Supplemental Information

IPSOS KNOWLEDGEPANEL AND THE GOVERNMENT & ACADEMIC OMNIBUS METHODOLOGY

Introduction

Ipsos has recruited the first online research panel that is representative of the entire US population. Panel members are randomly recruited through probability-based sampling, and non-Internet households are provided with an Internet-enabled tablet so that they can join the panel and complete surveys.

Ipsos recruits panel members by using address-based sampling (ABS) methods (previously, we relied on random-digit dialing methods). Once household members are recruited for the panel and assigned to a study sample, they are notified by e-mail for survey taking, or panelists can visit their online member page for survey taking (instead of being contacted by telephone or postal mail). This allows surveys to be fielded quickly and economically. In addition, this approach reduces the burden placed on respondents, because e-mail notification is less intrusive than telephone calls, and most respondents find answering online questionnaires more interesting and engaging than being questioned by a telephone interviewer. Furthermore, respondents have the convenience to choose what day and time to complete their assigned survey.

KnowledgePanel Methodology Information

KnowledgePanel is the largest online panel that relies on probability-based sampling techniques for recruitment; hence, it is the largest national sampling frame from which fully representative samples can be generated to produce statistically valid inferences for study populations. Our panel provides samples with the highest level of representativeness available in online research for measurement of public opinions, attitudes, and behaviors. The panel was first developed in 1999. Panel members are randomly selected so that survey results can properly represent the US population with a measurable level of accuracy, features that are not obtainable from nonprobability panels (for comparisons of results from probability versus nonprobability methods, see Yeager et al[29]).

KnowledgePanel's recruitment process was originally based exclusively on a national random-digit dialing sampling methodology. In 2009, in light of the growing proportion of cellphone-only households, we migrated to an ABS recruitment methodology via the US Postal Service's Delivery Sequence File. ABS not only improves population coverage but also provides a more effective means for recruiting hard-to-reach individuals, such as young adults and minorities. Households without Internet connection are provided with a web-enabled device and free Internet service.

After initially accepting the invitation to join the panel, participants are asked to complete a short demographic survey (the initial core profile survey); answers to this survey allow efficient panel sampling and weighting for future surveys. After completing the core profile survey, participants become active panel members. All panel members are provided privacy and confidentiality protections.

ABS Recruitment

To enhance the Delivery Sequence File–based sampling frame used for address selection, we require that our sample vendor append various ancillary data to each household address, thus facilitating sample stratification to proactively address differential recruitment rates observed by some demographics.[30] Taking advantage of such refinements, quarterly samples are selected by using a disproportionate stratified sampling methodology; typically oversampled households include those likely to have an 18 to 29 year old, likely to have a Hispanic household member, and those in rural areas.

Adults from sampled households are invited to join KnowledgePanel through a series of mailings, including an initial invitation letter, a reminder postcard, and a subsequent follow-up letter. Moreover, telephone refusal-conversion calls are made to nonresponding households for which a telephone number could be matched to a physical address. Invited households can join the panel by doing the following:

- completing and mailing back a paper form in a postage-paid envelope;
- calling a toll-free hotline phone number maintained by Ipsos; or
- going to a designated Ipsos Web site and completing the recruitment form online.

Household Member Recruitment

During the initial recruitment survey, all household members are enumerated. After enumeration, attempts are made to recruit every household member who is at least 13 years old to participate in KnowledgePanel surveys. For household members aged 13 to 17, consent is collected from the parents or the legal guardian during the initial recruitment interview. No direct communication with teenagers is attempted before obtaining parental consent. Although surveys can be conducted with these teenagers directly, in most instances, teenager surveys are conducted by first selecting a sample of active members who are parents. This parent route alternative makes it possible to reach a larger sample of teenagers.

Survey Sampling From KnowledgePanel

Once panel members are recruited and profiled by completing our core profile survey, they become eligible for selection for client surveys. Typically, specific survey samples are based on the equal probability selection method for general population surveys. Customized stratified random sampling based on "profile" data can also be implemented as required by the study design. Profile data can also be used when a survey calls for pre-screening: that is, members are drawn from a subsample of the panel, such as women, Republicans, grocery shoppers, etc. (This can reduce screening costs, particularly for rare subgroups.) In such cases, we take care to ensure that all subsequent

survey samples drawn that week are selected in such a way as to result in a sample that remains representative of the panel distributions.

Survey Administration

Once assigned to a survey, members receive a notification e-mail letting them know there is a new survey available for them to complete. This e-mail notification contains a link that sends them to the survey. No login name or password is required. The field period depends on the client's needs and can range anywhere from a few hours to several weeks.

After 3 days, automatic e-mail reminders are sent to all nonresponding panel members in the sample. Additional e-mail reminders are sent as needed. To assist panel members with their survey taking, each individual has a personalized member portal listing all assigned surveys that have yet to be completed.

Ipsos also operates an ongoing modest incentive program to encourage participation and create member loyalty. The incentive program includes special raffles and sweepstakes with both cash rewards and other prizes to be won. Typically, we assign panel members no more than 1 survey per week. On average, panel members complete 2 to 3 surveys per month, with durations of 10 to 15 minutes per survey. An additional incentive is usually provided for longer surveys.

Response Rates

As a member of the American Association of Public Opinion Research (AAPOR), Ipsos follows the AAPOR standards for response rate reporting. Although the AAPOR standards were established for single-survey administrations and not for multistage panel surveys, we use the Callegaro and DiSogra[14] algorithms for calculating KnowledgePanel survey response rates. Generally, the KnowledgePanel survey completion

rate is ~60%, with minor variations due to survey length, topic, sample specifications, and other fielding characteristics. In contrast, virtually all surveys that employ nonprobability online panels typically achieve survey completion rates in the low single digits.

Survey Instrument

Base: All Respondents

Question 1 [S] Which of the following statements best describes your household's ability to afford the food you needed before March 2020 when coronavirus (COVID-19) began to spread in the United States?

1. We could always afford good nutritious meals
2. We could always afford enough to eat but not always the kinds of food we should eat
3. Sometimes we could not afford enough to eat
4. Often we could not afford enough to eat

Base: All Respondents

Question 2 [S] Before March 2020 when coronavirus (COVID-19) began to spread in the US, did you or any member of your household receive benefits from (select all that apply):

Scripter, randomize responses:

1. The Food Stamp Program or SNAP (the Supplemental Nutrition Assistance Program)
2. WIC (the Special Supplemental Nutrition Program for Women, Infants, and Children)
3. Food banks or food pantries
4. [Show if xparent=1] Free or reduced-price lunch at school (the School Lunch Program)
5. None of these (Exclusive)

Base: if xparent=1

Question 3 [S] Before March 2020 when coronavirus (COVID-19) began to spread in the US, what best describes the health insurance status of your child(ren):

Scripter, randomize responses:

1. No insurance
2. Medicaid or the Children's Health Insurance Program
3. Private insurance from my employer
4. Private insurance purchased directly from an insurer
5. Private insurance purchased on a health insurance exchange
6. TriCare
7. Other

Base: All Respondents

Question 4 [S] Which of the following statements best describes your household's ability to afford the food you need since March 2020 when coronavirus (COVID-19) began to spread in the US?

1. We could always afford good nutritious meals
2. We could always afford enough to eat but not always the kinds of food we should eat
3. Sometimes we could not afford enough to eat
4. Often we could not afford enough to eat

In addition to programs that existed before March 2020, Congress passed the Families First Act which allowed families of children who qualified for free or reduced-price lunch at school to receive cash to purchase food for their children in grocery stores. The program is also called Pandemic-EBT.

Base: All Respondents

Question 5 [S] Since March 2020 when coronavirus (COVID-19) began to spread throughout the US, have you received assistance from any of the following (check all that apply):

Scripter, randomize responses:

1. The Food Stamp Program or SNAP (the Supplemental Nutrition Assistance Program)

2. WIC (the Special Supplemental Nutrition Program for Women, Infants, and Children)
3. Food banks or food pantries
4. [Show if xparent=1] Free Pandemic EBT (benefits to purchase food for families of children who qualify for free or reduced-price school meals)
5. [Show if xparent=1] Free Food picked up from your child's school or delivered from the school
6. None of these (Exclusive)

Base: if xparent=1

Question 6 [S] Since March 2020 when coronavirus (COVID-19) began to spread in the US, what best describes the health insurance status of your child(ren):

Scripter, randomize responses:

1. No insurance
2. Medicaid or the Children's Health Insurance Program
3. Private insurance from my employer
4. Private insurance purchased directly from an insurer
5. Private insurance purchased on a health insurance exchange
6. TriCare
7. Other

Scripter: rotate the order of questions 7a and 7b.

Base: if xparent=1

Question 7a [S] Since March 2020, has the physical health of any of your children gotten better or worse?

1. Yes, gotten better
2. Yes, gotten worse
3. No, there has been no change

Base: if xparent=1

Question 7b [S] Since March 2020, has the behavioral health of any of your children gotten better or worse?

1. Yes, gotten better
2. Yes, gotten worse

3. No, there has been no change

Base: if xparent=1

Question 8 [S] Since March 2020, has your child(ren) had a health care visit cancelled or delayed for any reason?

1. Yes
2. No

Base: if Q8=1

Question 8a [M] What reasons were given for it being cancelled or delayed? Please check all that apply.

Scripter, randomize items:

1. Well child check up
2. Vaccination
3. Follow-up visit for a chronic or long-term condition
4. Sick visit to my child's regular doctor
5. Visit with a subspecialist doctor (such as a pediatric allergist, cardiologist or neurologist)
6. Surgery or procedure
7. X-ray, ultrasound, CT scan, MRI scan or other diagnostic procedure
8. Physical, occupational, or speech therapy appointment
9. Behavioral health visit with a psychiatrist, psychologist, or other therapist
10. Medicine or drug given at a doctor's office or hospital
11. other service:

Base: if xparent=1

Question 9 [S] Since March 2020, did you lose regular child care arrangements for at least one day? (for example, due to cancellations from babysitters, day care center, or other care providers)

1. Yes
2. No

Base: if Q9=1

Question 9a [M] When this happened, was there a replacement caregiver?

Please select all that applied during this period.

1. Yes: myself or the child's/ children's other parent
2. Yes: a grandparent
3. Yes: an adult family member
4. Yes: an older child family member
5. Yes: an adult neighbor or friend
6. Yes: an older child neighbor or friend
7. No: My child(ren) stayed with a friend during the day
8. No: my child(ren) took care of herself/himself/themselves

Scripter: Rotate the order of questions 10a and 10b

Base: if xparent=1

Question 10a [S] Since March 2020, has your own physical health gotten better or worse?

1. Yes, gotten better
2. Yes, gotten worse
3. No, there has been no change

Base: if xparent=1

Question 10b [S] Since March 2020, has your own mental health gotten better or worse?

1. Yes, gotten better
2. Yes, gotten worse
3. No, there has been no change

SUPPLEMENTAL TABLE 4 Changes in Physical Health Among Parents and Children

Child Physical Health	Parent Physical Health, % (95% CI)		
	Better	Worse	No Change
Better	3.1 (1.8 to 4.4)	0.3 (0.0 to 0.7)	2.5 (1.5 to 3.6)
Worse	0.2 (−0.1 to 0.5)	2.3 (1.2 to 3.4)	1.3 (0.6 to 2.1)
No change	6.8 (5.2 to 8.4)	15.1 (12.7 to 17.6)	68.3 (65.1 to 71.4)

SUPPLEMENTAL TABLE 5 Changes in Mental and Behavioral Health Among Parents and Children

Child Behavioral Health	Parent Mental Health, % (95% CI)		
	Better	Worse	No Change
Better	1.6 (0.6 to 2.5)	1.1 (0.3 to 1.9)	2.8 (1.7 to 3.9)
Worse	0.9 (0.2 to 1.6)	9.6 (7.6 to 11.7)	3.9 (2.7 to 5.0)
No change	2.6 (1.5 to 3.7)	16.1 (13.6 to 18.6)	61.4 (58.1 to 64.7)

SUPPLEMENTAL TABLE 6 Child Health Care Visit Disruptions Among Families With Children <18 Years Old

	Child Health Care Visit Disruptions, % (95% CI)
Child health care visit delayed or cancelled	39.9 (36.6 to 43.2)
Of those, which service was disrupted?[a]	
Well-child check up	49.4 (44.0 to 54.7)
Vaccination	9.3 (6.0 to 12.6)
Follow-up visit for a chronic or long-term condition	8.1 (5.2 to 10.9)
Sick visit to my child's regular doctor	6.1 (3.3 to 8.9)
Visit with a subspecialist doctor	13.0 (9.5 to 16.5)
Surgery or procedure	4.2 (2.0 to 6.4)
Radiology or diagnostic procedure	1.6 (0.3 to 3.0)
Physical, occupational, or speech therapy appointment	6.9 (4.2 to 9.6)
Behavioral health visit	9.4 (6.3 to 12.5)
Medicine or drug given at a doctor's office or hospital	2.7 (0.6 to 4.9)
Other	26.6 (22.0 to 31.2)

[a] Because of the select-all-that-apply nature of this question, the total proportion may be >100%.

SUPPLEMENTAL TABLE 7 Caregiver Disruptions Among Families With Children <18 Years Old

	Caregiver Disruptions, % (95% CI)
Disruption of regular child care	24.1 (21.1 to 27.1)
Of those, replacement caregiver?[a]	
Myself or other parent	74.1 (67.6 to 80.7)
Grandparent	20.4 (14.3 to 26.5)
Adult family member	8.7 (4.7 to 12.8)
Took care of themselves	5.7 (2.2 to 9.3)
Older child family member	5.3 (1.7 to 8.9)
Stayed with a friend	5.2 (1.5 to 9.0)
Adult neighbor or friend	3.0 (0.5 to 5.4)
Older child neighbor or friend	1.1 (−0.1 to 2.3)

[a] Because of the select-all-that-apply nature of this question, the total proportion may be >100%.

SUPPLEMENTAL TABLE 8 Caregiver Disruptions Among Families With Children <18 Years Old, by Age of Children in the Home

	≥1 child 0–5 (45.7%), % (95% CI)	≥1 child 6–12 (50.7%), % (95% CI)	≥1 child 13–17 (44.3%), % (95% CI)
Child care disruptions	38.6 (33.4 to 43.7)	23.2 (19.2 to 27.2)	7.5 (4.9 to 10.1)
Of those, replacement caregiver?[a]			
Myself or other parent	74.6 (66.6 to 82.7)	75.3 (66.8 to 83.8)	67.9 (50.3 to 85.4)
Grandparent	23 (15.5 to 30.6)	16.1 (8.5 to 23.7)	21.4 (5.1 to 37.6)
Adult family member	7.8 (2.9 to 12.6)	9.7 (4.1 to 15.3)	9.1 (0.7 to 17.5)
Stayed with a friend	6.6 (1.6 to 11.6)	2.8 (−1.2 to 6.8)	0 (0 to 0)
Older child family member	5.6 (1.3 to 10)	6.2 (0.8 to 11.6)	8.6 (−0.9 to 18)
Took care of themselves	3.2 (−0.4 to 6.8)	8 (2.8 to 13.1)	11.2 (1.5 to 20.9)
Adult neighbor or friend	1.3 (−0.3 to 2.9)	3.4 (−0.4 to 7.2)	9.1 (−1.3 to 19.6)
Older child neighbor or friend	0.5 (−0.5 to 1.4)	1.5 (−0.6 to 3.7)	2.4 (−2.3 to 7)

[a] Because of the select-all-that-apply nature of this question, these may total >100%; on average, parents selected 1.2, 1.2, and 1.4 responses for each age group, respectively.

SUPPLEMENTAL TABLE 9 Changes in Food Insecurity During COVID-19 Pandemic

Before March 2020	Since March 2020			
	None	Mild	Moderate	Severe
None	62 (58.7 to 65.3)	4.5 (3.1 to 5.9)	0.9 (0.2 to 1.7)	—
Mild	1.9 (1.0 to 2.8)	22.6 (19.7 to 25.4)	1.8 (0.8 to 2.9)	0.3 (0.0 to 0.6)
Moderate	0.1 (−0.1 to 0.3)	1.0 (0.3 to 1.7)	3.2 (1.9 to 4.4)	0.3 (−0.1 to 0.6)
Severe	—	—	0.1 (−0.1 to 0.4)	1.2 (0.3 to 2.1)

—, not applicable.

SUPPLEMENTAL REFERENCES

29. Yeager D, Krosnick J, Chang L, et al. Comparing the accuracy of RDD telephone surveys and Internet surveys conducted with probability and nonprobability samples. *Public Opin Q.* 2011;75(4):709–797

30. Fahimi M, Kulp D. *Address-Based Sampling – Alternatives for Surveys That Require Contacts With Representative Samples of Households.* Eagan, MN: Quirk's Marketing Research Review; 2009