

UC Berkeley

UC Berkeley Previously Published Works

Title

Understanding Multiprogram Take-Up of Safety Net Programs Among California Families.

Permalink

<https://escholarship.org/uc/item/08v400v5>

Journal

AJPM Focus, 3(3)

Authors

Tsai, Marisa

Yeb, Joseph

Jackson, Kaitlyn

et al.

Publication Date

2024-06-01

DOI

10.1016/j.focus.2024.100216

Peer reviewed

AJPM FOCUS

INCLUSIVITY IN PEOPLE, METHODS, AND OUTCOMES

RESEARCH ARTICLE

Understanding Multiprogram Take-Up of Safety Net Programs Among California Families



Marisa M. Tsai, MS, MPH,^{1,2} Joseph A. Yeb, BS,³ Kaitlyn E. Jackson, MPH,⁴ Wendi Gosliner, DrPH,¹ Lia C.H. Fernald, PhD, MBA,⁵ Rita Hamad, MD, PhD⁴

Introduction: The U.S. safety net, which provides critical aid to households with low income, is composed of a patchwork of separate programs, and many people with low income benefit from accessing <1 program. However, little is known about multiprogram take-up, that is, participation conditioned on eligibility. This study examined individual and multiprogram take-up patterns and sociodemographic factors associated with multiprogram take-up of U.S. safety net programs.

Methods: The Assessing California Communities' Experiences with Safety Net Supports study interviewed Californians and reviewed their 2019 tax forms between August 2020 and May 2021. Take-up of safety net programs was calculated among eligible participants ($n=365$), including the Earned Income Tax Credit; Supplemental Nutrition Assistance Program; the Special Supplemental Nutrition Program for Women, Infants, and Children; and Medicaid. Multivariable regressions identified sociodemographic factors associated with take-up of multiple programs.

Results: Take-up was highest for Medicaid (90.6%) and lowest for Supplemental Nutrition Assistance Program (57.5%). Among people who received benefits from at least 1 other program, take-up ranged from 81.7% to 84.8% for the Earned Income Tax Credit; 54.4%–62.0% for Supplemental Nutrition Assistance Program; 74.3%–80.1% for Special Supplemental Nutrition Program for Women, Infants, and Children; and 89.7%–98.1% for Medicaid. Having a lower income and being younger were associated with concurrent take-up of Supplemental Nutrition Assistance Program and Special Supplemental Nutrition Program for Women, Infants, and Children. Among Supplemental Nutrition Assistance Program and Special Supplemental Nutrition Program for Women, Infants, and Children recipients, having higher income, being older, and being primarily English speaking were associated with Earned Income Tax Credit take-up.

Conclusions: Individual and multiprogram take-up vary between programs and by sociodemographic factors. Findings suggest opportunities to increase take-up of potentially synergistic programs by improving cross-program coordination, data sharing, and targeted recruitment of

From the ¹Nutrition Policy Institute, Division of Agriculture and Natural Resources, University of California, Oakland, California; ²Division of Epidemiology, School of Public Health, University of California, Berkeley, Berkeley, California; ³Public Health and Community Medicine, School of Medicine, Tufts University, Boston, Massachusetts; ⁴Department of Social and Behavioral Sciences, Harvard T. H. Chan School of Public Health, Boston, Massachusetts; and ⁵Community Health Sciences Division, School

of Public Health, University of California, Berkeley, Berkeley, California
Address correspondence to: Marisa M. Tsai, MS, MPH, Nutrition Policy Institute, Division of Agriculture and Natural Resources, University of California, 1111 Franklin Street, Oakland CA 94607. E-mail: mmtsai@ucanr.edu
2773-0654/\$36.00
<https://doi.org/10.1016/j.focus.2024.100216>

underenrolled subgroups (Supplemental Nutrition Assistance Program and Special Supplemental Nutrition Program for Women, Infants, and Children).

AJPM Focus 2024;3(3):100216. © 2024 The Authors. Published by Elsevier Inc. on behalf of The American Journal of Preventive Medicine Board of Governors. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

INTRODUCTION

Safety net programs reduce poverty by providing aid to people in households with low income through in-kind and cash assistance for basic needs.¹ Participation in safety net programs has been associated with positive health outcomes, including improved perinatal outcomes and reduced metabolic syndrome.^{2,3} A growing body of literature has shown that participation in safety net programs—such as the Earned Income Tax Credit (EITC), the largest U.S. poverty alleviation program for families with children, and the Supplemental Nutrition Assistance Program (SNAP)—also has long-term impacts on increasing economic mobility and contribute to sustained poverty reduction among economically disadvantaged families.^{4,5} The U.S. safety net is composed of an array of programs, and many people with low income benefit from accessing >1 program.⁶ Furthermore, multiprogram participation can optimize effectiveness of programs. Recent studies on people who participate in multiple nutrition assistance programs concurrently, including SNAP and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), suggest improved food security and diet quality relative to people only participating in a single program.^{7–9} Nevertheless, many are not participating in multiple programs when they are eligible, and potential participants report stigma, language barriers, and administrative burdens as roadblocks to participation.^{10,11}

Although factors associated with take-up of individual programs have been well documented, assessment of concurrent multiprogram take-up is more difficult owing to legal hurdles that make it challenging to link data across agencies. Specifically, EITC is administered by the Internal Revenue Service (IRS); SNAP and WIC are administered by the U.S. Department of Agriculture (USDA); and Medicaid is administered by the Centers for Medicare and Medicaid Services. Several studies examined multiprogram participation, without conditioning on eligibility. One study using survey-based methods on multiprogram participation found that half of children receiving SNAP also received benefits from 1 other program, and a third received benefits from 2 or more.¹² Other studies have found that factors associated with participation in multiple programs (e.g., SNAP,

WIC, school meals, Medicaid, and Temporary Assistance for Needy Families) included being younger, having lower income or income volatility, and unemployment.^{13,14} Without conditioning on eligibility, it is unclear how much of an individual's or household's lack of program participation is due to differing program eligibility.^{12,14,15} Different safety net programs target partially intersecting populations with low income, and each has unique eligibility rules.¹⁶ Thus, there is a risk of mischaracterization of the association between explanatory variables and participation. Examining take-up, that is, program participation conditioned on eligibility, is more informative in terms of identifying opportunities to boost safety net participation.

Policymakers and public health professionals have been increasingly interested in creating synergy across multiple safety net programs. For example, a key element of WIC modernization efforts involves streamlining WIC enrollment through data sharing with other social safety net programs.¹⁷ Understanding multiprogram take-up will help policymakers target their efforts to improve participation among eligible people who can most benefit from accessing multiple safety net resources. This study examines multiprogram take-up patterns and sociodemographic factors associated with multiprogram take-up in the EITC, SNAP, WIC, and Medicaid among eligible families in California.

METHODS

Study Sample

Data were drawn from the Assessing California Communities' Experiences with Safety Net Supports study, which conducted survey-based interviews with EITC-eligible Californian families with at least 1 dependent aged 0–8 years ($n=497$). Study procedures have been described previously.¹⁰ Recruitment was conducted in partnership with community-based organizations, including safety net programs, social services agencies, and tax preparation services. Interviews were conducted in English and Spanish in August 2020–May 2021, using video conferencing or telephone. For this analysis, the sample size was restricted to respondents who produced records of their tax forms at the time of the interview to verify EITC eligibility and receipt ($n=365$) (Figure 1). All

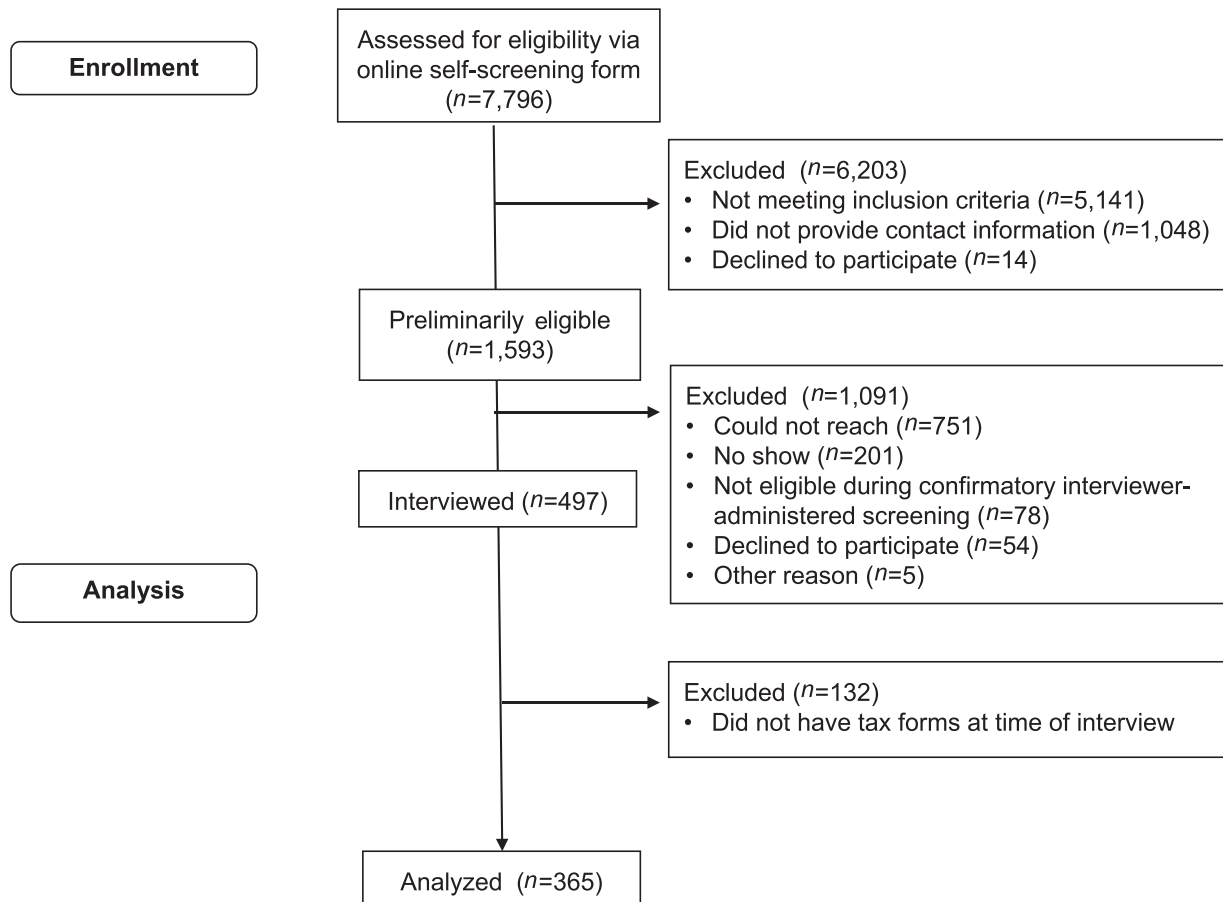


Figure 1. ACCESS study, analytical sample flow chart: California, 2020–2021. ACCESS, Assessing California Communities' Experiences with Safety Net Supports.

study protocols were approved by the by the California Committee for the Protection of Human Subjects and the IRB of the University of California, Berkeley, and informed consent was provided by all participants.

Measures

The survey included questions on sociodemographic characteristics, safety net program participation, and information from tax forms. Respondents self-identified their race/ethnicity, and this information was categorized into Hispanic/Latinx, non-Hispanic (NH) Black, NH White, and NH other.

Participants were also asked to describe their participation in safety net programs in 2019, before the coronavirus disease 2019 (COVID-19) pandemic, including EITC, SNAP, WIC, and Medicaid. Participants were also asked to provide their 2019 tax returns to verify eligibility for and receipt of the EITC. Respondents' eligibility for SNAP, WIC, and Medicaid were imputed on the basis of whether income (collected from tax forms) and other demographic information ([Appendix Table 1](#),

available online) met eligibility criteria from the corresponding government agency; logistical hurdles precluded authors' ability to link administrative participation and eligibility data for programs other than the EITC.^{18–21}

Statistical Analysis

Descriptive statistics on sociodemographic characteristics and take-up for single programs were calculated. Next, the authors cross-tabulated the percentage of participants in a given program who were also eligible for and participated in a second program. For example, among study respondents who participated in WIC and were eligible for SNAP, the authors calculated how many participated in SNAP.

Finally, the authors examined variables associated with multiprogram participation in EITC, SNAP, and WIC among eligible participants using multivariate logistic regression. Variables used for analyses were missing <1% of observations; therefore, complete case analysis was used. Medicaid was not included in

Table 1. Characteristics of ACCESS Study Participants: California, 2020–2021 (*n*=365)

Participant characteristics	Mean (SD) or <i>n</i> (%)
Age, years	32.3 (6.6)
Woman	343 (94.0)
Race/ethnicity	
Hispanic or Latinx	216 (59.2)
NH Black	71 (19.5)
NH White	37 (10.1)
NH other	41 (11.2)
Some college or more ^a	268 (73.6)
Household income, USD ^b	
<\$20,000	178 (48.8)
\$20,000–\$40,000	142 (38.9)
\$40,000–\$70,000	45 (12.3)
Any full-time or part-time work	267 (73.4)
Number of people in household	4.4 (1.7)
Number of dependents in household	2.2 (1.1)
Number of adults in household	2.1 (1.1)
Married	110 (30.1)
English as primary language	292 (80.0)
Safety net program take-up, <i>n</i> (%)	
EITC	274 (84.3)
SNAP	206 (57.5)
WIC	283 (79.1)
Medicaid	326 (90.6)

Notes: Data reflect participant characteristics in 2019.

^aSome college or more includes vocational school, associate's degree, and bachelor's degree or more.

^bAdjusted gross household income in 2019.

ACCESS, Assessing California Communities' Experiences with Safety Net Supports; EITC, Earned Income Tax Credit; NH, non-Hispanic; SNAP, Supplemental Nutrition Assistance Program; USD, U.S. dollar; WIC, Special Supplemental Nutrition Program for Women, Infants, and Children.

multiprogram participation analyses given the high take-up of this program among eligible individuals and thus small cell sizes. Covariates included gender, race/ethnicity, household income, education, employment status, marital status, age, number of adults in household, number of dependents in household, and speaking English as a primary language. Owing to concerns around collinearity and small cell sizes, race/ethnicity categories of NH White and NH other were combined and served as

the reference group. Data were analyzed using Stata 17 (College Station, TX). *p*-values less than or equal to 0.05 were considered statistically significant.

RESULTS

Of the 365 respondents, most (94.0%) were women (Table 1). Over half were Hispanic/Latinx (59.2%), and 19.5% were NH Black. The rest were NH White (10.1%) or other races/ethnicities (11.2%). One quarter had a bachelor's degree or higher. Nearly half had an annual adjusted gross income <\$20,000 on their 2019 tax returns, and the mean household size was 4.4 people.

Among those eligible, take-up rates for individual programs were 84.3% for EITC, 57.5% for SNAP, 79.1% for WIC, and 90.6% for Medicaid (Table 1). To calculate cross-program take-up of safety net programs, the authors restricted the sample of participants in each program to those who were eligible for the other programs examined (Table 2). EITC take-up was fairly consistent, ranging from 81.7% among WIC participants to 84.8% among SNAP participants. SNAP take-up ranged from 54.4% among WIC participants to 62.0% among Medicaid participants. WIC take-up ranged from 74.3% among SNAP participants to 80.1% among Medicaid participants. Medicaid take-up was consistently high among participants in other programs, ranging from 89.7% among EITC recipients to 98.1% among SNAP participants.

Among SNAP participants, those who had higher household income (OR=1.8; 95% CI=1.1, 3.0), were older (OR=1.2; 95% CI=1.1, 1.3), or spoke English as a primary language (OR=3.6, 95% CI=1.1, 11.8) had higher EITC take-up (Table 3). Those who were NH Black (OR=3.4, 95% CI=1.1, 10.3), had lower household incomes (OR=0.6; 95% CI=0.4, 0.96), were married (OR=4.0; 95% CI=1.4, 11.0), and were younger (OR=0.9; 95% CI=0.9, 0.99) had higher WIC take-up. Among WIC participants, those who had higher income (OR=1.4; 95% CI=1.02, 2.1) and spoke English (OR=3.2; 95% CI=1.4, 7.3) as a primary language had higher EITC take-up. Those who were had lower household income

Table 2. Multiprogram Take-Up in Safety Net Programs Among ACCESS Study Participants: California, 2020–2021 (*n*=365)

Of people who received program below . . .	Received EITC, <i>n</i> (%)	Received SNAP, <i>n</i> (%)	Received WIC, <i>n</i> (%)	Received Medicaid, <i>n</i> (%)
EITC	274 (100.0)	162 (60.0)	205 (75.9)	245 (89.7)
SNAP	162 (84.8)	206 (100.0)	153 (74.3)	202 (98.1)
WIC	205 (81.7)	153 (54.4)	282 (100.0)	261 (92.6)
Medicaid	245 (83.9)	202 (62.0)	261 (80.1)	326 (100.0)

ACCESS, Assessing California Communities' Experiences with Safety Net Supports; EITC, Earned Income Tax Credit; SNAP, Supplemental Nutrition Assistance Program; WIC, Special Supplemental Nutrition Program for Women, Infants, and Children.

Table 3. Sociodemographic Variables Associated With Multiprogram Take-Up in Safety Net Programs Among ACCESS Study Participants, Conditioned on Eligibility for Both Programs: California, 2020–2021 (n=365)

Sociodemographic variables	SNAP participants		WIC participants	
	EITC participation (n=191)	WIC participation (n=205)	EITC participation (n=250)	SNAP participation (n=281)
	OR (95% CI)			
Woman	0.9 (0.1, 9.2)	1.5 (0.4, 5.8)	0.9 (0.2, 5.4)	0.6 (0.2, 2.3)
Hispanic or Latinx	0.6 (0.2, 2.1)	1.2 (0.5, 2.8)	0.4 (0.1, 1.0)	0.6 (0.3, 1.2)
NH Black	0.9 (0.2, 5.1)	3.4* (1.1, 10.3)	1.0 (0.2, 4.2)	2.2 (0.9, 5.7)
10% increase in household income ^a	1.8* (1.1, 3.0)	0.6* (0.4, 0.96)	1.4* (1.02, 2.1)	0.5** (0.3, 0.7)
Some college or more ^b	0.8 (0.2, 3.0)	1.4 (0.6, 3.5)	0.8 (0.3, 1.8)	0.8 (0.5, 1.6)
Any work, full or part time	1.0 (0.3, 3.0)	0.7 (0.3, 1.8)	0.8 (0.4, 2.0)	0.6 (0.3, 1.3)
Married	0.8 (0.2, 2.8)	4.0** (1.4, 11.0)	1.0 (0.4, 2.5)	0.8 (0.4, 1.7)
Age	1.2** (1.1, 1.3)	0.9* (0.9, 0.99)	1.1 (1.0, 1.1)	0.95* (0.9, 0.99)
Number of adults	0.8 (0.6, 1.2)	0.7 (0.5, 1.0)	1.0 (0.7, 1.4)	0.8 (0.6, 1.1)
Number of children	0.8 (0.5, 1.3)	1.2 (0.9, 1.7)	0.9 (0.6, 1.3)	1.6** (1.2, 2.2)
Primary language English	3.6* (1.1, 11.8)	0.7 (0.3, 1.9)	3.2** (1.4, 7.3)	1.1 (0.5, 2.1)

Notes: Boldface indicates statistical significance (* $p \leq 0.05$ and ** $p \leq 0.01$).

Analyses involved multivariable logistic regression.

^aIncome variable was transformed by a natural log to reduce skewness.

^bSome college or more includes vocational school, associate's degree, and bachelor's degree or more.

ACCESS, Assessing California Communities' Experiences with Safety Net Supports; EITC, Earned Income Tax Credit; NH, non-Hispanic; SNAP, Supplemental Nutrition Assistance Program; WIC, Special Supplemental Nutrition Program for Women, Infants, and Children.

(OR=0.5; 95% CI=0.3, 0.7), were younger (OR=0.95; 95% CI=0.9, 0.99), and had more dependents (OR=1.6; 95% CI=1.2, 2.2) had higher SNAP take-up.

DISCUSSION

This study found that many participants of the 4 safety net programs examined participated in multiple programs. This finding was consistent with those of previous studies, although those did not condition on program-specific eligibility.^{6,13,22,23} For example, several studies reported that over half of people receiving any safety net benefits participated in multiple programs.^{6,22,23} This study found relatively low rates of cross-program take-up among those eligible for both of the nutrition programs in this study: 74.3% of SNAP participants also participated in WIC, whereas only 54.3% of WIC participants participated in SNAP. This may be due, in part, to high administrative burden, perceived stigma, low awareness, or limited desire to participate in multiple safety net programs. In prior work, WIC families with young children have reported that attending in-person appointments poses challenges, such as bringing their children to clinic, finding childcare for other children, or obtaining transportation.²⁴ No studies, to the authors' knowledge, have examined the barriers to concurrent participation among those eligible for both SNAP and WIC, an opportunity for future research. The

potential for greater collaboration between the SNAP and WIC programs represents an opportunity for administrators of the 2 programs—which are both run by the USDA—to facilitate enrollment in the other program among families who are already at high risk of food insecurity and malnutrition. Building on this potential, the USDA has recently undertaken efforts to enhance WIC enrollment through data matching with other federal programs.¹⁷

This study found high take-up of Medicaid in both individual and cross-program take-up. This finding may be partially due to relatively lower administrative burden: California adopted the Medicaid expansion in 2011, which simplified income eligibility rules and improved enrollment processes, such as real-time eligibility verification and automated renewals.^{25,26} In addition, awareness of Medicaid is high relative to that of other programs such as the EITC.^{10,27} Medicaid enrollment strategy has also historically focused on outreach, stationing workers to assist in enrollment in places that are more accessible for potential participants, such as community-based organizations, schools, and health clinics.²⁸ Furthermore, Medicaid offers potentially the most valuable benefit to families, given that healthcare expenses can reach tens or hundreds of thousands of dollars annually. Thus, ensuring that one's family has health insurance when eligible may be seen as a much higher priority than other programs.

This study next identified factors associated with multiprogram take-up, which can inform efforts for strategies to increase take-up among those most at risk for under enrollment. Higher income and older age were associated with lower odds of concurrent take-up of SNAP and WIC. Other studies have also found that these factors were associated with lower multiprogram participation, although these studies did not fully condition on eligibility.^{13,14} Households with higher incomes may experience a lower potential benefit from program participation.²⁹ Whereas benefits for WIC are the same for all income-eligible participants, SNAP benefits decline with higher income. Administrative burdens and perceived stigma may further reduce motivation to participate.^{29,30} In contrast, among SNAP and WIC participants, those with lower incomes had lower EITC take-up. This may be due to the fact that families with incomes below a certain threshold are not required to file taxes, but one must file to receive the EITC or other tax credits. A previous analysis found that families with lower incomes were less likely to file taxes, possibly owing to their income falling below the IRS filing threshold.³¹ Furthermore, SNAP and WIC participants who spoke a primary language other than English had lower EITC take-up, indicating a need for increased multilingual support. Recently, the USDA has taken steps to address the issue by funding efforts for the translation of resources and development of culturally tailored materials.¹⁷ Among SNAP participants, those who were married had higher WIC take-up. Prior research on the association between WIC participation and marital status has been mixed, but this study's finding may reflect an increased ability among married people to manage the administrative burdens of dual program participation.^{32–34} Supporting this theory, a recent study found that among WIC participants, married women were more likely to sustain program participation for longer durations than unmarried women.³⁵

This study contributes to a small body of literature on multiprogram participation. Broadly, findings suggest that people who receive larger benefits from participation have higher rates of take-up. This study also identified other likely barriers to participation, including language and administrative burden, highlighting the need for increasing language accessibility and simplifying administrative processes. On the basis of this study's findings that many participate in some but not all of the programs for which they are eligible, some ideas to increase multiprogram participation include reducing administrative burden by simplifying eligibility rules and streamlining application processes, allowing for flexibility in scheduling SNAP interviews (in states where appointments are required) and WIC appointments,

implementing automatic cross-program enrollment, expanding awareness of programs, and ensuring that program materials and support are available in multiple languages. Greater data sharing across the multiple agencies that administer each safety net program, including the IRS, the USDA, and Centers for Medicare and Medicaid Services, could also help streamline access. In addition, the high rates of Medicaid take-up suggest an opportunity to increase cross-program participation among people already involved in this part of the safety net. Healthcare providers or Medicaid administrators could incorporate eligibility and enrollment information for other safety net programs into routine interactions with people who participate in Medicaid.³⁶

Strengths of this study include its comprehensive questionnaire that included detailed questions on demographics and participation in multiple safety net programs. This allowed the authors to condition on participant eligibility to examine take-up and assess specific combinations of safety net programs. Data collectors also directly verified EITC receipt and eligibility from participants' tax forms, which reduced self-report errors for EITC participation. This study is also among the first to examine patterns and factors associated with take-up of multiple safety net programs.

Limitations

There are several limitations to this study. Eligibility for several programs was imputed on the basis of self-report, and self-reported variables are subject to standard reporting biases. There is a critical need to reduce barriers to administrative data linkages to avoid this reliance on self-report.³⁷ In addition, data collection occurred during the COVID-19 pandemic, although the authors specifically asked about program participation during 2019 before the pandemic; nevertheless, this may have affected respondents' answers to survey questions. In addition, the analytical sample was a convenience sample and is not intended to be generalizable to the population of low-income Californians. The sample was composed of individuals eligible for the EITC who were recruited in partnership with community-based organizations and who had their tax returns available. Therefore, households with low income who are not connected to the social safety system are underrepresented. Including only those who had their tax forms and the limited sample size also limit external validity and precludes the ability to disaggregate results by race and ethnicity. Finally, other states may have different categorical eligibility, certification, and requirements for programs, and California's WIC participation rate is greater than the national average, whereas its SNAP and EITC participation is lower.^{38–40} These factors

underscore the need for future studies in other settings outside of California.

CONCLUSIONS

Facilitating the take-up of safety net programs is critical, given their potential to address key social determinants of health and improve health equity. People are influenced by the full package of programs in which they participate, and there are many potential synergistic benefits to multiprogram participation. Particularly for those who are already accessing a part of the safety net, these findings suggest opportunities to increase take-up of other programs by improving cross-program coordination and targeting recruitment of underenrolled subgroups. Future studies should assess such interventions and explore optimal practices for providing a comprehensive social safety net using examples from nations outside the U.S., many of which have greater investment in children and families.⁴¹ Studies within the U.S. context should expand the types and combinations of social safety net programs examined for multiprogram participation and assess potential heterogeneity in effects of multiprogram participation among sociodemographic groups in nationwide samples.

ACKNOWLEDGMENTS

All study protocols were approved by the California Committee for the Protection of Human Subjects and the IRB of the University of California, Berkeley.

The study sponsors had no role in study design; collection, analysis, and interpretation of data; writing of the report; or the decision to submit the report for publication.

This work was funded by the Robert Wood Johnson Foundation, Tipping Point Foundation, the University of California Office of the President, and the Berkeley Population Center at the University of California Berkeley. This work was also supported by the National Institute for Child Health and Human Development of the National Institutes of Health under award no. 5T32HD101364.

Declarations of interest: none.

CREDIT AUTHOR STATEMENT

Marisa M. Tsai: Formal analysis, Writing – original draft, Writing – review & editing. Joseph A. Yeb: Formal analysis, Writing – review & editing. Kaitlyn E. Jackson: Investigation, Data curation, Writing – review & editing. Wendi Gosliner: Conceptualization, Supervision, Funding acquisition, Writing – review & editing. Lia C.H. Fernald: Conceptualization, Supervision, Funding acquisition, Writing – review & editing. Rita Hamad: Conceptualization, Supervision, Funding acquisition, Writing – review & editing.

SUPPLEMENTARY MATERIALS

Supplementary material associated with this article can be found in the online version at [doi:10.1016/j.focus.2024.100216](https://doi.org/10.1016/j.focus.2024.100216).

REFERENCES

1. Fox L, Burns K. The supplemental poverty measure: 2020, Published September 2021, U.S. Census Bureau; Washington, DC. <https://www.census.gov/content/dam/Census/library/publications/2021/demo/p60-275.pdf>. Accessed July 7, 2023.
2. Hoynes H, Schanzenbach DW, Almond D. Long-run impacts of childhood access to the safety net. *Am Econ Rev*. 2016;106(4):903–934. <https://doi.org/10.1257/aer.20130375>.
3. Rossin-Slater M. WIC in your neighborhood: new evidence on the impacts of geographic access to clinics. *J Public Econ*. 2013;102:51–69. <https://doi.org/10.1016/j.jpubeco.2013.03.009>.
4. Jones MR, Simeonova E, Akee R, *The EITC and Intergenerational Mobility*, Published November 2020, U.S. Census Bureau, Center for Economic Studies; Washington, DC. <https://www.census.gov/library/working-papers/2020/adrm/CES-WP-20-35.html>. Accessed May 5, 2022.
5. Bailey MJ, Hoynes HW, Rossin-Slater M, Walker R. *Is the social safety net a long-term investment? Large-scale evidence from the food stamps program*. Cambridge, MA: National Bureau of Economic Research; Published April 2020. https://www.nber.org/system/files/working_papers/w26942/w26942.pdf. Accessed July 7, 2023.
6. Macartney S, Ghertner R. *Participation in the U.S. social safety net: multiple programs, 2019*. Washington, DC: Office of the Assistant Secretary for Planning and Evaluation, HHS; Published April 2023. <https://aspe.hhs.gov/sites/default/files/documents/620afec437712c87613c4b77efd1d9c3/multiple-programs-safety-net-program-2019.pdf>. Accessed July 23, 2023.
7. Jensen HH, Kreider B, Zhilyevskyy O. Investigating treatment effects of participating jointly in SNAP and WIC when the treatment is validated only for SNAP. *South Econ J*. 2019;86(1):124–155. <https://doi.org/10.1002/soej.12365>.
8. Liu J, Kuo T, Jiang L, Robles B, Whaley SE. Food and drink consumption among 1–5-year-old Los Angeles County children from households receiving dual SNAP and WIC v. only WIC benefits. *Public Health Nutr*. 2017;20(14):2478–2485. <https://doi.org/10.1017/S1368980016002329>.
9. Laurito A, Schwartz AE. Does school lunch fill the “SNAP gap” at the end of the month? *South Econ J*. 2019;86(1):49–82. <https://doi.org/10.1002/soej.12370>.
10. Hamad R, Gosliner W, Brown EM, et al. Understanding Take-Up of the Earned Income Tax Credit among Californians with Low Income. *Health Aff (Millwood)*. 2022;41(12):1715–1724. <https://doi.org/10.1377/hlthaff.2022.00713>.
11. Winston P, Chien N, Gaddes R, Holzwart R. *Complex rules and barriers to self-sufficiency in safety net programs: perspectives of working parents*. Washington, DC: Office of the Assistant Secretary for Planning and Evaluation, HHS; Published September 2021. <https://aspe.hhs.gov/sites/default/files/documents/68f0b7e5248a36dbb99a6dcd9023910/mtr-qualitative-brief-2022.pdf>. Accessed July 23, 2023.
12. King MD, Giefer KG. *Nearly a third of children who receive SNAP participate in two or more additional programs*. Washington, DC: U.S. Census Bureau; Published June 30, 2021. <https://www.census.gov/library/stories/2021/06/most-children-receiving-snap-get-at-least-one-other-social-safety-net-benefit.html>. Accessed July 20, 2023.
13. Gilbert D, Nanda J, Paige D. Securing the safety net: concurrent participation in income eligible assistance programs. *Matern Child Health J*. 2014;18(3):604–612. <https://doi.org/10.1007/s10995-013-1281-2>.

14. Newman C, Todd JE, Ver Ploeg M. Children's participation in multiple food assistance programs: changes from 1990 to 2009. *Soc Serv Rev.* 2011;85(4):535–564. <https://doi.org/10.1086/663833>.
15. Todd JE. *Changing participation in food assistance programs among low-income children after welfare reform.* Washington, DC: U.S. Department of Agriculture. Published February 2010. https://www.ers.usda.gov/webdocs/publications/46363/8151_err92_1_.pdf?v=0. Accessed July 19, 2023.
16. Schmidt L, Shore-Sheppard L, Watson T. Safety net program interactions and impacts on low-income families. *NBER Report.* 2021;4:10–15. <https://www.nber.org/reporter/2021number4/safety-net-program-interactions-and-impacts-low-income-families>. Accessed November 16, 2023.
17. FY 2023 WIC modernization grant – notice of funding availability. U.S. Department of Agriculture, Food and Nutrition Service; 2023. <https://fns-prod.azureedge.us/sites/default/files/resource-files/wic-modernization-grant-nofa-2023.pdf>. Accessed September 22, 2023.
18. Celhay PA, Meyer BD, Mittag N. Errors in reporting and imputation of government benefits and their implications, Published August 2021, National Bureau of Economic Research; Cambridge, MA. Accessed August 22, 2023.
19. Eligibility. Alameda County Social Services. <https://www.alamedacountysocialservices.org/our-services/Health-and-Food/CalFresh/tabs/CalFresh-Eligibility>. Updated November 1, 2023. Accessed December 21, 2023.
20. USDA Food and Nutrition Service. WIC Eligibility Requirements. Washington, DC: USDA Food and Nutrition Service; Published June 2, 2019. <https://web.archive.org/web/20190602130047/https://www.fns.usda.gov/wic/wic-eligibility-requirements>. Accessed December 21, 2023.
21. Do you qualify for Medi-Cal benefits? California Department of Health Care Services. <https://web.archive.org/web/20191221001234/https://www.dhcs.ca.gov/services/medi-cal/Pages/DoYouQualifyForMedi-Cal.aspx>. Updated December 21, 2019. Accessed December 23, 2023.
22. Falk G, Mitchell A, Lynch KE, McCarty M, Morton WR, Crandall-Hollick ML. *Need-Tested Benefits: Estimated Eligibility and Benefit Receipt by Families and Individuals.* Washington, DC: Congressional Research Service; Published December 30, 2015. <https://crsreports.congress.gov/product/pdf/R/R44327>. Accessed July 23, 2023.
23. Moffitt R. “Multiple Program Participation and the SNAP Program”, SNAP Matters: How Food Stamps Affect Health and Well-Being, edited by Judith Bartfeld, Craig Gundersen, Timothy Smeeding, James P. Ziliak, 2016, Stanford University Press; Redwood City, CA.
24. Woelfel ML, Abusabha R, Pruzek R, Stratton H, Chen SG, Edmunds LS. Barriers to the use of WIC services. *J Am Diet Assoc.* 2004;104(5):736–743. <https://doi.org/10.1016/j.jada.2004.02.028>.
25. Novo D. *Eligibility and enrollment—current status and challenges.* Oakland, CA: California Health Care Foundation; Published February 2019. <https://collections.nlm.nih.gov/catalog/nlm:nlmuid-101758529-pdf>. Accessed July 19, 2023.
26. Fox AM, Stazyk EC, Feng W. Administrative easing: rule reduction and Medicaid enrollment. *Public Admin Rev.* 2020;80(1):104–117. <https://doi.org/10.1111/puar.13131>.
27. Cordoba M. *The Medi-Cal maze: why many eligible Californians don't enroll.* Oakland, CA: California Health Care Foundation; Published September 2021. <https://www.chcf.org/wp-content/uploads/2021/09/MediCalMazeWhyManyDontEnroll.pdf>. Accessed July 19, 2023.
28. Holcomb PA, Tumlin K, Koralek R, Capps R, Zuberi A. *The application process for TANF, food stamps, Medicaid and SCHIP. Issues for agencies and applicants, including immigrants and limited English speakers.* Washington, DC: Office of the Assistant Secretary for Planning and Evaluation, HHS; Published January 2003. https://aspe.hhs.gov/sites/default/files/migrated_legacy_files//40011/report.pdf. Accessed August 22, 2023.
29. Barr NA, Hall RE. The probability of dependence on public assistance. *Economica.* 1981;48(190):109–123. <https://doi.org/10.2307/2553477>.
30. Stuber J, Kronebusch K. Stigma and other determinants of participation in TANF and Medicaid. *J Policy Anal Manage.* 2004;23(3):509–530. <https://doi.org/10.1002/pam.20024>.
31. Iselin J, Mackay T, Unrath M. Measuring take-up of the California EITC with state administrative data. *J Public Econ.* 2023;227:105002. <https://doi.org/10.1016/j.jpubeco.2023.105002>.
32. Collin DF, Guan A, Hamad R. Predictors of WIC uptake among low-income pregnant individuals: a longitudinal nationwide analysis. *Am J Clin Nutr.* 2023;117(6):1331–1341. <https://doi.org/10.1016/j.ajcnut.2023.04.023>.
33. Vargas ED, Pirog MA. Mixed-status families and WIC uptake: the effects of risk of deportation on program use. *Soc Sci Q.* 2016;97(3):555–572. <https://doi.org/10.1111/ssqu.12286>.
34. Bitler MP, Currie J, Scholz JK. WIC eligibility and participation. *J Hum Resour.* 2003;38:1139–1179. <https://doi.org/10.2307/3558984>.
35. Anderson CE, Martinez CE, Ritchie LD, et al. Longer Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) participation duration is associated with higher diet quality at age 5 years. *J Nutr.* 2022;152(8):1974–1982. <https://doi.org/10.1093/jn/nxac134>.
36. Hamad R, Galea S. The role of health care systems in bolstering the Social Safety Net to address Health Inequities in the wake of the COVID-19 pandemic. *JAMA.* 2022;328(1):17–18. <https://doi.org/10.1001/jama.2022.10160>.
37. National Academy of Sciences. Engineering, Medicine. Reducing Intergenerational Poverty. Washington, DC: The National Academies Press; 2023. <https://doi.org/10.17226/27058>.
38. Gray K, Balch-Crystal E, Giannarelli L, Johnson P. *National- and State-Level Estimates of the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) Eligibility and WIC Program Reach in 2019.* U.S. Department of Agriculture, Food and Nutrition Service, Office of Policy Support. Prepared by Insight Policy Research, Contract No AG-3198-D-16-0095; 2022. <https://www.fns.usda.gov/wic/national-state-level-estimates-eligibility-program-reach-2019>.
39. Cunningham K. *Reaching those in need: estimates of USDA's state Supplemental Nutrition Assistance Program (SNAP) participation rates in 2020.* Washington, DC: U.S. Department of Agriculture, Food and Nutrition Service, Office of Policy Support; Published 2023. www.fns.usda.gov/research-and-analysis. Accessed November 16, 2023.
40. EITC participation rate by states tax years 2013 through 2020. Internal Revenue Service. <https://www.etc.irs.gov/eitc-central/participation-rate-by-state/eitc-participation-rate-by-states>. Updated January 26, 2024. Accessed March 18, 2024.
41. Fernald LCH, Gosliner W. Alternatives to SNAP: global approaches to addressing childhood poverty and food insecurity. *Am J Public Health.* 2019;109(12):1668–1677. <https://doi.org/10.2105/AJPH.2019.305365>.