Cognitive Interview Evaluation of Questions on Occupational Safety and Health for the Youth Risk Behavior Surveillance System (YRBSS)

Conducted on behalf of the National Institute for Occupational Safety and Health (NIOSH)

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Contents

1. Introduction

This report summarizes findings from an evaluation of survey questions on occupational safety and health, intended for possible inclusion in the 2023 Youth Risk Behavior Surveillance System (YRBSS).[1] YRBSS monitors high priority health-risk behaviors among high school students. The system includes a nationally representative self-administered survey, conducted by the Centers for Disease Control and Prevention (CDC), as well as state and local surveys which are coordinated by state and local education and public health agencies in collaboration with other partners.[2]

When survey questions are proposed for YRBSS it is standard practice for these questions to be tested and evaluated with young people reflecting the survey target population. This helps ensure that questions accurately collect data consistently across respondent groups, in accordance with the objectives of the research. As such, in the autumn of 2021, an evaluation of proposed questions on the topic of occupational safety and health was conducted by the National Center for Health Statistics (NCHS)' Collaborating Center for Questionnaire Design and Evaluation Research (CCQDER) using cognitive interviewing methods. The study was conducted in collaboration with staff from the National Institute for Occupational Safety and Health (NIOSH), Division of Field Studies and Engineering (DFSE).

Thirty-five English-speaking high school students, who had worked for pay within the past 12 months, took part in one-on-one cognitive interviews intended to test and evaluate the proposed survey questions. The interviews were administered virtually using a video-calling platform. Respondents answered questions about their paying jobs, work patterns and experiences. A question about unpaid volunteer work was also included in the evaluation.

2. Background

It is estimated that one in five U.S. high school students aged 16-19 years worked while enrolled at school in 2019 (the last pre-pandemic data available), and this number increased during the summer months.[3] Nearly two million youth aged 15-17 years worked during September-May 2017, increasing to 2.5 million during the summer.[4] Although work has benefits (opportunities to learn skills, earn money, and gain independence), it has been shown that the nearly 2 million adolescents employed annually are at risk

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[1] YRBSS | Youth Risk Behavior Surveillance System | Data | Adolescent and School Health | CDC

[2] Centers for Disease Control and Prevention. Methodology of the Youth Risk Behavior Surveillance System — 2013. MMWR 2013;62(No. RR-1):1-20.

[3] Statista. (2021). Percentage of teenagers (16-19) who are enrolled in school and working in the United States from 1985 to 2020. Retrieved from https://www.statista.com/statistics/477668/percentage-of-youth-who-are-enrolled-in-school-and-working-in-the-us/.

[4] United States Government Accountability Office. (November, 2018). Working Children: Federal Injury Data and Compliance Strategies Could be Strengthened. Report #19-26. Working Children: Federal Injury Data and Compliance Strategies Could Be Strengthened | U.S. GAO

for workplace bullying, violence, injuries, and illnesses,[5,6,7] as well as insufficient sleep and the potential for lower academic achievement.[8,9,10]

No existing survey captures comprehensive information about work and health in young employees still in high school. Survey questions which enable an assessment of the vulnerability of young people of high school age in the workplace, including health and economic burden, will provide data which can support research and intervention efforts in this area. The National Institute for Occupational Safety and Health (NIOSH), Division of Field Studies and Engineering (DFSE), would like to improve occupational health surveillance of young workers through the addition of work-related questions to surveys of youth, in particular the CDC's YRBSS which includes large, biennial surveys of U.S. high school students, at local, state, and national levels. The questions proposed cover the topics of:

- Job type (including industry)
- Employment status and reason for working (including hours worked and shift patterns)
- Safety climate (including bullying, harassment, physical assault and any safety training received)
- Psychosocial impact (including impact of job on school, extracurricular activities and family responsibilities)
- Health outcomes (including tiredness, workplace injury and use of pain medications)
- Volunteer or community service undertaken

3. Methods

3.1 Cognitive interviewing

This survey question evaluation utilized a one-on-one cognitive interviewing methodology. During the interviews, the survey questions under investigation were administered and cognitive interviewing techniques applied in order to make an assessment of the mental processes that respondents went through when answering the survey questions, within the context of their individual life circumstances.[11] Using this method, researchers are able to explore construct validity and identify any difficulties respondents encounter in understanding and answering the survey questions (i.e., learning whether

[5] National Institute for Occupational Safety and Health. (May, 2013). Health and Safety of Young Workers. DHHS (NIOSH) Publication No. 2013-144.

[6] Salminen, S. (2004). Have young workers more injuries than older ones? An international literature review. *Journal of Safety Research*, 35, 513-521.

[7] Rauscher, K. J. (2008). Workplace violence against adolescent workers in the US. *American Journal of Industrial Medicine*, 51, 539-544.

[8] Cunnien, K. A., MartinRogers, N., and Mortimer, J. T. (2009). Adolescent work experience and self-efficacy. *International Journal of Sociology and Social Policy*, 29(3/4), 164-175.

[9] Teixeira, L. R., Fischer, F. M., and Lowden, A. (2006). Sleep deprivation of working adolescents – a hidden work hazard. *Scand J Work Environ Health*, 32(4), 328-330.

[10] Graves, J. M., and Miller, M. E. (2015). Reduced sleep duration and history of work-related injuries among Washington State adolescents with a history of working. *American Journal of Industrial Medicine*, 58, 464-471.

[11] Miller, K. (2011). Cognitive interviewing. In J. Madans, K. Miller, A. Maitland & G. Willis (Eds.), *Question evaluation methods*. (1st ed.) Hoboken, NJ: Wiley.

respondents interpret the questions as asking about the construct of interest, and if not, why not)[12]. Ultimately, the findings from the cognitive interviews help in determining whether questions may be prone to measurement error when administered in a survey. The cognitive interview evaluation was conducted iteratively, in accordance with best practice.[13,14,15] Cognitive interviews were conducted remotely using the Zoom for Government video conferencing platform in order to comply with the CDC's recommendations of social distancing in response to COVID-19, as well as the CDC's requirements to use an authorized and secure video conferencing platform through which to conduct the interviews.

3.2 Study sample and respondent recruitment

For this qualitative evaluation study, a small-scale, purposive sample of respondents was selected for remote interview. CCQDER's Operations staff recruited and screened respondents. Respondents were recruited from advertisements placed on Reddit and Craigslist, as well as through social media and word of mouth. The Operations staff also reached out to youth organizations directly.

Staff reached out to the high school students who expressed an interest in taking part in the cognitive interviews and administered a set of screening questions. Young people under the age of 18 were treated as minors; those aged 18 or over were treated as adults.[16] Screening questions to minors were administered only after first obtaining permission from a parent or guardian to do so. Staff scheduled appointments with those who fulfilled the screening criteria. An attempt was made to achieve interviews with young people representing a range of demographic characteristics as well as a mix of behaviors related to the topic under investigation. Screening criteria included basic demographics such as age, school grade, gender, race and ethnicity, and whether the respondent resided in a rural location.[17] Screening questions also established whether the young person currently worked or had worked in the past 12 months, along with the nature of their work.

It should be noted that recruiting and scheduling youth for cognitive interview studies is generally more challenging than recruiting and scheduling adults, in part due to the additional time involved in obtaining parental permission to screen and consent to take part.[18] For this study recruitment and

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[12] Miller, K. (2014). Introduction. In K. Miller, S.Willson, V. Chepp & J.L.Padilla (Eds.), *Cognitive interviewing methodology*. Hoboken, NJ: Wiley.

[13] Office of Management and Budget 81 FR 70586 - Statistical Policy Directive No. 2: Standards and Guidelines for Statistical Surveys; Addendum: Standards and Guidelines for Cognitive Interviews. Statistical Policy Directive No. 2 Addendum: Standards and Guidelines for Cognitive Interviews (archives.gov)

[14] Willis, G. B. (2016). "Questionnaire Pretesting." *The SAGE Handbook of Survey Methodology*. Sage Publications.

[15] Collins, D. (Ed.) (2015). *Cognitive Interviewing Practice.* London, UK: Sage Publications, Inc.

[16] Exception to this rule is where the age of majority is different for any particular state of the country in which the minor is resident.

[17] During screening, and again at the start of the interview, respondents were asked: 'Would you describe where you live as rural (that is, in the country)?'

[18] In accordance with CDC Ethical Review Board requirements verbal permission to screen a minor was required from a parent or guardian along with written parental consent to take part in the cognitive interview.

scheduling was even more challenging than for other studies of youth that have been conducted by CCQDER. This was primarily because many of the young people that the CCQDER Operations staff were attempting to recruit and schedule were currently working as well as attending school, and it was difficult to make contact with them. There was a higher number of cancellations, rescheduled interviews and no-shows than would normally be anticipated for cognitive evaluation studies with adults. As a result, the scheduling and interviewing process took longer than expected and the resulting sample demographics were somewhat skewed, as discussed below.

In total, 35 English-speaking high school students between the ages of 14 and 18 took part in the cognitive interviews. There was a varied mix of those working in different industries as well as job types, number of jobs worked, work patterns and employment status, as well as a degree of geographical diversity. Respondents were from different states across the country, including Alabama, Alaska, California, North and South Carolina, Maine, Maryland, Massachusetts, Mississippi, New Jersey, Pennsylvania and Washington D.C. However, the sample was skewed towards non-Hispanic white, female, or in higher school grades, as well as those living in non-rural areas. Table 1 (below) shows the demographic breakdown for all achieved interviews.

Table 1: Respondent Demographics

Demographics	Total number of respondents (N=35)
Age group in years	
14-15	9
16-17	23
18	3
School grade	
9	4
10	5
11	12
12	14
Gender	
Female	24
Male	11
Race/Ethnicity	
Non-Hispanic	**29**
Asian	4
Black or African American	6
White	17
Multiple race groups	2
Hispanic	**6**
Rural location	
Rural	5
Not rural	30

<u>Work patterns, industry and job types</u>

Respondents worked in a range of different industries and job types. Some worked only during the summer break, while a few worked only during the school year when school was in session. Some worked both during the summer break and during the school year in same job; others had different jobs during the summer than during the school year. Some respondents had had the same job for a number of years; others had recently started a new job. Some worked as employees; others were self-employed. Some respondents also worked multiple jobs at the same time. This range of different circumstances and experiences meant that the breadth of how the survey questions performed was able to be examined.

Those working as employees with more structured forms of employment worked in the service industry in restaurants or coffee shops as servers, or at the window of a fast-food restaurant. Some worked as cashiers in grocery stores or at a pharmacy. Some worked as lifeguards or pool attendants. Some worked with youth at their church or at summer camp. Others worked in more manual jobs, for example doing house painting, fence installation or crop picking. Some others worked online from home as employees doing bookkeeping, database management or tutoring, for example. Others were self-employed. Some worked from home directly with clients on a commission basis, either making things or offering freelance online services. Some respondents had babysitting or yard work jobs which they did outside of their own home on a regular basis and actively sought out such work, while others did this type of work on an ad hoc basis for friends and family. One respondent worked as a home help aide for a neighbor. Two respondents had been part of a paid internship program during school summer break. Two respondents screened into the study on the basis of their intermittent yard work or one-time feeding of a neighbor's cat. Despite receiving financial compensation, on administration of the survey questions, neither considered these as paying jobs.

3.3 Data collection

Each respondent took part in an interview lasting no more than one hour and received $40 cash for participating. All interviews were conducted on a voluntary basis. Consent was sought prior to taking part in the interview. Verbal consent was provided for those classified as adults. Informed written consent was obtained from a parent or guardian on behalf of minors taking part. In the case of minors, verbal assent was provided prior to the start of the interview. In order to achieve a balanced assessment of how a particular respondent went about answering the survey questions, cognitive interviewers asked non-leading, expansive questions (or probes). These were generally administered retrospectively, after first administering the survey questions, but on occasion interviewers administered and probed concurrently - whichever was most appropriate for the young person being interviewed. The approach to cognitive interviewing used by CCQDER staff is interpretivist. That is, it focuses on how respondents' own life experiences inform their answers to survey questions. As such, staff rely on non-scripted,

verbal probing to illuminate the respondent's circumstances and inform how and why they answered the question the way they did.[19]

When conducting cognitive interviews with minors there were additional issues and concerns that interviewers needed to be aware of and know how to address. For example, language development, cognitive ability, and social skills, may be more or less developed and it was important for interviewers to consider this in respect of a student's ability to comprehend and respond to survey questions and questions asked as part of the cognitive interview. In fact, it was important for interviewers to be aware that young people may not necessarily understand or interpret the world around them in the same way as adults do. Therefore, any adaption of questions about occupational safety and health, originally designed for administration with adults, may not illicit the same kind of responses and may be prone to response error.

As such, additional training was provided during the interviewer briefing for this study to help interviewers to administer a successful cognitive interview with young people. For example, because memory capacity and memory speed may still be developing, young people may have difficulty holding a question in their mind and retrospective probing may be more problematic. It was most important to reassure young people that the interview is not a test, as they might receive at school, and it is not they who are being evaluated. In addition, if any questions being tested caused undue stress for a particular respondent the interviewers were instructed to follow a predetermined distress protocol and potentially end the interview.

The questionnaire was tested, revised and retested across three rounds of interviewing before final amendments were made to the questions based on the study findings. Each round of testing comprised a separate sample of respondents. Initially, five respondents were interviewed during Round 1 of the evaluation. Round 1 was considered exploratory in the sense that it was able to identify some key question design elements that could be applied to future rounds of testing. For example, some questions were simplified since they were cognitively burdensome, reference periods were adjusted, and a few questions were removed from testing altogether because they were not measuring the concepts as intended. Reducing the number of questions being evaluated further allowed for greater depth of probing within the one-hour interview time available. Twenty-one interviews were conducted during Round 2 interviewing which formed the main part of the evaluation. Nine interviews were conducted during Round 3 of the evaluation to ensure that any changes introduced after Round 2 did not introduce error which had not been apparent previously. During earlier rounds of testing, response options were not initially provided for some questions in order to test for comprehensiveness.

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[19] Cibelli Hibben, K.L. & de Jong, J. (2020). Cognitive Interviewing. *Guidelines for Best Practice in Cross-Cultural Surveys.* Ann Arbor, MI: Survey Research Center, Institute for Social Research, University of Michigan. Retrieved from https://ccsg.isr.umich.edu/chapters/pretesting/cognitive-interviewing/

3.4 Data analysis and reporting

Analysis of cognitive interviewing data follows a systematic process of synthesis and reduction from interview to report.[20] Firstly, all interviews were audio recorded to allow the interviewer the freedom to concentrate on the interview and enable a more thorough analysis than could be achieved by simply taking notes during the interview. Interviewers created summary notes about the way in which respondents interpreted and responded to the survey questions from the recordings, evidenced by verbatim statements made by respondents during the interview and observation of non-verbal behaviors during the interview itself. The summary notes were organized by question and entered into CCQDER's Q-Notes software,[21] a freely available application designed to facilitate the management and analysis of cognitive interviews. All notes were anonymized. That is, they did not contain any personal information that could identify those respondents who took part in the interviews. Respondent confidentiality was maintained throughout the analytical process.

As mentioned previously, an interpretivist approach to cognitive interviewing assumes that respondents understand and process survey questions based on their own personal experience. Findings reported incorporate information elicited through probing the respondent narrative, which helps the analyst to identify the basis on which the survey question is answered, and the construct captured.[22]

4. Findings

This evaluation comprised three rounds of cognitive interviewing. Following Round 1, amendments were made to some of the questions that were not performing well, for further testing in Round 2, and similarly for Round 3. The final tested questions are shown in the body of this report and presented in the order in which they were administered during Round 3[23]. Findings are reported across all rounds of testing, except where changes to the question wording between rounds impacted on the response task or respondents' interpretation of the question - in which case the changes are described and their impact explained. Where transitional introductory section statements are used to orientate respondents to the scope or definitions used, these are shown at the location they occurred during administration, and throughout this report in parentheses where they continued to be applicable. Where this report makes reference to verbatim statements from respondents, the respondent's accounts are italicized. Where the author felt that important supplemental information was required to help set the context of any respondent accounts, for example, the round in which the respondent was interviewed, or the type of job undertaken by the respondent, then this information is also included in the commentary.

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[20] Miller, K., Willson, S., Cheppe, V. & Ryan, J.M. (2014). Analysis. In K. Miller, S.Willson, V. Chepp & J.L.Padilla (Eds.), *Cognitive interviewing methodology*. Hoboken, NJ: Wiley.
[21] https://www.cdc.gov/nchs/ccqder/products/qnotes.htm
[22] Chepp, V. & Gray, C. (2014). Foundations and New Directions. In K. Miller, S.Willson, V. Chepp & J.L.Padilla (Eds.), *Cognitive interviewing methodology*. Hoboken, NJ: Wiley.
[23] The original question wording as tested during Round 1 and the final wording after Round 3 testing are shown in Appendix 1.

It is important to note that the findings reported herein are set within the context of the national YRBSS and its administration, since YRBSS is the intended data collection vehicle. There are certain administrative and questionnaire design features that are particular to YRBSS.[24] These features place some constraints on the way in which the survey questions are designed which may not be applicable to a survey using a different methodology. The administration is conducted between the months of February and May.[25] School students self-administer the questionnaire in the class room, during one class period, using a computer-scannable booklet. Questioning must be self-explanatory since there is no survey interviewer to provide clarification. No question routing is allowed, that is there are no survey skip patterns. The rationale for this is to help ease administration in a classroom environment by ensuring that the amount of time required to complete the questionnaire is the same for all students, while also helping to prevent students from determining the health-risk behaviors of other students who may take different amounts of time to complete the questionnaire if routing were allowed. Therefore, only one response selection is allowed per question and all students must be able to select a response option to all questions, even if the question does not apply to them. In addition, the YRBSS utilizes standard question(naire) formats, reference periods and response options that questionnaire designers are asked to adhere to as much as possible, for consistency.

4.1 General findings

Each question is reported on individually as part of the question-by-question review (section 4.2). However, some general findings associated with the way in which students responded to the survey questions are highlighted as follows.

Understanding of paying job
Importantly, in this study, it was the nature of the paying job undertaken by the student, and the industry in which the student was employed, that had the greatest impact on the way in which students interpreted and responded to the survey questions evaluated. Key to the success of this question set was respondents' understanding of what was meant by 'a paying job.' In general, respondents' interpretation of 'paying job' was congruent with the survey definition used and described in the respondent introduction to the question set. Respondents understood the concept of 'paying job' as a job they did outside of the home for which they received pay. Correctly, none of those interviewed included chores, yard work or babysitting at their own home as a paying job. However, respondents did not always report secondary or tertiary work for pay where such work occurred infrequently.

Minimizing the response task
Similar to studies of adults, when asked to complete more complex tasks, such as calculating weekly hours of work, some respondents found ways to minimize any cognitive burden associated with the task.

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[24] Methodology of the Youth Risk Behavior Surveillance System — 2013 rr6201.pdf (cdc.gov)
[25] In each odd numbered year.

This phenomenon was more apparent when respondents had multiple jobs with varying shift patterns. Some respondents guessed or otherwise took mental short cuts to make the task easier.

<u>Wanting to provide an answer</u>
It was apparent during the interviewing that respondents wanted to be able to provide answers to the survey questions asked of them. As a result, respondents sometimes answered about a job which they considered the most relevant or the most salient to the question topic, which was not necessarily consistent with the question intent. This phenomenon was also evidenced by respondents including events that were outside of the question reference period (also known as 'telescoping').

<u>Use of examples and response descriptions</u>
Although the use of examples can add to the complexity of question design, young people have a low threshold for ambiguity[26] and there were some instances where it was important to provide examples or more detailed descriptions of the response options.

4.2 Question by question review

Each question evaluated is reported on below in the order in which the questions were administered during Round 3 testing.

Introductory statement: Definition of paying job

> **INTRO1: The next set of questions ask about your paying jobs, including work at a family business or farm, even if you were not paid directly. When answering these questions do NOT include chores, yard work or babysitting <u>at your own home</u>.**

This first introductory statement provides the definition of paying job to be applied throughout the entire set of questions being evaluated for this study.

Changes to question wording across rounds

The statement remained unaltered across all three rounds of interviews and proved successful in establishing in the respondent's mind the definition to be applied.

Findings

In general respondents understood the concept of 'paying job' as meaning a job they did outside of the home for which they received pay. Respondents also understood the concept of working for a family business even if not paid directly, even though none of our respondents were in that position. Correctly, none of those interviewed included chores, yard work or babysitting at their own home. Although one

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[26] Borgers N, de Leeuw E, Hox J. Children as Respondents in Survey Research: Cognitive Development and Response Quality 1. Bulletin of Sociological Methodology/Bulletin de Méthodologie Sociologique. 2000;66(1):60-75. doi:10.1177/075910630006600106

respondent questioned whether to include a job he did at his home making things on a commission basis, he ultimately decided to report that work. However, on occasion, respondents did not include secondary or tertiary work for pay where they did not make much of a profit or where such work occurred infrequently. This was because they did not think of such work as a paying job. For example, one respondent did not consider her second job as a babysitter outside of the home because she said, *"I don't consider that a regular thing."* One respondent did not consider his paid yard work for neighbors because after purchasing the equipment he needed he did not make a profit from the work. Another respondent did not consider selling candy at school to be a paying job: *"Well one thing I do not think is a paying job that I do sometimes is sell candy at the school."*

Interviewers found that once the definition, as described in the introductory statement, had been established in the respondent's mind, it did not change for the respondent throughout the question administration, even when repeated intermittently during Rounds 1 and 2. Therefore for Round 3 the statement was only provided once to respondents at the start of the interview.

Job Type: Main reason for working

Q1. What is the **main reason** you worked at a paying job **during the past 12 months**?
   (Select only one response)
   A. I have not worked at a paying job during the past 12 months
   B. To help my family pay bills or buy food
   C. To save money for my future after I graduate high school
   D. To earn day-to-day spending money for myself
   E. To learn new skills
   F. Some other reason

Some students may have a financial responsibility to work in order to help support their family, while other students may work to earn spending money for themselves. This question is intended to capture the student's main reason for employment.

Changes to the question wording across rounds

Following Round 1 testing, respondents were asked for their main reason for working over the past 12 months, rather than focusing on their main reason for working in their current job, so as to be more inclusive and account for those who had worked during the past 12 months, but not currently. During the course of the testing the question response options were simplified and refocused away from higher education specifically, which was not applicable for some respondents.

Findings

When answering this question respondents considered all of their reasons for working at a paying job before settling on their main reason. The final round response options provided appeared comprehensive and less error prone than those used in earlier rounds.

Some respondents cited more than one reason why they worked at a paying job. *"Uh, to buy things. Yeah and to also to learn new skills."* Indeed, a few queried if they could select more than one response, despite the instruction to select only one: *"Do you have to choose one?"* When asked to select their main reason they tended to select a response option reflecting a longer term, rather than a shorter term, goal. For example, selecting saving for their future over wanting to have money to buy things for themselves right now.

To help ensure that the response options provided were comprehensive, in earlier rounds, respondents were asked about their reasons for working at a paying job before hearing the possible options. For the most part the response options encompassed the reasons provided and respondents made a correct response selection. Answers given included:

"To make money for a savings account for college."

"Mostly to just support my family."

"I need to pay for my car."

"I just wanted to get some extra cash because I didn't want to keep asking my parents for money for unnecessary things…like accessories, like bracelets or just junk food or now my best friend can drive we have been going to a lot of places… skating, the park, to a few people's houses, the mall."

However, earlier rounds of questioning included response options which focused on planning for higher education or college. This was not always the intention of some respondents who were saving for their future in general, or who were developing skills they could use when applying for jobs in the future, not just for use with their college application. As a result, respondents selected what they considered to be the 'closest fit.' For example, a respondent selected the category 'To save money for education after I graduate high school,' but explained that she was actually investing for her retirement: *"I was actually thinking of retirement. I had started investing. I had developed a stock portfolio and I eventually wanted to move it into a Roth IRA once it grew a little bit..."* Another respondent selected the 'other' category stating that she worked *"...in order to save but not really for education purposes but just to save in general."*

Interestingly, a few respondents said that their main reason for working at a paying job had changed over time. In this scenario respondents answered about their initial motivation for working. For example, one respondent explained that he had answered 'To help my family pay bills or buy food,' *"Because in the beginning that was the main reason for me working – to help my parents out."*

Employment status: Hours worked during summer break

> Q2. **Last summer during school break**, how many **hours per week** did you usually work at all your paying jobs?
>   A. I did not work at a paying job last summer
>   B. 1 to 5 hours per week
>   C. 6 to 10 hours per week
>   D. 11 to 20 hours per week
>   E. 21 to 30 hours per week
>   F. 31 or more hours per week

There are likely differences in the type of job available in the summer, compared with the school year, which would alter potential occupational health risks. This question is intended to capture if the student had a paying job during the school summer break, while simultaneously capturing hours worked per week.

Changes to question wording across rounds

Following Round 1, changes were made to the question stem to emphasize the requirement to provide hours per week, and the number of response option groupings was reduced for simplification. The instruction to consider all paying jobs was removed to test if it was actually necessary. Following Round 2, that instruction was reinstated to encourage the inclusion of secondary jobs. Again, to emphasize that weekly reporting was required, 'per week' was added to the response options for Round 3.

Findings

Across the rounds all but one respondent provided an answer to this question. This one respondent did not think of their occasional paid work for neighbors as a paying job. Four respondents answered that they had not had a paying job during last summer school break.

Most understood the question concept of working at a paying job during summer break when school was not in session, and that they were being asked to recall the number of hours per week they had usually worked in all their paying summer jobs. However, the way in which respondents went about making the calculation of hours worked varied depending on the complexity of their working situation and the amount of cognitive effort they were willing or able to expend in order to provide an answer. Some respondents guessed or otherwise took mental short cuts in order to make the task easier, including calling on the interviewer for support. As a result, the amount of hours reported tended to be an underestimate. In addition, a few Round 1 and Round 2 respondents reported daily rather than weekly hours, thus avoiding the last part of the calculation and again providing an underestimate. A couple of respondents queried whether to include their paid summer internship: *"Does the summer job program count?"* Although they were paid every few weeks and both described what they did in terms of 'work,' neither were clear of the basis on which they were paid: *"whether you showed up or not."*

It is important to note that respondents did not always work at their paying jobs for the entire summer break, nor was the length of the summer break consistent across school districts. When answering this question most, although not all, reported the hours they worked each week when they were working. For example, a database administrator had only started her online job in August. In addition, the summer break period varied, described as being anywhere from mid-June to the end of September. One student said that his summer break was only a week and a half in length because he was in *"all year round school."*

<u>Making the calculation</u>
Most respondents invested cognitive effort in attempting to make an accurate calculation of their work hours during summer break. For example, one respondent, who answered '21 to 30 hours,' explained that she worked either 4-hour shifts 6 days per week, or 6 hour shifts 4 days per week, at the grocery store. Another respondent, who worked as a lifeguard explained, *"I worked a lot this summer so it was 21 to 30 hours. I worked about 5 hours per day... Not every day. Sometimes I would have a day off at the weekend, so mostly 5 to 6 days per week."* Another respondent said *"I'm going to say 31 plus"* based on working 4 or 5 days per week*, "...long shifts sometimes. Like, 8-hour, 9-hour shifts."*

The task was easier to perform for those who worked just one summer job with a more regular shift pattern. For example, a respondent who babysat from 10am to 5pm during the week and occasionally on Saturdays, answered '31 or more hours': *"a pretty regular schedule."* Another respondent, who answered '31 or more hours,' also described a regular shift pattern at his summer camp job: "*Well, I was just trying to calculate all of the hours that I was working and I pretty much worked all day during the week days, so yeah. I was just thinking about that…8:15 to 6."* When work shifts varied in length respondents still attempted to calculate an average: "*I would say per week probably 1 to 5…It varies there have been some weeks where it has been over 5 hours but on average usually 3 or 4 hours."* With reference to her online tutoring job a respondent who answered '6 to 10 hours' explained, *"I usually work two shifts…the thing about the shifts is, they're always a little bit different because sometimes students take longer, which means that you get the chance to, like, stay longer if you want to, which means that sometimes the shifts are longer."*

The task was more difficult to perform for those who had multiple summer jobs where they needed to combine hours in order to provide an estimate, especially when the work patterns were different. For example, one respondent who had two jobs, one of which was for a shorter period of time, first estimated her weekly hours during the time she worked both jobs and then averaged those hours across the summer break: *"I had two jobs. I worked at the library, and for that it was 5 hours per week consistently. But I also worked at a camp, part time. So that was only for three weeks. And on those three weeks, I think I clocked like 35 hours per week…Yeah, like average, maybe like 8 hours per week…I'm not sure if the math is right, I'm just estimating…Yeah I would probably do the average, 8 to 10 hours per week."*

Some respondents had occasional secondary or even tertiary jobs. In these circumstances they focused on their main job and did not factor in the occasional work. For example, one respondent did not include her job doing yardwork for neighbors because she did not do the job very often and not weekly, *"It's super infrequent,"* which made it difficult for her to give a regular weekly amount. Similarly, another respondent told the interviewer, *"I don't think I could answer the question that way because it is random, someone says hey, can you babysit my child, I say sure, but it's really whenever."* She said, *"I think the babysitting job was too sporadic and the schedule too unpredictable, so I was just thinking of the* [Grocery store] *job."* It is unlikely that the small numbers of hours worked in these types of jobs would impact on the response grouping selected. Nevertheless, on this basis the instruction to include all paying jobs was reinstated as part of the question stem for Round 3.

A few respondents struggled with the math or simply guessed their usual weekly hours. After some hesitation an agricultural worker looked up to the ceiling, clearly attempting to calculate the amount of time in her head and answered, *"Um, I'm pretty sure 20 to 30 hours per week."* However, during probing she changed her mind: "*That's in my mind I thought that's what it was like but then when hours add up from 7 to 6 everyday till Friday, I'm not sure yet how much it would add up to."* Another respondent initially answered about her summer landscaping job without hesitation: *"I'd say about 20 hours per week."* However, during probing she admitted, *"I worked more than I said to you. I don't know why I said 20 I got the number wrong in my head…I actually worked more like 9 hours a day."* Another respondent who did babysitting initially took a guess at 20 hours and then asked the interviewer if that was correct based on her description of her work. This respondent's initial response was again an underestimate. Indeed, another respondent also found it difficult to provide an estimate which she attributed to *"being bad at math"* but was compounded by the fact that her working pattern as a home help aide was complicated: *"Eh, 48? That doesn't even sound right. No, um. Let's see. Addition. Um. Maybe. If I were to guess, maybe 60 hours."*

One respondent did not need to make the calculation but was able to provide an accurate response because her employer provided a printed weekly schedule displaying her hours.

Daily rather than weekly reporting

During Rounds 1 and 2 a few respondents provided the number of hours they worked each day, reporting the length of their shift, rather than totaling a weekly amount. All reported working under 10 hours per week when in fact all worked more than that amount - in one case the respondent was actually working more than 30 hours per week. These respondents repeated the same error for the subsequent question about hours worked during the school year (or they did not work during the school year). As a result, the instruction to provide a weekly amount was emphasized in the question stem after Round 1 and added to the response options after Round 2. All Round 3 respondents reported a weekly amount.

Summer jobs versus jobs during the school year

Respondents who worked both during summer break and during the school year worked the same or longer hours during the summer break. There was only one instance where the opposite was true. Some respondents had the same job during the summer and during the school year; some had different jobs.

However, it should be noted that the groupings used in the response categories may not capture more subtle changes in hours worked during the summer break compared with during the school year. For example, for one respondent the category '1 to 5 hours' did not capture the change from 3 to 4 hours per week doing yardwork for neighbors during the summer, compared with 1 to 2 hours per week during the school year.

Employment status: Hours worked during the school year

Q3. **During the school year,** how many **hours per week** do you usually work at all your paying jobs?
  A. I do not work at a paying job during the school year
  B. 1 to 5 hours per week
  C. 6 to 10 hours per week
  D. 11 to 20 hours per week
  E. 21 to 30 hours per week
  F. 31 or more hours per week

While some students may only work during the summer, so having a job may not interfere with their studies and other responsibilities, other students may need to work throughout the year. This question is therefore intended to capture if the student had a paying job during the school year, while simultaneously capturing hours worked per week.

Changes to question wording across rounds

The same changes were made to this question as were made for the previous Question 2 about work hours during school summer break. The requirement to provide a weekly amount was emphasized and the number of response option groupings reduced for simplification.

Findings

Across the rounds, all but one respondent provided an answer to this question. Seven respondents said that they did not work at a paying job during the school year. Many of the same findings were apparent for this question as that previously asking about work hours during summer break. Most respondents made the effort to report an accurate estimate of their usual weekly hours, although they did not always factor in secondary jobs or unusual shift patterns.

Indeed, it should be noted that work patterns were sometimes more variable during the school year than during summer break. As a result, some respondents found it more difficult to calculate their response during the school year than during the summer, even when they had the same job. The variability was associated with prioritizing schoolwork and the students taking on less work during the school year as a result. For example, one respondent explained that during the school year he tended to take on yard work bi-weekly, rather than weekly during the summer.

Most understood the concept of working at a paying job during the school year, and that they were being asked about the number of hours they usually worked per week at all of their paying jobs during the school year. However, when calculating her usual hours one respondent did not consider one of her jobs doing fencing, because she explained she had undertaken the work during spring break and not when school was in session. As reported previously, another respondent did not provide an answer to this question because she did not think about her occasional paid work for neighbors as a paying job. Apart from one Round 1 respondent, who attended what he described as 'all-year-round school,' respondents described the school year to be anywhere between the middle of August and end of June. Most worked after the school day had ended or on weekends. However, a few worked during the school day. For example, one respondent who worked in a grocery store answered, '6 to 10 hours per week' explaining, "*I have a half day for school so I am able to work some hours in the morning about twice during the week and then maybe a weekend day as well.*"

Making the calculation
As with the previous question about paid work during school summer break, many respondents made the effort to calculate their weekly hours. However, the accuracy of the responses was related to the complexity of their work situation. Those with a more regular shift pattern found it easier to provide a more accurate response: *"...once a week on Wednesdays for two hours."* In general respondents made the calculation by thinking about the days of the week they usually worked and then the hours they usually worked on those days. For example, one grocery store worker, who answered '11 to 20 hours' explained, *"Well, I would work Wednesdays, Saturdays, and Sundays. So I would work around to 5, no around 6 hours on Wednesday. Then I would work 4 hours Saturday. And then I would probably work 4 to 5 hours again, or 3 depending on the schedule with the manager, sometimes on Sunday."*

Some of those with more variable shift patterns still attempted to make the calculation although generally it appeared that they underestimated their work hours. One respondent, who worked as a house painter, described his hours as changeable, depending on the job. The variability of the work made it more difficult for him to make an estimate. This respondent calculated his weekly hours based on the amount he got paid: *"...I get paid by the hour. Every hour is $20...And I normally get like $200, $300* [in a week]." As such, his estimate of '1 to 5 hours per week' in answer to this question was likely an underestimate. However, one respondent, who answered '6 to10 hours per week', only reported her usual hours working at a restaurant and did not factor in unexpected shifts covering for coworkers.

As described when reporting on the previous question about hours worked during school summer break, those with multiple jobs found the task more challenging. For example, one respondent explained, "*Well, I babysit a couple of hours a day like two or three days. It just kind of depends. And then, I only tutor for an hour most weeks. And, I work a few hours at the ball park. It really just depends on the week and what I have going on each week.*" During probing this respondent described working two-and-a-half-hour shifts at the ballpark two or three days per week. Her response therefore also likely was an underestimate.

Again, as described in the previous question, respondents did not always factor in secondary or tertiary employment because it was difficult to give a regular weekly amount if the work was undertaken

infrequently, rather they focused on their regular main job. Indeed, one respondent, who answered '11 to 15 hours,' did not include occasional additional shift work at a grocery store.

Also as mentioned previously, respondents tended to work the same or less hours during the school year due to schoolwork and other extracurricular activities taking place, or the nature of the work itself. For example, one respondent, who worked as a tutor, explained, "*I don't work that often on the school year, like I said they don't need me during the school week because the kids are in school.*" In fact, some employers were respectful of the school year. One respondent, who had the same job during the summer as during the school year, explained that even though she worked the same shifts they were shorter because her boss didn't allow the students to stay late during the school year.

Daily rather than weekly reporting

Similar to findings from the previous question, during Rounds 1 and 2 testing a few respondents provided the number of hours they worked each day rather than totaling a weekly amount. As a result, the instruction to provide a weekly amount was emphasized in the question stem after Round 1 and added to the response options after Round 2. All Round 3 respondents reported a weekly amount.

Psychosocial: Impact on other life activities

Q4. **During the school year**, how often, if at all, do you have **less time** to spend on schoolwork, family responsibilities (such as chores), or extracurricular activities (such as sports or clubs) **because of working at a paying job?**
    A. I do not work at a paying job during the school year
    B. Never
    C. Sometimes
    D. Most of the time
    E. Always

This question is intended to capture the frequency of work interference with school, family, and other responsibilities during the school year.

Changes to question wording across rounds

Over the course of the testing, the scope of this question was refocused to only ask about paying jobs undertaken during the school year. The phrase 'outside activities' was changed to 'extracurricular activities.' The 'phrase 'less time' was preferred to the term 'interfered.' The response options were changed to match standard response options used by the YRBSS.

Findings

Across the rounds, 33 respondents answered this question. Most answered 'sometimes' (17) while eight answered 'never', three answered 'most of the time' (or 'often' as administered in Round 1), and one respondent answered 'always.' When the question focused on work during the school year, two respondents said that they did not work at a paying job during the school year.

Respondents understood that the question was asking whether working at a paying job interfered with other aspects of their life, in particular schoolwork: *"Okay, so the question is asking if working impacted my schooling and stuff?"* When answering, most focused on the impact their paying job had on schoolwork, while a few commented on the impact on extracurricular activities. None of our respondents talked about any impact on their family responsibilities. However, a few answered on the basis that their paying job also interfered with their social life, rather than more formal extracurricular activities which was the question intent: "*Sometimes with outside activities like going out with my friends as they would go out earlier than the time I get off.*"

During the course of testing, the scope of the question was refocused to only ask about paying jobs undertaken during the school year. This was because when asked about the past 12 months a few respondents answered 'never' on the basis that they only had a paying job during summer break when school was not in session and therefore their job never impacted on schoolwork.

Terminology used

Although there was no direct evidence that the term 'interfered' was not understood correctly by respondents, the phrase 'less time,' which had been used during Round 1 testing, was felt to be simpler for students to understand and perhaps less open to misinterpretation.

Following Round 1, the term 'outside activities' was changed to 'extracurricular activities' to avoid the situation where respondents were thinking about socializing with friends when answering the question, rather than more structured or organized activities. Respondents were familiar with the term 'extracurricular activities' and were able to explain its meaning, that being, additional organized activities outside of the regular school curriculum. Respondents described being involved in sports, clubs or even community service activities: "*Anything that you're doing outside of school like music lessons or sports… similar to school like science team, math team.*" When considering their family responsibilities respondents thought about chores they might have to do at home: "*And, family stuff? I would say like cleaning or cooking, but I don't usually do that anyways.*"

Response selection

For some, working at a paying job did interfere with their schoolwork or extracurricular activities. These respondents explained that because of their paying job they sometimes felt "*rushed*" and did not do their best schoolwork. For example, one respondent, who worked 11 to 20 hours per week during the school year said, "*Most of the time it does 'cause it's like I have to go type of thing and I don't really get a lot of time for homework on the days I work because I get out at 3.30pm and I start work at 6pm.*" Another respondent, who worked 31 or more hours per week during the school year, explained, "*Um, sometimes it's a little tough to get homework done when you have to work so many hours a week.*" With reference to extracurricular activities, one respondent, who worked 6 to 10 hours per week, said, "*Like when softball season rolls around it kinda interferes with that. It kinda just depends on the schedule around that and when I have practices and when I have games.*"

A few respondents answered on the basis of how tired they felt rather than how frequently their job interfered with other activities. The respondent who answered 'always' explained that working every evening after school at the grocery store made him feel tired, *"Because I have to divide my school time my study time from work. And I'm tired. It is tiring…"*

Some respondents said that their paying jobs did not, or would only sometimes, interfere with other activities because they had flexible work arrangements or were otherwise able to prioritize their schoolwork or extracurricular activities. For example, one respondent who answered 'sometimes' said, *"It's definitely, it's a little complicated to explain. Because my schoolwork does come first…then extracurriculars. And then if I fall behind on my schoolwork and I can't do my extracurriculars, it just gives me more time."* Another, who answered 'sometimes' referring to her job at the ball park said about her schedule, *"It's normally really flexible, and I'm able to change it around."* Another who answered 'sometimes' explained that she did not work during soccer season: *"Yeah well I didn't work in the fall because I did do soccer."* A respondent who did office work answered 'never' explaining, *"Not often at all, because I decide it, we plan it beforehand. So if I can't do that day, then we just don't do that day. So nothing really gets in my way because everything is planned."* A respondent, who worked online, answered 'never' explaining that he could work at his own convenience.

A few respondents felt that they were able to find a work around but did not necessarily recognize the impact that might have on their schoolwork. For example, a respondent who answered 'never' said, *"I can stay up late and just complete the things I need to."*

Employment status: Work pattern during the school year (Monday to Friday)

> **INTRO2: Think about your paying jobs during the school year. If you have more than one paying job think about the job you work the most hours.**
>
> Q5. **During the school year,** when do you usually work at your paying job **during the school week (**Monday to Friday)? If you have more than one paying job during the school week think about the job you work the most hours.
>   A. I do not work at a paying job during the school week
>   B. Between 7am and 4pm (Daytime)
>   C. Between 4pm and 11pm (Evenings)
>   D. Between 11pm and 7am (Nights)
>   E. When I work during the school week changes (for example, from daytime to evenings)

This question is intended to capture when, during the day, during the school week, a student is working.

Changes to question wording across rounds

Changes were made to this question across rounds for simplification and improved comprehension. In particular the term 'shift' was dropped from the questioning for Round 3, with a refocus on the actual times worked. For those with more than one job the reminder to report on the main job proved

important. Item E was amended across rounds, the wording proved too complex during Round 1 and too simple during Round 2.

Findings

Question scope
Without the instruction to report on their main job, respondents with more than one job were, on occasion, unsure how to answer the question or selected the last response option E to reflect the fact that they worked different shift patterns in multiple jobs.

Use of the term 'shift'
This question was originally adapted from a question asking about adult worker shift patterns, included in the National Health Interview Survey.[27] Although many of our respondents used the term 'shift' to describe *"A period of time where a person is working at the company,"* they tended to be those working in more traditional service industry jobs, such as restaurants or grocery stores, where there was a fixed schedule. Although they understood the meaning of the term 'shift,' the self-employed did not always apply that term to their own working arrangements. For example, one respondent who did freelance online work explained, *"...the work that I work it does not have shifts, like a morning shift or an evening shift...Yeah, it's not really a shift. I can work at any time so long as there is work...Whenever I like."* As a result, the way in which the shift descriptions were presented to respondents was tested in different ways across the various rounds of cognitive interviewing.

Response selection
Over the course of testing it became clear that it was important to include the actual shift times alongside the shift description in order for respondents to be able to answer with accuracy. When the actual work times were not included in the response options, students applied they own definitions of 'day,' 'evening' or 'night' shift, which were not always consistent. Indeed, when answering this question respondents found it easier to focus on the actual time of day they worked rather than the shift description.

> **Day shift.** Two respondents worked during the day when they did not have classes to attend and answered the question accordingly. However, those who did not have time to work when school is in session may not understand the term 'day shift' in the same way. As one respondent queried, *" So would day shift be like directly after school ends?"*

> **Evening shift.** During the school week, most of those who had a job worked outside of school hours in the evening. The term 'evening shift' was generally understood to mean that the shift was after school, starting and finishing anytime between 3pm and 11pm. A respondent who worked as a pool attendant after school described working from 3pm to 7pm. A grocery store worker described

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[27] NHIS - National Health Interview Survey (cdc.gov)

working from 4pm to 8pm. A landscaper described working from 5pm to 7pm. A restaurant worker from 5pm to10pm.

Night shift. None of the respondents actually worked overnight in accordance with the question definition. However, two respondents answered that way. Both worked late in the evenings until 10pm. In both cases the actual shift times had not been conveyed to the respondents during questioning. One of these respondents explained that her definition of evening shift would be from *"4pm ish to 6 or 7ish"* while *"...a night shift is any time from that on."* Her shift spanned both these timeframes, but she ultimately selected 'night shift.' The other respondent explained*, "Well, I am there until nighttime, so that is why I thought of it as 'night shift' instead of 'evening.'"* Another respondent who worked in a coffee house from 4pm to 7pm could not make a selection: "*Evening shift or night shift however you define those."*

Changing shift patterns. During Round 1 testing the phrase 'Irregular hours or shift rotates – that is, it changes from day to evening or night' was presented to respondents as the last response option. One Round 1 respondent interpreted 'irregular hours' to mean *"overtime hours."* As a result, the text for this response option was amended to simply 'It changes' for testing in Round 2. However, it was apparent during Round 2 testing that some respondents were selecting this item incorrectly, to convey the flexible nature of their employment, rather than their actual work patterns - meaning that their work shift could change, but not necessarily that it did. For example, one respondent, working as a tutor selected 'It changes' explaining, *"It's very flexible*…" even though she worked the same shift pattern each week: *"I usually work Tuesdays and Thursdays. Tuesdays on Zoom and Thursdays in person."* One respondent chose 'It changes' to reflect that fact that work at the ball park was only available when there was a game, even though when there was a game she worked the same shift pattern. Another respondent selected 'It changes' because she worked more than one job with different shift patterns, in the mornings doing accounting work and evenings doing babysitting. Therefore, this response option was amended to include a more detailed description of meaning (see question text above). During the final round of testing none of our respondents selected this item.

Employment status: Work pattern during the school year (weekends)

> **(INTRO2: Think about your paying jobs during the school year. If you have more than one paying job think about the job you work the most hours.)**
>
> Q6. **During the school year**, when do you usually work at your paying job **on weekends** (Saturday and Sunday)? If you have more than one paying job on weekends think about the job you work the most hours.
>   A. I do not work at a paying job on weekends
>   B. Between 7am and 4pm (Daytime)
>   C. Between 4pm and 11pm (Evenings)
>   D. Between 11pm and 7am (Nights)
>   E. When I work on weekends changes (for example, from daytime to evenings)

This question is intended to capture when, during the day, during the school year, a student is working on weekends.

Changes to question wording across rounds

Similar changes were made to this question across rounds in line with those made to the previous Question 5 about when respondents worked during the school week. The term 'shift' was dropped following Round 2 testing because respondents did not always think about the hours they worked in this way, and the question response options were refocused to the time of day rather than using the text descriptions of 'day,' 'evening' or 'night,' since respondents' definitions of these descriptions varied. The instruction to consider the main job was included in the question stem. The response option about working irregular hours was amended across rounds to 'When I work on weekends changes (for example, from daytime to evenings).'

Findings

Respondents often worked the same jobs on weekends during the school year as they did during the school week, yet more respondents answered that they worked during the daytime or answered that when they worked changed. Respondents generally worked longer hours on a Saturday, from as early as 5am to late afternoon or early evening (4pm or 5pm). Depending on the nature of the business respondents tended to work less time on Sundays because of half-day closing. Where their shift pattern changed, respondents explained that this was because on weekends they had more time available to work and could be more flexible than during the school week:

"*It's just whenever I have time over the weekend.*"

"*… because I don't have anything to do. There's nothing, there's no challenges, there's nothing deterring me from saying yes I can do this amount of time.*"

However, as with the previous question, a few respondents still selected the response option 'It changes' (Round 2 version) to reflect the flexible nature of their job, meaning it could change even though it did not. Indeed, one respondent, who worked online, selected the response option 'It changes' to reflect the fact that, even though she rarely worked at the weekend, it was possible that her weekday job could *"spill over"* because her work was flexible in that way.

Job Type: Place of work

(INTRO2: Think about your paying jobs during the school year. If you have more than one paying job think about the job you work the most hours.)

Q7. **During the school year,** which **one** of the following **best describes** the place where you work at your paying job? If you have more than one paying job during the school year think about the job you work the most hours.
- A. I do not work at a paying job during the school year
- B. Restaurant or fast food place
- C. Retail store, grocery store or pharmacy
- D. Recreation or entertainment place
- E. Farm or ranch (including family-owned)
- F. Office work
- G. Babysitting, landscaping or yard work done <u>outside</u> of your own home
- H. Some other place

This question is intended to capture the student's place of employment and provide information on the type of work they perform.

Changes to question wording across rounds

Over the course of the testing the scope of this question was refocused to only ask about the main paying job done during the school year. During Round 1 testing the question contained a great deal of text including examples of the types of places respondents may have worked, which were unnecessary. For subsequent rounds the response options were simplified, and examples included only where required. As the testing progressed, for clarity, following Round 1, 'fast food place' was included with the description of 'restaurant,' 'grocery store' and 'pharmacy' were added to the description of 'retail store,' (following Round 2 and Round 3, respectively) and the term 'work' was added to the description of 'office' for Round 3.

Findings

The reason why this question was refocused to only ask about the main paying job done during the school year was because when the question asked about their current or most recent job, some respondents answered about their summer job rather than their current job. For example, a respondent answered about her summer job at a restaurant, rather than her job during the school year at a grocery

store, because she said, *"...I earned more there and I was working much harder than I was at the grocery store."*

Response selection

As described in the methods section of this report respondents with a range of different job types, working in a range of different industries as employees or self-employed, were interviewed. Therefore, we can be fairly confident that the question response options are comprehensive for high school students. Indeed, most respondents answered correctly about the kind of place they worked, but some amendments were made to the text of a few response options across rounds to improve clarity. The term 'fast food place' was added to that of 'restaurant.' This was because a Round 1 respondent, who answered 'some other place,' did not consider the fast food place where she worked to be a restaurant as there was no seating area. The seating area had been closed due to the COVID-19 pandemic. During Round 2 testing a respondent who worked for a well-known coffee house chain correctly selected "*fast food*" without hesitation. Following subsequent rounds of testing, the term 'grocery store' was added to that of 'retail store.' This was because a few respondents, including those who worked in a grocery store, did not always think of a grocery store in that way but rather thought of a retail store as being a big box, department or clothing store. Indeed, one Round 1 respondent classified grocery store as 'farm, ranch or dairy' explaining that, *"When you work in a grocery store they have different parts so I was thinking someone was working at the meats or the dairy..."* This amendment worked well in helping respondents to select the correct classification. For example, in Round 2, a grocery store worker said, *"I work at a grocery store so I guess yes, grocery store and retail."* One respondent did not classify the pharmacy she worked at as a retail store, but rather thought about it as a medical facility and selected 'some other place' as her response, explaining, *"I'm not sure what category a pharmacy would be in...It's a medical sort of thing. It's not a doctor's office but it's kind of affiliated with that because you get medication."* As a result, the term 'pharmacy' was also added to the category of 'retail store.' The term 'work' was added to the category 'office' because without it some respondents thought about physically going into an office location and classified office work they did from home as 'some other place'.

Safety Climate: Prevention training (workplace bullying, violence or sexual harassment)

> **(INTRO2: Think about your paying jobs during the school year. If you have more than one paying job think about the job you work the most hours.)**
>
> Q8. **While working at your paying job** during the **school year,** have you received any on-the-job training about how to protect **yourself** from workplace bullying, violence, or sexual harassment?
>   A. I do not work at a paying job during the school year
>   B. Yes
>   C. No

This question is intended to capture if, while working at their paying job, the student received any on-the-job training on the prevention and handling of workplace violence, bullying, or sexual harassment.

Changes to question wording across rounds

Over the course of testing the scope of this question was refocused to the main job undertaken during the school year, rather than asking about the current or most recent job which in effect was asking 'ever' from those whose may not have worked for some time. The phrase 'protect yourself' was added to the question stem to focus respondents' answers on training they had been given to protect themselves, rather than to protect others. Also, the phrase 'on-the-job' was added to emphasize that the question was asking about training provided by the employer or while working at their paying job.

Findings

Respondents generally understood the concept of workplace bullying, violence or sexual harassment, but could not always remember if they had received training on how to handle it. During probing respondents demonstrated an understanding of workplace bullying, violence or sexual harassment, congruent with the question intent:

> *"...people gossiping about you or being mean for no reason."*

> *"Someone using inappropriate language to someone who doesn't feel comfortable…I think it's bad. I haven't really experienced it, but if I saw it, I would try to step in."*

> "*A coworker harassing you, a coworker sexually harassing you. Somebody touching you in places. Or speaking profanities towards you. Just harassments in general around coworkers."*

One respondent included discrimination based on ethnicity or gender in her definition.

When, during earlier rounds of testing, the question asked about the current or most recent job, a few respondents answered about the job they considered most relevant. For example, one respondent answered about her summer job rather than her current job: *"Yeah, I have, but only for one of my jobs…Yeah we had a meeting and talked about all the rules. It was like four hours."*

Response selection

Across rounds, 11 respondents answered 'Yes' to this question. Those who described receiving more formal and structured trainings dealing specifically with bullying, violence or sexual harassment worked for larger establishments, such as chain restaurants or retail stores. For example, one respondent said that while working at the pharmacy she was required to take an online class every year about *"workplace harassment and how to handle fellow employees and customers."* A grocery store worker described something similar: *"Yes we are given….I can't remember the acronym – just videos to watch, instructional videos…and sometimes periodically we review them…the videos are the only thing that deals with bullying and harassment. I don't think it has been a big problem at the store."* Another grocery store worker said, *"There were a few videos on how to either combat it or take it to a supervisor or take it to someone who is higher up in the company."* One fast food worker answered 'Yes' but was not sure if the initial training she had received via Zoom a few months prior to the interview had

included how to handle workplace bullying, violence or sexual harassment: *"Um, if I'm not mistaking the meeting I was in probably they told me that I just don't remember."*

A few respondents answered 'Yes' to the question describing more informal guidance which they had received from managers, colleagues, or from family members with whom they worked, on how to handle workplace bullying, violence or sexual harassment: *"My mom taught me…She'll be like, 'if there is anything that happens, do this.'"*

When the question stem did not make reference to training for self-protection, some respondents answered about training they had received to protect others. For example, one respondent answered 'Yes' because she had received training in how to recognize child abuse for her job as a babysitter: "*It was very eventful. It was a class, actually, that I had to take. Mostly for health reasons for the kids…and if there is certain abuse signs within the household, looking for those on the kids."*

During earlier rounds of testing a few respondents described training in general that they received outside of their workplace. One respondent answered 'Yes' explaining that his summer internship was about preparing students for *"real life"* and, as such, he had seen presentations on *"how to stick up for yourself in the workplace."* Another respondent answered 'No' but described being taught at school about how to handle herself in such situations explaining: *"There is a whole unit for it."* These descriptions led to the change in the question wording to specify on-the-job training for Round 3.

The training described by those who answered 'No' to this question was training in how to do the job specifically: *"The only training was like how to do the books, but beyond that, there really wasn't much of anything else."*

Respondents who worked from home or did online jobs all said that they had not received training in how to handle workplace bullying, violence or sexual harassment, and in a few of these cases respondents did not think that the question applied to them because they did not have any physical interactions with other people. Those who were self-employed doing jobs such as yard work for neighbors did not receive such training.

Safety Climate: Reporting concerns (workplace bullying, violence or sexual harassment)

> **(INTRO2: Think about your paying jobs during the school year. If you have more than one paying job think about the job you work the most hours.)**
>
> Q9. **While working at your paying job** during the **school year**, do you feel that you could talk to your supervisor or manager about any workplace bullying, violence, or sexual harassment?
>   A. I do not work at a paying job during the school year
>   B. I work at a paying job but do not have a supervisor or manager
>   C. Yes
>   D. No

This question is intended to capture if the student felt they could report concerns related to workplace bullying, violence, or sexual harassment to their supervisor or manager without fear of retribution or other issues that may prevent them reporting their concerns.

Changes to question wording across rounds

For the reasons mentioned at Question 8 the focus of this question was restricted to the main job during the school year. The question wording was simplified as one Round 1 respondent misunderstood the question entirely. The tense of the question was changed from past to present, in order to account for situations where a respondent might answer 'No' because they had never been in the situation. An additional response option was added to account for situations where respondents did not consider that they had a supervisor or manager.

Findings

Respondents understood that they were being asked if they felt comfortable reporting any workplace bullying, violence or sexual harassment to their supervisor or manager. Some did; some did not. However, one Round 1 respondent misunderstood the question entirely as asking *"Was I fine with people sexually harassing me or talking to be in a bad manner then the answer is 'No.'"* As a result the question wording was simplified for subsequent rounds.

When the question asked about the current or most recent job respondents sometimes answered about the job they considered to provide the most desirable response. For example, a Round 2 respondent answered 'Yes'' about her summer job rather than her job during the school year about which she said she would have answered 'No.' The final tested version of the question asks only about the current main job during the school year.

Response selection
Those who answered 'Yes' described having a *"good connection"* with their supervisor or manager and feeling comfortable talking to them:

"I've never had to talk to them about it, but I think they are pretty cool people and they would definitely listen if you had something going on."

"It isn't like they are your supervisor, they're kind of a colleague, and it's a very welcoming sort of environment. And really anyone can talk to anyone. It's very free."

"I would feel like really comfortable if any of this was happening to tell my boss about it."

"But I felt very comfortable and I think if something like that would happen I could speak to the supervisors. And, they were very clear when I was hired to not take any, I don't know if it's bullying, but customers what they are saying…'If people are being mean to you, come get us. Your job is not to deal with these crazy people.'"

Only two respondents had actually spoken with their supervisor or manager about such behaviors. Both answered 'Yes.' One had spoken to her supervisor about a rude customer. The other had spoken to her manager about an overly friendly coworker: *"Back when I first started, I had a co-worker who sort of crossed a boundary, it wasn't any sort of verbal abuse or sexual abuse or anything like that, but it was like a boundary cross and I had went to my manager about it and asked him to not schedule me with that coworker anymore and he didn't."*

Those who answered 'No' described feeling that they would not be taken seriously or the person in charge did not want to hear about these kinds of problems:

"The boss doesn't care."

"Not really. I never felt like really connected to them."

"It was not a very strong bond so I didn't feel like if something happened that I'd be able to talk with them about it."

Respondent supervision

In general, those who worked as employees were able to determine who their supervisor or manager was. A few respondents, who answered 'Yes' reported directly to a family member whom they considered their supervisor. Others said they thought of more than one person as their supervisor or manager. For example, a respondent who worked at a pharmacy, described a general store manager and a pharmacist for whom she worked. This respondent felt that both would be approachable and answered 'Yes' to the question. Another respondent, who worked online from home, talked about the person who had trained her to do the job, as well as a family member for whom she worked: *"I was kind a thinking about those two people when you were talking about supervisor."*

Self-employed respondents struggled to identify anyone as their supervisor or manager because they worked directly for clients. Sometimes they considered their client as their supervisor or manager and sometimes they did not consider that they had a supervisor or manager at all. For example, one respondent, working as a home help aide, considered the person she helped as her supervisor, and answered 'Yes' to the question because they got along well. A respondent who babysat thought about

one of the parents of the children in her care: *"I'm just going to refer to the parents as the manager, and I would say yes..."* A self-employed landscaper answered 'Yes,' thinking about a neighbor whom he saw as a mentor: *"He's only a text away."* However, a respondent who did yard work and odd jobs said, "*That* [question] *doesn't apply to me."* An online graphic designer said, *"I don't have any supervisor. I'm on my own. I am my own supervisor."* Indeed, in one case, a respondent answered 'No' about their summer job, rather than their current job working directly with clients where they considered themselves to be self-supervised. As a result, an additional response option was added for Round 3 to account for those in this situation: 'I work at a paying job but do not have a supervisor or manager.'

Despite having a supervisor or manager a few respondents mentioned that they might go to their parents first if anything happened to them at work. A respondent who answered 'No' to this question explained, *"I'm not sure if I would talk to them but I know if I was bullied or sexually harassed I would go tell my parents and have my parents talk to them because I feel like if I talked to them they would not take me seriously."*

Safety Climate: Prevention training (workplace injury)

> **(INTRO2: Think about your paying jobs during the school year. If you have more than one paying job think about the job you work the most hours.)**
>
> Q10. **While working at your paying job** during the **school year,** have you received any safety training about how to protect **yourself** from being injured at work?
>   A. I do not work at a paying job during the school year
>   B. Yes
>   C. No

This question is intended to capture if, while working at their paying job, the student received any workplace injury prevention training.

Changes to question wording across rounds

For the reasons mentioned at Question 8, the scope of this question was refocused to only ask about the main job undertaken during the school year. The phrase 'prevent yourself' was added to the question stem for Round 2 testing to focus respondents' answers on training they had been given to prevent themselves from being injured, rather than to prevent others from being injured, which was subsequently changed to 'protect yourself' in Round 3 to be consistent with wording used in Question 8.

Findings

During Round 1 testing a respondent answered the question about training he had received to help prevent those using the pool at which he was an attendant from being injured. For subsequent rounds the wording of the question instructed respondents to think about training related to self-protection. This

change appears to have been successful. For example, a Round 3 respondent who worked with children answered 'No' explaining, *"…for the kids 'yes' but for myself 'no.'"*

Respondents who answered 'Yes' talked about the method in which they received training in a similar way to Question 8. Those who received formal training mentioned being shown videos or taking part in a Zoom meeting or online class. One respondent talked about being given a *'manual'* to read; another about shadowing colleagues. Those who answered 'Yes' and described more informal training, described being shown by colleagues, family members, neighbors, or in the case of the respondent who was a home help aide, the person for whom she worked, how to make sure they were safe from injury.

The type of issues covered by the safety training, as described by respondents, included how to prevent back injury by learning how to lift and move items correctly, avoiding slips and falls, learning how to dispose of hazardous waste, how to handle shoplifters and what to do in an active assailant situation. Safety training related to COVID-19 was also mentioned in relation to working with children.

> *"My most recent training was cashier training and we learned about different ways to take things off the belt so to not strain our backs. Ways to lift the bags so we wouldn't injure our arms or our legs or anything like that."*
>
> *"Well, for my bike messaging job I had to go on like a shadow day and then a training day for how to bike safely…Mostly it was just following them, like learning how to bike in the road, watch out for like cars and when to go and when not to."*
>
> *"Safety hazards, and like other ones…mainly safety hazards….Slips and falls, shoplifting, and robberies sometimes happen…"*
>
> *"Yeah there were onboarding videos about that situation* [active assailant]. *Oh! Also shoplifters. We were trained for that, like not to confront them too much before grabbing a manager. So I guess that goes along with preventing injury."*
>
> *"Right now it's more about COVID and stuff. Because that's like the biggest safety thing we're worried about right now…everyone's required to wear masks, but also social distancing, making sure the kids aren't touching, and like disinfecting things after the kids leave."*

In earlier rounds of testing a few respondents answered 'Yes' about the job they considered the most salient, rather than their current job during the school year. For example, one Round 2 respondent answered about her summer job rather than her current job at the library: *"Yeah, I don't see any way I could injure myself with the library job. I don't see why they would give us that sort of training."*

Those who answered 'No' did so on the basis that they had not received any formal training:

> *"I got very little training overall especially not on like stuff specific like safety."*
>
> *"It's just up to your coworkers to train you."*

One self-employed respondent answered 'No' because he had not had any formal training but went on to explain that he avoided burning himself on some of the equipment because he read the user manual. A few respondents said they did not think the question applied in their situation. For example, one respondent who answered 'No,' and who worked in a doctor's office, said, *"I don't think there is anything that would be a risk to my safety where I work."*

Safety Climate: Reporting concerns (workplace injury)

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(INTRO2: Think about your paying jobs during the school year. If you have more than one paying job think about the job you work the most hours.)

Q11. **While working at your paying job** during the **school year,** do you feel you could talk to your supervisor or manager about an unsafe work task you might be asked to do?
    A. I do not work at a paying job during the school year
    B. I work at a paying job but do not have a supervisor or manager
    C. Yes
    D. No

</div>

This question is intended to capture if the student felt they could report concerns about unsafe work tasks to their supervisor or manager that may result in accidents or injuries, without fear of retribution or other issues that may have prevented them reporting their concerns.

Changes to question wording across rounds

Following Round 2 testing, the tense in which this question was asked was changed from past to present, and the word 'might' was added to the question stem, to try and avoid respondents misinterpreting the question as asking if they had actually been asked to do an unsafe work task. Response option B was added to account for those who did not consider that they had a supervisor or manager.

Findings

Respondents understood that they were being asked if they felt comfortable reporting any unsafe work tasks to their supervisor or manager. As with Question 9, some said that they did feel comfortable doing so while others said that they did not. Indeed, most respondents gave the same positive or negative response to this question as they had to Question 9 about reporting workplace bullying, violence or sexual harassment, describing a similar culture of trust or mistrust affecting answers to both questions. Across the rounds only three Round 2 respondents gave a different response. One farm worker explained that she did not feel comfortable talking to "*the boss"* about issues between employees, which is why she had answered 'No' to Question 9. However, she answered 'Yes' to this question because she felt that the boss would be receptive to issues related to "*the actual work."* In the other two cases the respondents understood the question as asking if they had actually been asked to do an unsafe work task.

Respondents' definitions of what constituted an unsafe work task varied depending on the nature of their work and their direct experiences. Some described heavy lifting in their job, others described handling hot beverages or appliances. One respondent described being asked to put chlorine in a swimming pool as an unsafe work task because she was nervous about the amount she should use. Another cited an example of the person in her care falling out of their wheelchair and having to lift her. Another described having to clean up the mess of a young child who was not potty trained, which she considered to be an unsafe work task. A lifeguard said that she would only count a task as unsafe if it was outside of her usual work duties, some of which may be considered unsafe but part of her job.

As with Question 9, a few respondents explained that they did not have supervisor and therefore the question did not apply.

Psychosocial impact: Stress

(INTRO2: Think about your paying jobs during the school year. If you have more than one paying job think about the job you work the most hours.)

Q12. How often, if at all, do you find working at **your paying job** to be stressful?
    A. I do not work at a paying job
    B. Never
    C. Sometimes
    D. Most of the time
    E. Always

This question is intended to capture the frequency with which students find their paying job to be stressful.

Changes to question wording across rounds

For the reasons described in the commentary to Question 8, in the final round of testing, the scope of this question was restricted to the main job undertaken during the school year. More nuanced changes in the question wording across rounds did not affect the basis on which respondents answered this question. The response options were changed to match standard response options used by YRBSS.

Findings

Respondents understood this question as asking about the frequency with which they found working at their paying job to be stressful.

Before determining frequency, respondents considered the meaning of the term 'stress' in relation to their paying job. They either thought about: i) whether the nature of the job itself was stressful; or, ii) whether working at a paying job impacted on the other aspects of their lives, which in turn caused stress. Indeed, a few respondents considered both these aspects when assessing whether or not they found

working at their paying job to be stressful. Over the course of testing the question wording was changed in an attempt to steer respondents to consider the former aspect. Rather than asking how often they felt stressed because of their paying job, respondents were asked more directly about how often they found their paying job to be stressful. However, despite this change, respondents still applied one or other, or both definitions.

What respondents found stressful in their paying job varied. Some said that rude customers caused their job to be stressful, some cited staff shortages, others mentioned coworkers not doing their jobs properly, or their own level of responsibility in their job. A few mentioned that working outside in the heat was stressful. A few mentioned wanting to be a good employee sometimes caused them stress - getting to work on time, doing the job right, meeting deadlines, etc. Some cited more than one reason.

Response options
The reported frequency was strongly associated with job type. Those reporting that they found working at their paying job stressful all or most of the time, were those who worked in jobs which interfaced directly with customers or clients, such as those working in the restaurant industry, retail, or the self-employed who worked directly with paying clients and had deadlines to meet. Across the rounds, two respondents said that they found working at their paying job to be always stressful for multiple reasons. Both worked in the restaurant business. One explained her stress due to the level of responsibility she had in her job, along with staff shortages, as well as her generally busy schedule: *"My schedule is just so busy and a generally stressful job…with me being a shift leader and with my lack of training…I'm so young."* The other respondent also described staff shortages and a generally unhealthy culture of verbal abuse from customers and staff alike which occurred on a daily basis.

Those who answered 'most of the time' (or 'often' in Round 1), also cited multiple reasons including staff shortages, interfacing with members of the public, and their general feeling of tiredness because of all of their other life responsibilities: *"… I just feel severely overwhelmed. Not all the time but definitely frequently."* These respondents chose to answer 'most of the time' rather than 'always' because to them 'always' implied daily and there were some days when they could *"relax and chill."*

> *"I do work in a grocery store so I have to deal with a lot of rude customers and sometimes it will get very busy and we don't have as many back-up cashiers as we should have, so it starts to get really busy and stressful to me."*

> *"I would say most of the time. It was a lot of waking up, no sleeping…*[But] *there were some points where she could tell I was really irritated and like tired and she would just say 'go home and go to sleep, go take a nap and then come back.' And I feel like that took off a little bit of stress, just to relax a little bit."*

> *"The stress most of the time is because right after school I have to go to work and do my job and it's tiring sometimes. And, in between that there is still school going on, the homework, the projects. That's why I say it is stressful."*

Most respondents answered 'sometimes' for similar reasons but occurring less frequently.

> *"Because maybe sometimes I'm worried about like not being there on time or not doing the job correctly."*

> *"Definitely the times where I forget that I have work scheduled and then I have a whole bunch of assignments."*

> *"Well you know sometimes you have a lot of chores to do at your work…and, a lot of things can happen at once…always being on your feet can be stressful all day. And people…can be mean and that stresses you out too. Like, the patrons, we call them…but to be honest it's a bunch of just sitting….every once in a while it can still get hectic."*

Those who answered 'never' tended to work fewer hours or expressed how much they enjoyed their job. Possibly because they worked fewer hours those who answered 'never' also tended to base their answer on the nature of job itself, rather than the impact of working alongside their other life responsibilities. For example, referring to his job doing yard work one respondent explained that the job itself was not mentally taxing although, *"Doing homework late is a little bit stressful but I manage to get the homework done…I would say never."* With reference to her job babysitting another respondent who answered 'never' explained, *"I don't get stressed about the work. I only get stressed if I have other things that need to get done and I also have to work."* Another respondent who answered 'never' said *"I like, really like my job. I love working with kids…I'm not ever really stressed about it. I might be stressed about, if I'm working a shift and I have a lot of homework, I might be stressed about getting everything done, but nothing in the job that I'm stressed about."*

When asked about the current or most recent job during Round 2 testing, a few respondents answered about a previous job which they considered was more stressful than their current job. The frequency with which respondents found a job stressful could also change over time. A few respondents mentioned that the job was more stressful when they first started out learning the job: "*When I first started it would be most of the time, but now I'm getting more used to it so it's 'sometimes'.*"

It is interesting to note that a few respondents appeared to blame themselves for their stress levels, describing themselves as generally anxious. For example, a respondent who answered 'most of the time' said, *"There is always going to be a level of stress in anything I do. I tend to overschedule myself. It's always I'm thinking of the next thing that has to happen so there's always that sense of…not necessarily dread, but I don't know how to word it."*

Health outcomes: Workplace injury

INTRO3: Think about all of your paying jobs during the past 12 months

Q13. **During the past 12 months, while working at a paying job**, have you been injured badly enough on the job that you needed to go to a nurse, doctor, or hospital?
    A. I did not work at a paying job during the past 12 months
    B. Yes
    C. No

This question is intended to capture workplace injuries sustained during the past 12 months.

Changes to question wording across rounds

Over the course of the testing the response options were changed to a simple 'Yes' or 'No' dichotomy.

Findings

Respondents understood that in order to respond 'Yes' to this question they would have to have sustained a serious workplace injury during the past 12 months. Across all rounds only one respondent answered 'Yes.' This one respondent had injured himself during food preparation while working at a summer camp and had attended an urgent care facility for treatment by a medical professional: *"I accidentally cut myself when I was carving at the summer camp. And I had to get stitches."* The use of the phrase 'on the job' included in the question stem helped respondents to understand that they should only report workplace injuries *"...when you're working on the clock at the job site."*

Some of those who answered 'No' did describe having sustained an injury while working at a paying job during the past 12 months but had not sought treatment from a medical professional. These respondents described blisters, insect stings, scrapes and minor burns, slips and bruises, while one respondent described hitting her head, but none had sought medical help.

Those with online jobs who worked from home did not always think that the question could apply to them: *"The worst is probably a paper cut or something."* Indeed, a freelance graphic designer said that he would not think of an injury sustained at home as a workplace injury.

It is worth noting that not all respondents had been in employment for the full 12-month reference period.

Health outcomes: Prescription pain medication

(INTRO3: Think about all of your paying jobs during the past 12 months)

Q14. **During the past 12 months**, have you taken **prescription pain medication** (such as Vicodin, Oxycontin or Percocet) for an injury that happened while you were **working at a paying job?**
    A. I did not work at a paying job during the past 12 months
    B. I did not have a workplace injury during the past 12 months
    C. Yes, I took prescription pain medication for my workplace injury
    D. No, I did not take prescription pain medication for my workplace injury

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This question is intended to capture the use of prescription pain medication to treat a workplace injury sustained during the past 12 months.

Changes to question wording across rounds

This question underwent substantive changes across rounds. The question initially tested during Round 1 was too complicated. The answer choices differentiated between type of pain medication (prescription or non-prescription) and if the prescription pain medication was obtained illegally. There was no option for respondents to indicate that they had not had a workplace injury during the past 12 months, which led to response error. Following Round 2, the example of 'Hydrocodone' was dropped from the question stem since the majority of the young people interviewed had not heard of this drug. However, examples were provided that respondents were more familiar with to try and avoid the reporting of over-the-counter pain medications. The phrase 'working at a paying job' was highlighted as some respondents reported on sports injuries or injuries sustained while doing unpaid volunteer work. During Round 2, simple dichotomous Yes/No response options were tested. However, respondents confused a 'No' response with 'I have not had a workplace injury during the past 12 months,' and therefore a more expansive explanation of the Yes/No categories was added, as shown above.

Findings

Across the rounds no one said that they had taken prescription pain medication for a workplace injury.

The version of the question tested during Round 1 was long and complex, meaning it was cognitively burdensome and potentially more prone to response error. The question attempted to differentiate not only between the type of pain medication (prescription or non-prescription) taken to treat a workplace injury, but also if the prescription pain medication was obtained illegally. In addition, three respondents selected the response option 'No, I did not take any pain medication for my workplace injury' because there was no separate category to indicate that they had not had a workplace injury during the past 12 months. One respondent misunderstood the question and selected taking a non-prescription pain medication, but for period cramps and not an injury. Possibly due to the complexity of the response options used in Round 1 another respondent misunderstood the meaning of a non-prescription pain

medication: *"Non-prescribed medicine could turn to an addiction, or you can give your body a scare because that's something you are not supposed to take."*

<u>Response selection</u>
Respondents' definition of a workplace injury varied, influencing their response selection. For example, one respondent, who answered that she had had a workplace injury but had not taken prescription pain medication, was thinking about her blisters from mowing the lawn, whereas another respondent, who had received a minor burn while using a hot fryer, did not consider that serious enough to be a workplace injury and answered that he had not had a workplace injury during the past 12 months: *"... I burnt my finger really bad…I just ran it under some cold water and it had a little blister and it was fine."* A few, including the respondent who had burned his finger, made the distinction between more serious workplace injuries and what they described as *"everyday"* injuries. In addition, one respondent included a sports injury and another an injury sustained while volunteering when answering this question. As a result, the text specifying workplace injury is highlighted. There was also some evidence of telescoping, that is, extending the question reference period in order to be able to provide a response. For example, one respondent was injured at work after hitting her head on some machinery, for which she had taken a non-prescription pain medication. However, the injury had happened more than 12 months prior to the interview during the summer of 2020.

During Round 2 simple Yes/No responses were tested with the option to report not having had a workplace injury during the past 12 months. However, a few respondents conflated this option with the 'No' response option. As a result, the final version of the question tested included more clearly defined descriptions of the 'Yes' or 'No' categories (see above). During Round 3 testing there was no evidence of this response error.

Perhaps not all young people are as familiar with opioid pain medications as adults. Indeed, the majority of those interviewed had not heard of the drug 'Hydrocodone,' which was subsequently dropped from the question stem. Furthermore, not all respondents differentiated between prescription and non-prescription pain medication. A few included Tylenol and Advil in their descriptions of a prescription pain medication. Although the examples of prescription pain medications used in the question were not known by all, they nevertheless proved useful in helping some respondents determine whether to include medication that could be bought over the counter. For example, one respondent said that she had been thinking about pain medications such as Tylenol until she heard the examples provided.

As mentioned previously, not all respondents had been in employment for the full 12-month reference period.

Psychosocial impact: Tired or worn out

> **INTRO4: Think about all your paying jobs during the past 30 days**
>
> Q15. **During the past 30 days**, how often, if at all, has working at a paying job, in addition to completing schoolwork, family responsibilities (such as chores), or extracurricular activities (such as sports or clubs), made you feel tired or worn out?
> - A. I did not work at a paying job during the past 30 days
> - B. Never
> - C. Sometimes
> - D. Most of the time
> - E. Always

This question is intended to capture fatigue caused by working at a paying job alongside other life activities.

Changes to question wording across rounds

During testing, the question reference period was changed from 'past month' to 'past 30 days.' This was because when asked about 'past month' some respondents thought about the last month, that is, the month before the interview month. In addition, 'past 30 days' is consistent with the YRBSS standard. The way in which the question was worded during Rounds 1 and 2 had implied a 'Yes' or 'No' response was required, rather than an assessment of frequency. During Round 3 the phrase 'how often' was added to indicate frequency, along with 'if at all' to provide balance. To be consistent with Question 4, the term 'outside activities' was changed to 'extracurricular activities,' to help respondents think about more structured or organized activities, rather than socializing with friends, when answering the question.

Findings

Some respondents understood this question as asking if they felt tired or worn out generally with all they had to get done or were involved in. A few described feeling *"overwhelmed"* and answered about their stress levels: *"I would say sometimes because I am pretty good at getting my work done, but sometimes it's too much and I do start to get stressed out."* Some understood the question as asking if they felt tired or worn out when at work. Indeed, one Round 1 respondent described feeling tired or worn out at work due to taking part in outside activities such as going out with friends.

For some, the definition of feeling 'tired' and the definition of feeling 'worn out' differed. One respondent said that when she thought of being 'worn out' she thought of being mentally tired or *"burnt out,"* whereas she thought of being tired as physical tiredness. Another respondent said he thought the opposite: "*Tired is a mental thing, a sleep deprivation kind of thing, like worn out is like more like your body.*" Nevertheless, respondents answered about one or the other feeling.

<u>Response selection</u>

When assessing frequency, some answered about how frequently they feel tired or worn out on the days when they worked: *"And I said sometimes because the day I do it* [work] *I feel exhausted, but not necessarily the whole week I'm exhausted."* Others answered about how frequently they felt tired or worn out generally across the week: *"I'm always tired. I'm always doing something."*

Across rounds, only two respondents answered 'never' to this question. These respondents described having some control over when they worked or said they had learned to manage their time: *"In the beginning, yeah it did make me feel worn out, but I just had to keep a schedule of things."* On the other hand, eight respondents said that they always felt tired or worn out or felt that way most of the time. They described more hectic schedules, but they were unable to isolate a causal relationship with their paying job. In fact, these respondents sometimes described themselves as being tired people in general.

<u>Reference period</u>

During testing, the question reference period was changed to 'past 30 days,' rather than 'past month', as some respondents were thinking about the last month prior to the interview date. As mentioned in previous questions there was some evidence of possible telescoping. For example, one respondent answered about her summer job which she had done more than a month ago.

Climate safety: Sexual harassment or assault, physical assault or verbal abuse or bullying

This next set of three questions are intended to capture workplace violence and harassment with corresponding examples of sexual harassment or assault, physical assault, or verbal abuse or bullying.

Changes to the question wording across rounds

The scope of these questions was expanded across rounds. In Round 1 the questions were asked in relation to the current paying job only. However, one Round 1 respondent answered about her most recent summer job as she was not working currently. In Round 2 the questions were asked about the current or most recent job. In Round 3 the scope was expanded further to include paying jobs respondents had ever had. Following Round 1, the question order was changed to ask about sexual before physical assault. This was because when first asked about physical assault some respondents included sexual assault in their definition. The condition to consider violence or harassment from a supervisor, co-worker, or customer was also dropped from the questions stem. This was because not all jobs involved formal supervision or co-workers, and respondents did not always consider those to whom they were providing a service as customers. For example, a Round 1 respondent who worked as a pool attendant at a private residential complex did not think about the residents who used the pool as customers explaining, *"They are not really buying anything."*

Question administration

<u>Question sensitivity</u>
Because of the potentially sensitive nature of this set of questions, prior to administration, respondents were reminded that they did not need to provide an answer if they did not want to. Across all three rounds, five respondents did not provide an answer to the question about sexual assault or harassment, four respondents did not provide an answer to the question about physical assault, and seven respondents did not provide an answer to the question about verbal abuse or bullying. Due to time constraints during the cognitive interview the questions were not administered to one Round 3 respondent.

<u>Examples in parenthesis</u>
In order to test whether the examples provided in parenthesis were necessary interviewers did not initially administer them. This was the case for all rounds of testing. However, the examples provided in the question stem proved helpful in indicating to respondents how the different types of violence or harassment were defined.

<u>Testing the measurement concept</u>
Across all three rounds, no one answered 'Yes' to the question about sexual harassment or assault, just one respondent answered 'Yes' to the question about physical assault, and three respondents answered 'Yes' to the question about verbal abuse or bullying. Nevertheless, it was important to ascertain whether the measurement concept was understood. In many cases, even when it had not happened to them, respondents verified their understanding and could describe instances where friends or coworkers had experienced violence or harassment: *"I've heard stories of friends…who have had situations…have been verbally abused over some sort of thing, like their appearance, or how they talk, or where they're from, like racial problems."*

Climate safety: Introductory statement

INTRO5: Think about all the paying jobs you have ever had outside of your own home.

As mentioned, the scope of the question was expanded in Round 3 testing to be more inclusive. Round 3 respondents were asked about any relevant experiences during their lifetime of work, and all answered accordingly. For example, a Round 3 respondent confirmed that he was considering both his current job as a bicycle messenger as well as his job as an instructor at summer camp: *"All the jobs, both of them."* Another Round 3 respondent considered her current job at the pharmacy which she did during the school year, her summer landscaping job, and also a babysitting job she had done a couple of years prior. Because of their age respondents had a limited work history and therefore did not have difficulty thinking about these climate safety issues across their lifetime of work.

Climate safety: Sexual harassment or assault

(INTRO5: Think about all the paying jobs you have ever had outside of your own home.)

Q16. **While working at a paying job,** have you **ever been sexually harassed** or **sexually assaulted,** for example, been inappropriately touched, had sexual comments made about how you look, been shown photos or videos of a sexual nature?
    A. I have never had a paying job
    B. Yes
    C. No

Findings

Across all three rounds no one answered 'Yes' to this question.

When answering this question respondents understood the concept of being sexually harassed or assaulted. During Rounds 1 and 2 testing interviewers did not initially read out the examples provided. Instead, respondents were asked to provide their own definitions of sexual harassment or assault which generally concurred with the examples provided in the question stem: *"From small little innuendos to straight up like being assaulted."* Respondents also demonstrated an understanding that this type of harassment or assault could be more nuanced, with emphasis on how it made someone feel:

> *"Being disrespectful towards me, saying uncomfortable words, just being uncomfortable overall."*

> *"...making inappropriate comments to a co-worker or touching them inappropriately... It's not what you say or do to them but if you say something that makes someone feel uncomfortable or touching them in a way they don't want to be touched."*

Respondents mentioned that the sexual harassment or assault would be unsolicited and non-consensual: *"Um, someone doing something sexual to me after I told them no and when they don't have my consent"* and more likely from those in a position of authority: *"I guess in terms of people more superior to you trying to take advantage."* One respondent thought only about adults as being the perpetrators of sexual harassment or assault. She did not think that the question applied to her working situation as a babysitter, *"Because the adults that I work with are gone when I work..."* One respondent included, *"...being called names that pertain to your gender, or sexuality"* in her definition. Being shown photos or videos of a sexual nature, or sexual comments made about how you look, were not mentioned by any respondents. Indeed, the examples in parenthesis were said to be helpful in clarifying the definitions to be applied: *"I think the examples are really good because I think definitions are different to everyone, so having examples is helpful."* One respondent said that she had initially associated physical assault with sexual assault, but the examples helped her to distinguish between the two, *"But then like, when you gave the examples, I think it made sense what it was asking."*

<u>Requiring in-person interaction</u>
In general, respondents thought about in-person assault or harassment; those working virtually from home did not consider that it could happen to them because they did not have any personal interactions with other people. One respondent, who worked online as a database administrator said, *"That doesn't apply to me in any way because I work at home."* Another respondent, who did freelance design work online from home explained that he had little interaction with others and those he did have were less personable, *"There really isn't much interaction. The interactions that I do have are…work-related interactions, virtual…Yeah, it's pretty anonymous, at the end of the day, it is just the output that* [the client] *is interested in."*

Similarly, those who worked with people they knew and trusted, or where there were other people around, did not think they would experience sexual harassment or assault: "… *there are a lot of people around all the time so I don't think something like that could happen."* One respondent working in an all-female environment with people she knew well said, *"I'm not saying that it couldn't happen…we are all female. So, that's a highly unlikely scenario for me right now."*

Climate safety: Physical Assault

> **(INTRO5: Think about all the paying jobs you have ever had outside of your own home.)**
>
> Q17. **While working at a paying job,** have you **ever been physically assaulted**, for example, been hit, pushed, kicked, or slapped?
>   A. I have never had a paying job
>   B. Yes
>   C. No

Findings

Across all three rounds only one respondent answered 'Yes' to this question.

<u>Question order</u>
During Round 1 testing, one respondent included sexual assault in his definition of physical assault. As a result, the question order was changed to ask about sexual assault prior to asking about physical assault. The question order worked better in helping respondents to determine a difference between the two concepts. For example, one Round 2 respondent said, *"Since we already like covered like sexual harassment and sexual assault, I would consider, since this is a completely separate question, physical assault would be like, putting your hands on someone, like pushing them or punching them or like hitting them or anything like that in that range."* Nevertheless, one Round 2 and one Round 3 respondent described sexual assault when asked about physical assault before the examples were provided, demonstrating the importance of using the examples in the question stem.

The one respondent who answered 'Yes' to this question described two separate incidents working at a fast food restaurant where he had been physically assaulted by a customer: *"Well, um…I was working at the window and I got spit on by a customer…there was another time I got a drink thrown at* [me].*"*

Before the examples were provided by the interviewer respondents described physical assault as involving non-consensual personal touching carried out on-purpose by the perpetrator:

> *"To me physically assaulted is like someone just putting their hands on you if you are not friends…even if you are friends you know the difference between playing and not playing."*

> *"…if somebody like hit me purposively that's physical assault, just in general, if they ever like do anything purposely that's physical assault to me."*

> *"Any type of pushing, hitting, hair pulling, punching, anything like that."*

Requiring in-person interaction

As mentioned previously, when answering the questions about assault, those with online jobs and those who worked from home said that they felt the question did not apply to them because they did not have any physical contact with other people.

Climate safety: Verbal abuse or bullying

(INTRO5: Think about all the paying jobs you have ever had outside of your own home.)

Q18**. While working at a paying job,** have you **ever been verbally abused** or **bullied**, for example, been name called or insulted, threatened with physical harm, screamed, or yelled at with offensive language, had rumors spread about you?
  A. I have never had a paying job
  B. Yes
  C. No

Findings

Across all three rounds, three respondents answered 'Yes' to this question.

Type of verbal abuse or bullying experienced

Those who answered 'Yes' to this question described experiencing verbal abuse from customers, in some cases a near daily occurrence. As one grocery store worker explained, *"Well, it's almost like an everyday thing with customers who are in a rush or in a hurry, and sometimes they don't get their order right because we are in a rush or in a hurry. Or, they're just having a bad day, yeah…Sometimes they say…curse words and a bunch of mean, ugly words."* Respondents also described being bullied by work colleagues. One farm worker described having rumors spread about her which had *"mentally hurt."* She answered, *"Probably rumors the last one, that's basically it not anything else."* Another grocery store worker described *"cussing"* from his manager because he had been late for a shift.

A few were not certain if their experiences would count as verbal abuse or bullying. Indeed, for some, a general culture of verbal abuse or bullying in the workplace had an almost normalizing effect on their perception of whether they were being verbally abused or bullied, which may lead to under reporting. For example, one respondent, who worked in a fast-food restaurant, described a culture of verbal abuse and bullying from managers, coworkers and customers alike. Her initial answer after hearing the question was *"Kind of."* On probing, she could not decide whether to answer 'Yes' or 'No' but described being yelled at by her manager and coworkers who *"...are really rude"* and would *"mumble under their breath and think you can't hear them,"* as well as verbal abuse from customers.

Those who answered 'No' to this question described verbal abuse or bullying to mean the use of degrading, harsh or unkind language and mocking. Some also described the verbal abuse or bullying as being persistent, and understood that it was not necessarily what was said but how it was received:

> *"Verbal abuse and bullying would definitely be someone talking down on me. Saying I was not good enough or that I sucked."*

> *"Verbally abused is like a person just saying things to you that might make you uncomfortable or hurt your feelings and make you not want to be there."*

> *"Bullying is when someone is saying something that is not nice to you and you have asked them to stop but they won't. Verbal abuse is just being extremely mean to someone to the point when it is affecting them. You could say something and not actually use mean words but you could mean it to be mean."*

A few respondents made a distinction between being verbally abusive and being 'rude' or 'mean' based on the emotional impact, whether the interaction was sustained over a period of time, and whether they felt the interaction was directed at them personally, which could also lead to underreporting.

> *"I think being rude, to me, is like, people can make certain rude comments or something that they maybe shouldn't have said, but it's not something that I am going to think about for a long time and be like 'Wow, that was really hurtful.' Verbal abuse is yelling at someone and… like after they have tried to help you, you just keep, like, putting them down, keep saying rude things, like, constantly over and over."*

> *"Maybe by a customer, but never the staff…Because well, actually, I don't think it was directed at me, it was more of a general statement. It was a shoplifting case. People get pretty heated when they get called out…so I don't think it was directed at me so I'm going to say 'No' for that one."*

> *"I have…but I'm not sure like – what qualifies for that…Because, when I was working at the camp, it was the kids who were being really rude sometimes, some of the kids. But, I don't, I don't know if that counts. I wouldn't count that, but then you were providing examples… and I'm like 'well, that did happen!' I don't know if I count that, I don't know…I don't think they had malicious intentions, it was kids being kids."*

Without the examples provided in the question stem respondents may not consider some kinds of verbal abuse or bullying. For example, a few respondents queried the example of spreading rumors provided in the question stem which they considered of lesser importance and associated with school rather than the workplace. Another reason why the examples are important.

<u>Requiring in-person interaction</u>
Some, but not all, of those whose paying jobs were online, did not consider that this question applied to them. For example, a respondent who worked online as a graphic designer said: *"Okay, it doesn't apply to me at all"* explaining that he was thinking about in-person interactions even though during probing he acknowledged that it was possible for someone to be verbally aggressive in their online interactions. In addition, those who worked with family members found it difficult to imagine that verbal abuse or bullying could happen to them.

VOLUNTEER: Unpaid volunteer or community service work

INTRO6: The next question asks about any unpaid volunteer or community service work you have done in the past 30 days.

Q19. **During the past 30 days**, how many hours did you spend doing any unpaid volunteer or community service work?
  A. I did not do any unpaid volunteer or community service work during the past 30 days
  B. 1 to 5 hours
  C. 6 to 10 hours
  D. 11 to 20 hours
  E. 21 to 30 hours
  F. 31 or more hours

This question is intended to capture unpaid volunteer or community service work performed by the student, specifically the number of hours spent doing this type of work.

Changes to the question wording across rounds

This question did not change substantially across rounds. Following Round 1, the word 'total' was removed from the question stem because one respondent initially understood the question as asking for the total number of community service hours he had accrued throughout his high school career. Following Round 2, the reference period was changed to be more precise in specifying the past 30 days rather than past month, and to be consistent with the YRBSS approach to specifying time periods in the questionnaire.

Findings

Across all three rounds, 14 respondents reported having undertaken some kind of unpaid volunteer or community service work during the past month or 30-day period.[28] All understood that 'volunteer work' was something that they chose to do and for which they were not paid:*"…stuff you do voluntarily for free and you can help others."* A few were unsure about the meaning of 'community service work' or understood that it was describing a way to make reparation: *"Community service work sounds like you got in trouble and the government is having you fix the environment or help people out as a way to pay back."* Comprehension of the measurement concept was also evidenced by the examples of unpaid volunteer or community service work provided by the young people in our sample. Descriptions of such unpaid work undertaken during the past month or 30-day period included, helping out at community events, coaching sports or general youth work with children younger than themselves, and volunteering at sporting events such as at the local ball park. One respondent volunteered for an organization supporting COVID-19 relief activities. Those who had not undertaken any unpaid volunteer or community service work during the reference period nevertheless demonstrated their understanding of the kind of work that would entail, describing the kind of work they had done in the past, such as volunteering at a summer camp, or helping at a homeless person or animal shelter, or they described the kind of work they thought would be involved: *"It might mean trying to commit your time to help other people. It could be helping other students like with their grades, it could be helping senior citizens do whatever."*

Defining past month
During earlier rounds of testing, when asked about the past month, some respondents reported on the past calendar month and some on the past 30 days from the interview date. A few respondents thought back only to the start of the month in which the interview was being conducted, others thought beyond the reference period and included volunteer work they had undertaken longer ago.[29] As a result, in Round 3, the reference period was changed to be more precise in specifying the past 30 days, and to be consistent with the YRBSS approach to specifying time periods in the questionnaire. Only two Round 3 respondents had undertaken volunteer or community service work within the past 30 days. Both answered within the correct time period.

Response options
Response options were amended between Rounds 1 and 2 such that the groupings used were consistent with previous questions (Question 2 and Question 3) about number of hours worked. During Round 1 testing one respondent considered all of the hours he had spent doing unpaid community service work throughout his high school career and answered *"23 hours"* explaining that he only needed to complete one more hour to fulfil the state requirement for graduating high school. In fact, during the past month,

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[28] It should be noted that students living in some states told us they were required to undertake a certain number of volunteer or community service hours in order to graduate high school.
[29] Also known as telescoping

he had not undertaken any volunteer work. To try and mitigate this issue the word 'total' was removed from the question stem as unnecessary.

It is worth noting that a few respondents said that the number of hours they spent volunteering varied month to month. Indeed, some also said that they spent more time volunteering during the summer months: *"I'm thinking about the last month, and it's been pretty sparse. Usually it's more involved during the summer and then it takes a backseat during school."* Sometimes the volunteer hours were undertaken during school hours so were not in addition to the time students spent at school. One respondent said that she helped her teacher to grade school papers during her lunch break. Another said that she was credited for the volunteering hours she spent helping out at school clubs during school hours.

Job Type: Work on a farm or ranch

INTRO7: The next two questions ask about work you have done on a farm or ranch.

Q20. **During the past 12 months,** have you worked on a farm or ranch? Do not include volunteer or community service work or club activities like 4H.

    A. No
    B. Yes, I worked on a farm or ranch that my family <u>owns</u>
    C. Yes, I worked on a farm or ranch that my family <u>does not own</u>

Agricultural work is a large source of young worker injuries and fatalities.[30] This question is intended to capture if agricultural work has been performed by the respondent. The reference period of the prior 12 months is intended to capture any seasonal work. Answer choices establish whether agricultural work was done on a family farm or not.

Changes to the question wording across rounds

Following Round 1, an introductory statement was added prior to this question to help orientate respondents. However, not all respondents understood the meaning of the term 'agricultural work' used in that introductory statement. Following Round 2, the statement was changed to match the wording used in the question stem - farm or ranch.

Following Round 1, examples provided in the question stem explaining the meaning of 'farm, ranch or dairy' were removed since they were thought not to enhance understanding - borne out in subsequent rounds of testing. The term 'dairy' was also removed from the question stem since the term 'farm' was considered all encompassing. Following Round 2, the instruction not to include volunteer or community

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[30] NIOSH [2017]. Young worker injury deaths: a historical summary of surveillance and investigative findings. By Perritt KR, Hendricks KJ, Goldcamp EM. Morgantown, WV: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, DHHS (NIOSH) Publication No. 2017-168.

service work was added to the question stem to mitigate any confusion over whether or not to include such unpaid work.

Findings

This question was not administered to everyone due to time constraints during the interview. Just two respondents answered 'Yes,' during the past 12 months they had worked on a farm or ranch (that their family did not own). Both respondents lived in areas they described as rural, and both described summer jobs. One respondent had worked on a tobacco farm; the other sold produce from a farm stand.

<u>Comprehension of type of work</u>
Despite the fact that most respondents had never worked on a farm or ranch the nature of the industry was generally understood. Respondents mentioned growing crops and livestock management. Following Round 1 testing, the term 'dairy' was deleted from the question stem since it was thought that the term 'farm' would suffice. There was no evidence during subsequent rounds that this deletion impeded understanding. However, in Round 2, the concept of 'agricultural work' was presented in an introductory statement, which made some respondents think of *"crop farming,"* as opposed to livestock management. One respondent, who lived in a non-rural area explained, *"I think of farming and plants when I think of agriculture. I don't think of animals, I think more environmental like water and plants and stuff like that."* A few respondents admitted to not knowing what the term 'agricultural work' meant, including one respondent who lived in a rural area: *"...I never heard of it."* Indeed, most referred to *"farming"* in general when asked for their interpretation. When asked about the phrase 'farm or ranch' used in the question stem, respondents described in more detail work involving both "*caring for animals or taking care of crops and stuff like that."* For example, a respondent living in a non-rural area explained, *"A farm is anywhere where growing crops or managing livestock and going or selling your product."* Indeed, those unable to explain the meaning of the term 'agriculture' had a better understanding of the nature of a farm or ranch: "*I think of working on a farm like in the country with the animals, that type of farm, or like a crop garden, stuff like that."* Following Round 2 testing, the wording of the introductory statement was changed to match that used in the question stem - farm or ranch.

<u>Inclusion of unpaid volunteer or community service work</u>
The question does not mention whether work done on a farm or ranch should be paid because some young people may not be paid for work they do on a family-owned farm or ranch. However, two respondents queried whether to report their unpaid volunteer work, although ultimately decided not to. The confusion may have been because the question was located immediately after a question about volunteer or community service work. One respondent explained that she did unpaid volunteer work with therapy farm animals. On hearing the question another asked, *"Is this for volunteering or working?...I would assume that this question was for working or volunteering, because it's right after the volunteering question."* Following Round 2 the instruction not to include volunteer or community service work was added to the question stem.

<u>Knowledge of 4H clubs</u>

Respondents are instructed not to include club activities, such as 4H clubs, when answering the question. Only four respondents across all three rounds of testing said that they had heard of 4H clubs, although none had taken part themselves. Two said that 4H was a program offered at their school, but they were not sure what it was about. One had read a book which mentioned 4H clubs. One said that her sibling had been involved in 4H.

Job Type: Migrant work

(INTRO7: The next two questions ask about work you have done on a farm or ranch.)

Q21. **During the past 3 years**, have you **moved** to a different location for part of the year in order to work for pay on a farm or ranch?
     A. Yes
     B. No

This question is intended to capture if the student has been a migrant farm worker in the prior three years.

Changes to the question wording across rounds

As with the previous question, the term 'dairy' was dropped from the question stem since it was thought that the term 'farm' would be all encompassing. The reference period was extended from 12 months to three years to capture less frequent, periodic movement. Respondents were simply asked to indicate if they had moved to a different location to work for pay on a farm or ranch, rather than asking them to conceptualize a specific distance in miles. No further changes were made to the question wording in subsequent rounds.

Findings

Across all three rounds no one answered 'Yes' to this question. Nevertheless, a reasonable evaluation of the measurement constructs captured was made.

<u>Difficulty conceptualizing distance</u>

The version of the question used in Round 1 was created using the U.S. Department of Labor's definition of migrant worker,[31] that is, those who moved at least 75 miles from their usual residence. During Round 1 testing it was apparent that although respondents understood the concept being measured, they struggled to conceptualize a distance of 75 miles. This was true even when they believed they had good perception. For example, one respondent estimated that *"75 miles would probably be from my house to* [name of large city]," when in fact the distance is over 200 miles. Another respondent also tried to visualize the distance in this way "*I guess 75 miles would be a different city, two cities*

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[31] <u>Public Data | U.S. Department of Labor (dol.gov)</u>

over.” One younger respondent described 75 miles as being *“pretty far”* and thought that she had probably only travelled that far when she had gone on vacation to another country. Indeed, another respondent explained that she never travelled very far from her home because of her age, no more than 30 minutes, thinking in terms of travel time rather than distance: *“We are never that far because we are still young... Hours away would be a good distance from here. What places would be 75 miles I don’t even know.”* One older respondent explained that she also thought in terms of time rather than distance unless she was driving, in which case the distance she had travelled was displayed on her GPS[32]: *”...if I’m going to be the one driving, then I use Google Maps and that tells me the miles.”*

Following Round 1 the question was revised to simply ask respondents to indicate if they had moved to a different location to work for pay on a farm or ranch, rather than asking them to conceptualize a specific distance in miles. Those taking part in subsequent rounds, including those who had done farm work, had no firsthand experience or knowledge of migrant working but nevertheless understood the revised question intent, that workers would move either permanently or temporarily to another place to find work on a farm or ranch:

> *“The question is asking if you’ve moved to follow work in order to make money from farming.”*
>
> *“If I moved houses to be near the job that, er, farm I was going to work at.”*
>
> *“... moving out like to rural areas to work at a farm or ranch and not living at my house anymore for a little bit.”*
>
> *“I’ve seen it in movies and stuff, ‘yeah like I’m going to move down south and then be back to you and give you money’ and stuff. That’s what I’ve heard. I’ve never done anything like that or know anyone who has.”*

As with Question 20, the removal of the term ‘dairy’ from the question stem did not appear to affect understanding of the question intent and respondents considered dairy farming when they described their definition of a farm.

Since no respondents answered ‘Yes’ to this question it was not possible to test the reference period of three years.

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[32] Global Positioning System

Appendix 1: Questions on occupational safety and health: Initial and final question wording

> **INTRO1**
> **The next 8 questions ask about your paying jobs, including work at a family business or farm, even if you are not paid directly. When answering these questions do NOT include chores, yard work, or babysitting <u>at your own home</u>.**
>
> **INTRO1**
> **The next set of questions ask about your paying jobs, including work at a family business or farm, even if you were not paid directly. When answering these questions do NOT include chores, yard work or babysitting <u>at your own home</u>.**

> Q3. What is the <u>main</u> reason you work at a paying job? Please select only ONE answer choice.
> A. I do not have a paying job
> B. To earn spending money for myself to buy things I like or want
> C. To earn money for my family (for example: to pay bills, to pay rent, to buy food)
> D. To learn new skills for my college application or job resume
> E. To earn money for college or other post-high school education such as trade school, vocational school, or a certificate program
> F. Other
>
> Q1. What is the **main reason** you worked at a paying job **during the past 12 months**?
> (Select only one response)
> A. I have not worked at a paying job during the past 12 months
> B. To help my family pay bills or buy food
> C. To save money for my future after I graduate high school
> D. To earn day-to-day spending money for myself
> E. To learn new skills
> F. Some other reason

> Q2. During <u>last summer break when you were out of school</u>, how many hours per week did you typically work at all your paying jobs?
> A. I did not have a paying job last summer
> B. 1 to 5 hours
> C. 6 to 10 hours
> D. 11 to 15 hours

     E. 16 to 20 hours

     F. 21 to 30 hours

     G. 31 or more hours

Q2. **Last summer during school break**, how many **hours per week** did you usually work at all your paying jobs?

     A. I did not work at a paying job last summer

     B. 1 to 5 hours per week

     C. 6 to 10 hours per week

     D. 11 to 20 hours per week

     E. 21 to 30 hours per week

     F. 31 or more hours per week

Q1. During a typical week <u>in the school year</u>, how many hours do you work at all your paying jobs?

     A. I do not have a paying job.

     B. 1 to 5 hours

     C. 6 to 10 hours

     D. 11 to 15 hours

     E. 16 to 20 hours

     F. 21 to 30 hours

     G. 31 or more hours

Q3. **During the school year,** how many **hours per week** do you usually work at all your paying jobs?

     A. I do not work at a paying job during the school year

     B. 1 to 5 hours per week

     C. 6 to 10 hours per week

     D. 11 to 20 hours per week

     E. 21 to 30 hours per week

     F. 31 or more hours per week

INTRO4: The next 6 questions ask about how your current paying job may affect your daily life.

Q18. Because of your paying job, how often have you had less time to spend on your schoolwork, family responsibilities (such as chores), or outside activities (such as sports or clubs)?

     F. I do not have a paying job

G. Always
H. Often
I. Sometimes
J. Hardly ever
K. Never

Q4**. During the school year**, how often, if at all, do you have **less time** to spend on schoolwork, family responsibilities (such as chores), or extracurricular activities (such as sports or clubs) **because of working at a paying job?**
    A. I do not work at a paying job during the school year
    B. Never
    C. Sometimes
    D. Most of the time
    E. Always

Q4. Which category <u>best</u> describes the hours you usually work at your paying job during the school week (Monday-Friday)? (If you have more than one paying job think about the job you work the most hours.)
    A. I do not have a paying job during the school week
    B. Day shift (typically between 7am – 4pm)
    C. Evening shift (typically between 4pm – 11pm)
    D. Night shift (typically 11pm – 7am)
    E. Irregular hours or shift rotates – that is, it changes from day to evening or night
    F. Some other schedule

INTRO2: Think about your paying jobs during the school year. If you have more than one paying job think about the job you work the most hours.

Q5. **During the school year,** when do you usually work at your paying job **during the school week (**Monday to Friday)? If you have more than one paying job during the school week think about the job you work the most hours.
    A. I do not work at a paying job during the school week
    B. Between 7am and 4pm (Daytime)
    C. Between 4pm and 11pm (Evenings)
    D. Between 11pm and 7am (Nights)
    E. When I work during the school week changes (for example, from daytime to evenings)

Q5. Which category <u>best</u> describes the hours you usually work at your paying job during the weekend (Saturday and Sunday) in a school year? (If you have more than one paying job think about the job you work the most hours.)

      F. I do not have a paying job during the weekend
      G. Day shift (typically between 7am – 4pm)
      H. Evening shift (typically between 4pm – 11pm)
      I. Night shift (typically 11pm – 7am)
      J. Irregular hours or shift rotates – that is, it changes from day to evening or night
      K. Some other schedule

Q6. **During the school year**, when do you usually work at your paying job **on weekends** (Saturday and Sunday)? If you have more than one paying job on weekends think about the job you work the most hours.

      A. I do not work at a paying job on weekends
      B. Between 7am and 4pm (Daytime)
      C. Between 4pm and 11pm (Evenings)
      D. Between 11pm and 7am (Nights)
      E. When I work on weekends changes (for example, from daytime to evenings)

INTRO2: Think about paying jobs you have had in the past 12 months.

Q6. During the past 12 months, which one of the following <u>best</u> describes the place where you now or most recently worked for pay? (If you work in more than one place, choose the place you work the most hours.)

      I. I did not work for pay during the past 12 months
      J. Restaurant (including fast food, ice cream, or coffee shop)
      K. Retail store (including grocery, clothing, convenience/gas station, pharmacy, or pet store)
      L. Recreation or entertainment place (including a movie theater, swimming pool, golf course, amusement park, or camp)
      M. Farm, ranch or dairy (including family-owned)
      N. Office
      O. Babysitting, landscaping or yard work done <u>outside</u> of your own home
      P. Some other place

Q7. **During the school year,** which **one** of the following **best describes** the place where you work at your paying job? If you have more than one paying job during the school year think about the job you work the most hours.

      A. I do not work at a paying job during the school year
      B. Restaurant or fast food place
      C. Retail store, grocery store or pharmacy

D. Recreation or entertainment place
E. Farm or ranch (including family-owned)
F. Office work
G. Babysitting, landscaping or yard work done <u>outside</u> of your own home
H. Some other place

Q13. While working at your paying job, have you received any training on how to handle workplace bullying, violence, or sexual harassment?
    A. I do not have a paying job.
    B. Yes
    C. No

Q8. **While working at your paying job** during the **school year,** have you received any on-the-job training about how to protect **yourself** from workplace bullying, violence, or sexual harassment?
    A. I do not work at a paying job during the school year
    B. Yes
    C. No

Q15. While working at your paying job, do you feel safe enough to share concerns related to workplace safety involving verbal abuse, bullying, physical violence, or sexual harassment to your supervisor or manager?
    A. I do not have a paying job
    B. Yes
    C. No

Q9. **While working at your paying job** during the **school year**, do you feel that you could talk to your supervisor or manager about any workplace bullying, violence, or sexual harassment?
    A. I do not work at a paying job during the school year
    B. I work at a paying job but do not have a supervisor or manager
    C. Yes
    D. No

Q12. While working at your paying job, have you received any safety training related to prevention of accidents and injuries?

D. I do not have a paying job
E. Yes
F. No

Q10. While working at your paying job during the **school year,** have you received any safety training about how to protect **yourself** from being injured at work?
  A. I do not work at a paying job during the school year
  B. Yes
  C. No

Q14. While working at your paying job, do you feel safe enough to share concerns related to a work task you felt was unsafe to your supervisor or manager?
  E. I do not have a paying job
  F. Yes
  G. No

Q11. While working at your paying job during the **school year,** do you feel you could talk to your supervisor or manager about an unsafe work task you might be asked to do?
  A. I do not work at a paying job during the school year
  B. I work at a paying job but do not have a supervisor or manager
  C. Yes
  D. No

Q19. How often do you find your paying job to be stressful?
  A. I do not have a paying job.
  B. Always
  C. Often
  D. Sometimes
  E. Hardly ever
  F. Never

Q12. How often, if at all, do you find working at **your paying job** to be stressful?
  A. I do not work at a paying job
  B. Never
  C. Sometimes
  D. Most of the time
  E. Always

INTRO5: Now think about all of the paying jobs you have had in the past 12 months.

Q20. During the past 12 months, while you were working at a paying job, were you ever injured badly enough on the job that you needed to go to a nurse, doctor, or hospital?
      D. I have not worked for pay during the past 12 months
      E. I have worked during the past 12 months but have never been injured badly enough to go to a nurse, doctor, or hospital
      F. Yes, I was injured at work during the past 12 months and needed to go to a nurse, doctor, or hospital

INTRO3: Think about all of your paying jobs during the past 12 months

Q13. **During the past 12 months, while working at a paying job**, have you been injured badly enough on the job that you needed to go to a nurse, doctor, or hospital?
      A. I did not work at a paying job during the past 12 months
      B. Yes
      C. No

Q21. During the past 12 months, have you taken pain medication for an injury that happened while you were working at a paying job?
      A. I have not worked for pay during the past 12 months
      B. No, I did not take any pain medication for my workplace injury
      C. Yes, I <u>only</u> took non-prescription medication like Tylenol or Advil
      D. Yes, I took a prescription pain medicine (such as Vicodin, Hydrocodone, OxyContin, or Percocet) that was prescribed to me by a health professional for this injury
      E. Yes, I took a prescription pain medicine (such as Vicodin, Hydrocodone, OxyContin, or Percocet) that was <u>not</u> prescribed to me by a health professional for this injury

Q14. **During the past 12 months**, have you taken **prescription pain medication** (such as Vicodin, Oxycontin or Percocet) for an injury that happened while you were **working at a paying job?**
      A. I did not work at a paying job during the past 12 months
      B. I did not have a workplace injury during the past 12 months
      C. Yes, I took prescription pain medication for my workplace injury
      D. No, I did not take prescription pain medication for my workplace injury

Now think about the past month.

Q23. During the past month, has working at a paying job, in addition to completing schoolwork, family responsibilities (such as chores) or participating in outside activities (such as sports or clubs), made you feel tired or worn out?
- A. I did not have a paying job during the past month.
- B. Never
- C. Several days
- D. More than half the days
- E. Nearly every day

Final question wording
INTRO4: Think about all your paying jobs during the past 30 days

Q15. **During the past 30 days**, how often, if at all, has working at a paying job, in addition to completing schoolwork, family responsibilities (such as chores), or extracurricular activities (such as sports or clubs), made you feel tired or worn out?
- A. I did not work at a paying job during the past 30 days
- B. Never
- C. Sometimes
- D. Most of the time
- E. Always

Initial question wording
Q10. While working at your paying job, have you been sexually harassed or assaulted (for example, been inappropriately touched, had sexual comments made about how you look, been shown inappropriate photos or videos such as those with nudity) by a supervisor, co-worker, or customer?
- A. I do not have a paying job
- B. Yes
- C. No

Final question wording
INTRO5: Think about all the paying jobs you have ever had outside of your own home.

Q16. **While working at a paying job,** have you **ever been sexually harassed** or **sexually assaulted,** for example, been inappropriately touched, had sexual comments made about how you look, been shown photos or videos of a sexual nature?
- D. I have never had a paying job
- E. Yes
- F. No

INTRO3: The next 9 questions ask about the safety in the workplace.
Now think about your current paying job, including work for a family business or farm even if you are not paid directly. Do NOT include chores, yard work, or babysitting <u>at your own home</u>. If you have more than one paying job think about the job you work the most hours.

Q9. While working at your paying job, have you been physically assaulted (for example, been hit, pushed, kicked, or slapped) by a supervisor, co-worker, or customer?
      A. I do not have a paying job
      B. Yes
      C. No

Q17. **While working at a paying job,** have you **ever been physically assaulted**, for example, been hit, pushed, kicked, or slapped?
      D. I have never had a paying job
      E. Yes
      F. No

Q11. While working at your paying job, have you ever been verbally abused or bullied (for example, been name called or insulted, threatened with physical harm, screamed or yelled at with offensive language, had rumors spread about you) by a supervisor, co-worker, or customer?
      A. I do not have a paying job.
      B. Yes
      C. No

Q18. **While working at a paying job,** have you **ever been verbally abused** or **bullied**, for example, been name called or insulted, threatened with physical harm, screamed, or yelled at with offensive language, had rumors spread about you?
      D. I have never had a paying job
      E. Yes
      F. No

INTRO6: The next question asks about any unpaid volunteer or community service work you have done in the past month.

Q24. During the past month, about how many total hours did you spend doing unpaid volunteer or community service work?
    A. I did not do any unpaid volunteer or community service work during the past month.
    B. 1 – 5 hours
    C. 6 – 10 hours
    D. 11 – 15 hours
    E. 16 – 20 hours
    F. 21 hours or more

INTRO6: The next question asks about any unpaid volunteer or community service work you have done in the past 30 days.

Q19. During the past 30 days, how many hours did you spend doing any unpaid volunteer or community service work?
    A. I did not do any unpaid volunteer or community service work during the past 30 days
    B. 1 to 5 hours
    C. 6 to 10 hours
    D. 11 to 20 hours
    E. 21 to 30 hours
    F. 31 or more hours

Q7. During the past 12 months, have you worked on a farm, ranch, or dairy (including tending to livestock or planting, maintaining, or harvesting crops)? Do not include club activities like 4H.
    A. No
    B. Yes, I worked on a farm, ranch, or dairy that my family <u>owns.</u>
    C. Yes, I worked on a farm, ranch, or dairy that my family <u>does not own.</u>

INTRO7: The next two questions ask about work you have done on a farm or ranch.

Q20. **During the past 12 months,** have you worked on a farm or ranch? Do not include volunteer or community service work or club activities like 4H.
    A. No
    B. Yes, I worked on a farm or ranch that my family <u>owns</u>
    C. Yes, I worked on a farm or ranch that my family <u>does not own</u>

Q8. During the past 12 months, have you travelled approximately 75 miles or more from your usual residence to work for pay on a farm, ranch, or dairy (this is known as migrant or migrante work)?

    A. Yes
    B. No

INTRO7: The next two questions ask about work you have done on a farm or ranch.

Q21. During the past 3 years, have you **moved** to a different location for part of the year in order to work for pay on a farm or ranch?

    A. Yes
    B. No