ti software (Berlin, Germany). A team consensus process was used with repeated reviews of the data by team members to ensure the trustworthiness of the results. First, an initial codebook was developed based on a review of the field notes and debriefing notes. The data were then coded using the constant comparative method[21] by three members of the research team (JW, NM, JD) with an ongoing iterative process of refining the codebook. First, JW and NM independently coded one transcript. Then, the coding team met to discuss the coding process and to reach a consensus and resolve any discrepancies in coding. This independent coding and team consensus process was repeated with two new transcripts, after which the coding team was able to decide on a finalized codebook to be used for the remaining focus groups. These first three transcripts were later re-coded using the final version of the codebook. Once the focus groups were coded, the same coding team completed a thematic analysis of the data. This too was done independently first with a consensus later reached on the themes presented by the team.

RESULTS

Focus group participants are described in Table 1. Using a chi-squared test, no differences were found between the groups. Two main categories into which themes could be grouped emerged from the analysis: 1) opinions on mitigation strategies (i.e., overall opinions, compliance, changes in strategies, and opinion changes), and 2) thoughts on in-person learning.

Mitigation Strategies – Overall

The overarching theme among parents in the LMA group was one of COVID-19 fatigue. While this was also a theme in the HMA group, there, those same feelings also came paired with remaining concerns about COVID-19. The HMA group spoke specifically about frustrations with schools' mitigation strategies. While the majority of the HMA participants were satisfied with COVID-19 policies in place at their children's schools, many also took issue with the specifics of the school policies or their implementation.

> "I agreed with them, just how they were implemented, I did not agree with because I don't think it was done– If it was done perfectly anywhere, I'd like to know where that was because I haven't heard of anybody doing it."
>
> – HMA group member

Some in the HMA group also expressed feeling that schools and school administrations were prioritizing other matters, such as perceptions of school leadership or having to deal with inconveniences, over people's health and safety.

Mitigation Strategies – Compliance

Within both the LMA and HMA groups, parents voiced concerns about a perceived lack of compliance with or enforcement of COVID-19 mitigation policies in schools.

> "I did notice that they [students] weren't social distancing. Masks were above the nose, under the nose, under the chin. And so, that is very concerning, especially when COVID was quite heightened."
>
> – HMA group member

However, some parents in the HMA group also believed schools to be largely compliant, with those struggling to comply or even refusing to comply to be in the minority. Some also mentioned compliance being limited by school resources and believed the schools to be operating as best as their circumstances allowed.

> "If there's one person in the school dedicated to doing that [carrying out COVID-19 mitigation plans], it's a school nurse. That's a lot of responsibility for one person and my school didn't have adequate support for that."
>
> – HMA group member

Mitigation Strategies – Changes Over Time

Regarding changes over time, parents in the LMA group voiced greater concerns about the long-term effects of restrictive COVID-19 precautions on their children versus the risk of getting COVID-19.

> "Initially, it was because we didn't really know how this disease worked that I understood putting precautions into place. But I don't think they took into consideration the long-term effects of keeping our kids out of school and having their parents teach them."
>
> – LMA group member

> "But they [schools] were doing the whole six feet apart and three feet apart, and I just didn't like that so much because I just think it's very isolating to children. They need that peer-to-peer interaction."
>
> – LMA group member

There was also considerable overlap between the low and high acceptability groups on this topic. A recurring theme among participants in both groups regarding changes in school mitigation strategies over time was inconsistency, not only in guidelines among different environments, but also between the policies chosen and people's understanding of COVID-19. Many participants noticed inconsistent COVID-19 mitigation policies across schools, even in the same district. Inconsistent policies were also noted when comparing schools to other places such as stores, public venues, or their own workplaces. Many also felt there were logical inconsistencies in how schools developed their COVID-19 plans and policies. For example, a school might require social distancing in classrooms but not in all other parts of the school building, such as the cafeteria.

> "There was just so much confusion about what guidelines are we supposed to be following. You know, the school says this, the county says this, the state says this, the CDC says something else, and it was all over the place."
>
> – HMA group member

> "In football season, COVID was really high here. The kids are not allowed to sit next to each other, they have to wear masks during practice. But then Friday night football comes along, and everybody can pack into the stadium on top of each other with no masks required, and the kids can play with no masks – it makes no sense."
>
> – HMA group member

In both groups, parents expressed frustration with the frequent changes made to COVID-19 policies, especially during the earlier stages of the pandemic. Understandings of how the virus spreads were changing so rapidly that by the time that information was used to develop a new set of recommended practices, the recommendations were changing again. What people learned about COVID-19 was also different depending on where they got their information. COVID-19 messaging thus appeared to people to be inconsistent both over time and across sources.

> "So with the policies continuously changing, I don't know if I'm missing something. It's just been very confusing to keep up with what is the policy today."
>
> – HMA group member

Consequently, there was a lot of uncertainty regarding what to believe, which not only made it difficult for people to know which rules to follow, but also led some to become skeptical of subsequent information released.

> "The fact that the CDC went back and forth on you need the mask, you need the mask and six feet, you need the mask and three feet, only the N95 is going to be effective. There are so many different changes nonstop that I think people finally got sick of it and were like whatever, if I'm going to get sick, I'm going to get sick. I'm done with this. So, I think the lack of consistency in information made people very wary."
>
> – LMA group member

Some parents in the HMA group noted confusion with or difficulty understanding COVID-19 policies, which also caused them to feel unsure of what information to believe.

> "I'm not a super fact checker, I'm not doing all the research, I'm not a scientist, and I'm also not a conspiracy theorist. But there are a lot of conspiracy theorists out there, right? So, it's kind of like, what is actually real, you know?"
>
> – HMA group member

There was a common theme in the HMA group, which was not seen in the LMA group, where participants noted a gradual decline in schools' implementation of the mitigation strategies over time; a majority was disappointed by this, despite all participants acknowledging COVID-19 fatigue at this point.

> "You could sign up for COVID tests, but I think it's gotten a little bit more lax than from the beginning school year or this year. I think we're kind of dropping the ball, we're kind of letting our guard down."
>
> – HMA group member

Mitigation Strategies – Opinion Changes

When it came to how people's feelings about COVID-19 restrictions may have changed as the pandemic changed and progressed, the differences between the lower and higher masking acceptability groups were more stark. The primary theme that emerged from the HMA group was that there was little to no change in their opinions – they had always been and continued to be in support of the mitigation strategies.

In contrast, a different set of themes relating to opinion changes emerged in the LMA group. Some participants were influenced by their personal experiences and anecdotal knowledge of COVID-19; how their opinions changed depended largely on their own experience having COVID-19 or the experience of someone they knew. Some had been more accepting of the mitigation strategies initially but later became skeptical of them or even rejected them. Some participants felt the initial warnings had been exaggerated or started to doubt the strategies' effectiveness.

> "I feel like, at the beginning, they really put the fear factor on heavy. So everybody was really nervous about it. And as it went on, and as people started getting it, nine times out of ten you realized it wasn't that bad for most people."
>
> – LMA group member

> "I tried to keep my kids from other kids. I stopped letting them go outside when they wanted to, they didn't play with their friends. But after everything they still contracted it. And I didn't get it. My husband didn't get it. So, I really feel most of those things don't work, so I feel it was unnecessary."
>
> – LMA group member

Others were simply set on returning to living their lives as they had been prior to the pandemic.

> "I'm just tired of this. I felt like we were all being held hostage, and I was like, I'm not going to be held hostage forever. It is what it is. If I'm going to get sick, I'm going to get sick."
>
> – LMA group member

> "At the beginning I would want somebody to tell me I've been exposed. Now, it's just kind of like I don't even think I want to know because then my family is all going to have to quarantine, and I just can't handle being home anymore."
>
> – LMA group member

In-Person Learning

The benefits of in-person schooling were widely agreed upon by parents in both groups. Participants noted that, for students, the in-person learning environment allowed for more interaction with their teachers, more opportunities for hands-on learning, and fewer distractions compared to the home environment. Participants in both groups consistently noted that the purpose of school went beyond the academic experience and that in-person learning was also key to helping children develop socially and emotionally through

interactions with their peers. One participant, a teacher, was able to comment from their unique perspective in this role.

> "The socialization piece is so vital. As a teacher right now, we're seeing these kids that were home for so long, that they're struggling with the socialization skills that they should have learned in pre-K."
>
> – HMA group member

There were also additional themes that emerged solely among the LMA participants. These parents discussed how virtual learning placed an additional burden on not only the students, but also teachers and parents. With in-person learning, teachers did not face the added barrier of having to navigate the new technology necessary for virtual learning. Parents thought of remote learning as an additional responsibility they had to take on. They had to dedicate more time to assisting their child with school to supplement the virtual schooling; however, many did not feel equipped to take on this role.

> "I'm not a teacher. I'm not good at teaching. And when they were home, I still have to work. So, I'm trying to work while they're doing school, and I had to help them with their computer, then I had to help them with their work. And it's a lot."
>
> – LMA group member

When it came to concerns regarding in-person learning, participants in both groups mentioned still worrying about getting COVID-19. However, the LMA group also expressed that the benefits of in-person learning significantly outweighed any concerns they had. Some parents in this group were far more concerned about their children possibly missing out on any more of the benefits of being back in school in person compared to the risk of getting COVID-19.

DISCUSSION

In this study, parents' perceptions of COVID-19 and the implementation of COVID-19 mitigation strategies in their children's schools were explored. Commonalities and differences were highlighted between those who considered masking in schools to be more highly acceptable and those who rated it less acceptable. Differences pertained mainly to opinions on mitigation strategies in general as well as over time and satisfaction with schools' implementation thereof, often rooted in core beliefs about the severity of COVID-19 and trust in the schools and government at large. In contrast, commonalities included COVID-19 fatigue, benefits of in-person learning, and frustrations with inconsistencies.

There was general consensus across the HMA and LMA groups regarding the benefits of in-person learning, with the socialization aspect presenting as a key theme. The foundational skills young children learn through relationships with teachers and other children have been shown to facilitate positive growth and development throughout early childhood, and beyond.[22] While there were some in both groups still concerned about their children getting COVID-19 in school, the LMA group mainly expressed that the benefits of learning in person significantly outweighed any concerns. A recent review of 12 research studies

found a negative impact of COVID-19 school closures on child mental health.[23] Additional research has found an association between virtual schooling and greater risk to parent mental health and wellbeing.[8] Moreover, research has linked COVID-19 school closures to increased rates of childhood obesity and negative academic outcomes.[24,25]

Most participants in both groups also agreed on the inconsistency of COVID-19 policies across various contexts, as well as over time. It also wasn't always clear to people why the general COVID-19 recommendations were translated into guidelines at the school level the way they were. Additionally, parents often discussed perceived inconsistencies in the information and messaging they received, which varied depending on when it was relayed and the source. The perceptions of the parents in this study support findings that various factors during the pandemic led to an environment conducive to the spread of disinformation, ambiguous information, and misinterpretation.[26] This led to confusion and sometimes skepticism regarding COVID-19, resulting in a lack of compliance and even resistance to mitigation strategies.

Similar overall findings emerged from a recent study on school district communication officers' experiences with parent activists during the pandemic.[27] Whereas Richardson et al[27] highlighted areas of "tension" in their findings, here we have focused on areas of agreement between the opposing groups of this study. In their discussion of the tension between school districts wanting to engage parents and also being hesitant to fully open communication channels as pandemic-related opinions became increasingly polarized, they recommended engaging parents in dialogue early on in a crisis. Our findings suggest that even in such a landscape, common ground can be found. Thus, the recommended strategy of school districts facilitating constructive engagement with stakeholders, such as parents, could be expanded upon by using knowledge of where groups agree as a starting point for fostering such dialogue. Consequently, if stakeholders' trust in school districts can be increased in this way, it may help in lowering this barrier to engagement, especially for later conversations on more contentious topics.

Implications for School Health Policy, Practice, and Equity

Findings from this study suggest that consistency facilitates clarity and, consequently, compliance with school-based COVID-19 mitigation policies. There is a need for the standardization of policies, while also taking into consideration diverse needs and capabilities. Policies should be easily understood, and clearly and consistently communicated, to increase the likelihood of effective implementation. Moreover, it may be helpful to prepare parents for expected changes in policies as knowledge and resources change. Many of these same recommendations also align with evidence-based guidance on risk communication, especially in public health emergencies.[28] It is worth noting that the study sample for these focus groups leaned more highly formally educated, with 65% having attained a bachelor's or advanced degree, compared to the national rate of 37.9% among Americans 25 and older.[29] The fact that confusion regarding COVID-19 and its related policies persisted among this group further highlights the pressing need for effective and consistent public health messaging, especially in times of crisis. As a result, following the completion of data collection through the PACE Study, the study team used these data, in

partnership with community stakeholders, to develop a communication toolkit for school districts and schools to facilitate this effective communicaton.[30] Of course, to enhance the success of all communication efforts, school districts should also work toward consistently engaging and building trust with their communities, even beyond times of crisis.

Limitations

Although this study provided unique insight into parents' perceptions of COVID-19 and its mitigation strategies, particularly in schools, there are limitations to be noted. The small sample size limits generalizability, and findings may only apply to similar populations. The study was also conducted in Maryland, a liberal-leaning state, where communication regarding COVID-19 likely differed from other states. Additionally, member checking was not conducted, though results were reviewed by our community advisory board. Also, though the PACE Study focused on underserved populations,[17] and the focus group sample was diverse with respect to race, ethnicity, and income, the majority were highly educated. Another limitation may stem from the focus groups not being in person, which might have affected participant engagement. In the time that passed since the participants filled out the survey, which was the source of the LMA and HMA groups, their feelings on masking acceptability may have changed. The initial survey from which the focus group participants were drawn was fielded as early as January 2022 and the final focus group was completed in July 2022. Some participants might have better aligned with the other stratum at the time of focus group completion.

CONCLUSIONS

This study uniquely examined parental perceptions of school-based COVID-19 mitigation strategies among two groups of parents: those who considered masking in schools to be more highly acceptable and those who rated it less acceptable. The similarities and differences between these groups may help to guide public health messaging and decision-making for future health emergencies. For example, similarities were observed regarding support for in-person learning and concerns about inconsistencies in the implementation and messaging regarding mitigation. Concerns about contracting COVID-19, in relation to the need for mitigation, varied by masking acceptability; this could be a target area for future public heath informational efforts. Finally, this study focused on the perspectives of parents. Parents play an important role in ensuring school health initiatives are fully implemented, and their voices are needed when planning school-based public health strategies.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Table 1.

Participant Demographics % (n)

Demographic Variable	Total Participants, (*n* = 40)	HMA Participants (*n* = 26)	LMA Participants (*n* = 14)	Difference between HMA and LMA χ^2 (p)
Caregiver Gender				
Female	85% (34)	84.6% (22)	85.7% (12)	0.01 (0.926)
Male	15% (6)	15.4% (4)	14.3% (2)	
Child Race/Ethnicity				
Non-Hispanic African American/Black	38.5% (15)	44.0% (11)	28.6% (4)	2.20 (0.532)
Non-Hispanic White	43.6% (17)	40.0% (10)	50.0% (7)	
Hispanic of any race	10.3% (4)	10.0% (3)	7.1% (1)	
Non-Hispanic Other race or More than one race	7.7% (3)	4.0% (1)	14.3% (2)	
Prefer not to answer	1	1	0	
Household Income				
<$50,000	25.6% (10)	30.8% (8)	15.4% (2)	1.33 (0.516)
$50,000 – $99,999	51.3% (20)	50.0% (13)	53.8% (7)	
$100,000+	23.1% (9)	19.2% (5)	30.8% (4)	
Prefer not to answer	1	0	1	
Caregiver Highest Level of Education				
Some college or less	35.0% (14)	34.6% (9)	35.7% (5)	0.01 (0.945)
Bachelor’s or other advanced degree (master’s, doctoral)	65.0% (26)	65.4% (17)	64.3% (9)	