

UNIVERSITY *of* WASHINGTON

Nutritional Sciences Program

Assessing Demographics of United Way King County DoorDash Clients vs. Low-income King County Residents

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Introduction

The United Way of King County (UWKC) partnership with the DoorDash delivery program seeks to fill the gaps in regional food bank services during the Covid-19 pandemic, and better serve populations facing acute and/or chronic food insecurity. The purpose of this analysis, performed as a Capstone project for the University of Washington Nutritional Sciences MS program, is to better understand the demographics of lower-income communities in King County, compare these demographics to those of UWKC DoorDash clients, and identify potential target populations that may be missed through current services.

Methods

First, I analyzed King County demographic data using United States Census Bureau American Community Survey (ACS) data. I used 5-Year Estimates – Public Use Microdata Sample / Vintage 2019 dataset, and limited the analysis to King County and Seattle data.¹ I stratified all individuals in the ACS dataset as either above or below \$90,000 annual household income using the “Household income (past 12 months)” variable. This served as a proxy for low-income status, defined as less than 80% of average median income in the Seattle area per Housing and Urban Development protocol.²

Next, I analyzed UWKC DoorDash Delivery program data using two datasets provided by the organization. The client intake form included demographic information taken during signup, and the client survey included demographic as well as program satisfaction information collected during the program. I used the client survey data for race and ethnicity, as UWKC added these variables to the intake form several months into the program, thus potentially skewing results.

From the intake form data, I created two new variables: “Children in Household” represents the sum of all pediatric age groups (<2 years, 2-5 years, 5-18 years) in data, and “Total in Household” represents the sum of all age groups in household (<2 years, 2-5 years, 5-17 years, 18-54 years, and 55+ years). “Seniors in household” is a proxy for those over 55 years as is included in the intake form. The client survey had a similar variable, but captured those over 65 years, and I selected the more inclusive dataset.

Lastly, I compared variables that were included in both the King County ACS microdata as well as UWKC client survey and/or intake datasets: race (client survey), ethnicity (client survey), children in household (intake form), seniors in household (intake form), disability status (intake form), veteran status (intake form), people in household (intake form), and children in household (intake form). I calculated mean and standard deviation for continuous variables, and frequency and percentage for categorical variables. Please refer to the *Discussion* section for limitations in comparison.

Results

UWKC Door Dash Delivery Program The UWKC DoorDash Delivery program client survey data included 467 clients, and the intake data included 4084 clients (note: not all clients responded to all questions, resulting in lower n values in some analyses – see Table 1). For race, clients could select all categories that applied to accurately reflect multiracial identities. Of DoorDash clients, 31% were white, 25% were Asian, and 18% identified as two or more races. Other race/ethnicities in the population sample included Black or African American alone (15%); other race alone; (5%) American Indian, Indigenous, or First Nation alone (4%); and Native Hawaiian, Pacific Islander, or Alaska Native alone (2%). “Asian” included those who responded as Southeast Asian alone or South Asian alone. “Other race alone” included those who responded as another

race not featured in the survey, African alone, and Middle Eastern alone. I grouped this data to align with the categories included in the ACS data for King County. Additionally, 24% of participants identified as Hispanic/Latinx for ethnicity.

Among DoorDash clients who completed the intake form, the average household size was 3.6 (SD=2.2), with an average of 0.7 children (SD=1.3). Twenty-nine percent (n=1151) of respondents reported children in the household, and 64% reported seniors in the household. Seven percent of respondents self-identified as veterans, and 38% reported having a disability.

Table 1. Demographics of low-income King County residents vs. United Way King County (UWKC) DoorDash Delivery program clients

Race	(n=89,8179)	(n=361)
White alone	527827 (59%)	113 (31%)
Asian alone*	132819 (15%)	89 (25%)
Black or African American alone	92617 (10%)	54 (15%)
Two or more races	64662 (7%)	65 (18%)
Some other race alone**	64416 (7%)	17 (5%)
Native Hawaiian, Pacific Islander or Alaska Native	8979 (1%)	8 (2%)
American Indian, Indigenous, or First Nation	6859 (1%)	15 (4%)
Ethnicity	(n=900,208)	(n=467)
Hispanic/Latinx	129353 (14%)	110 (24%)
Not Hispanic/Latinx	770855 (86%)	357 (76%)
Children in household	(n=200,145)	(n=3927)
Yes	94882 (47%)	1151 (29%)
No	105263 (53%)	2776 (71%)
Seniors in household	(n=442,457)	(n=1885)
Yes	168085 (28%)	1214 (64%)
No	274372 (62%)	671 (36%)
Disability status	(n=900,801)	(n=1269)
Yes	128656 (14%)	508 (38%)
No	772145 (86%)	761 (57%)
Veteran status	(n=731,202)	(n=1285)
Yes	57398 (8%)	96 (7%)
No	673804 (92%)	1189 (90%)
Household size	mean (SD)	mean (SD)
People in household	2.0 (0.4)	3.6 (2.2)
Children in household	0.3 (0.5)	0.7 (1.3)

* Includes "Asian" and "South Asian" groups in UWKC DoorDash survey data
 ** Includes "Some other race," "Middle Eastern," and "African" in UWKC DoorDash survey data

King County Low-Income Data The ACS data for low-income King County residents included 900,208 respondents, with some differences due to missing data for certain variables (see Table 1). Of all King County residents with an annual household income under \$90,000 per year, 59% were white, 15% were Asian, and 10% were Black or African American. Other races in the ACS dataset included two or more races (7%); some other race alone (7%); Native Hawaiian, Pacific Islander, or Alaska Native (1%); and American Indian, Indigenous, or First Nation (1%). Additionally, 14% of respondents identified as Hispanic/Latinx for ethnicity.

The average household size for residents earning less than \$90,000/year was 2.0 (SD=0.4), with an average of 0.3 children (SD=0.5). Forty-seven percent (n=94,822) of respondents reported children in the household, and 38% (n=168,085) reported seniors in the household. Eight percent (n=57,398) of respondents self-identified as veterans, and 14% (n=128,656) reported having a disability.

Discussion

Findings and Gaps in Service Comparing demographic data between UWKC DoorDash Delivery program clients and low-income King County residents can provide insight into which communities are utilizing this service, and where gaps may exist. The racial representation of low-income residents generally reflects the overall population of King County. ³ Compared to low-income King County residents, a larger proportion of DoorDash clients identify as Asian, Black or African American, or multiracial. This could signal successful outreach to these communities or point to barriers to food access beyond financial resources that the UWKC DoorDash program addresses. However, given the limitations in the dataset (see Limitations section below), as well as the demographics of those living below the federal poverty line, ⁴ these findings may not tell the full story of whether UWKC is reaching historically marginalized communities. For example, Black, Hispanic, American Indian and Alaska Native, and multiracial residents are significantly more likely to experience poverty than all King County residents on average. ⁴ It is possible that the UWKC DoorDash program may be missing those living under the federal poverty level, thus misrepresenting the race/ethnicity demographics of clients compared to lower-income King County residents.

DoorDash clients live in larger households (3.6 vs. 2.0) compared to the general low-income King County population. While DoorDash client households with children have more children on average compared to low-income King County residents (0.7 vs. 0.3), they are less likely to any child in the household (29% vs. 47%). Conversely, more UWKC DoorDash Delivery clients reported seniors living in the household than low-income King County residents (64% vs. 38%). Finally, DoorDash clients were more likely to have a disability (38% vs. 14%) and were equally likely to be veterans (7% vs. 8%).

These findings illustrate that UWKC is meeting its goal of providing services to those who might face systemic and structural barriers to accessing and purchasing safe, affordable, and culturally appropriate food. For example, those with disabilities are significantly more likely to experience poverty than those without disabilities, ⁴ and UWKC meets a need not offered by traditional food assistance services. In addition to continuing outreach to BIPOC communities, those with disabilities, and seniors, UWKC might look to expand its services to those with children, and further identify and address barriers for these families.

Limitations Discrepancies in variable coding and grouping created some challenges in fully understanding the two represented samples. First, these datasets coded for race/ethnicity differently, with UWKC DoorDash Delivery intake and survey data including more options for race/ethnicity – including African, Middle Eastern, Indigenous, and differentiation of South Asian vs. Southeast Asian – that the ACS data did not include. Further, while the DoorDash intake form included more clients than the survey data, the program did not include race/ethnicity as a variable until after the program had started, potentially introducing bias. For this reason, I did not use the intake form for race/ethnicity. Future analysis may use this intake data for ongoing program evaluation.

Additionally, the coding for senior populations used two different ages (55 years in the intake form vs. 60 years for ACS) for the cut-off point. While this certainly affected the total percentage of seniors, it does not explain the 26% difference between the datasets. Further, \$90,000/year was used as a proxy for low-income status based on HUD data for a family of four. Using this proxy for the ACS data likely captured some higher-income single earners, as well as those with more than four people in the household who made more than the cut-off, thus introducing potential bias

Lastly, due to the extensive nature of ACS data, many more variables were available for the overall low-income population of King County and Seattle than for the UWKC DoorDash Delivery program. As the program's evaluation efforts grow, there may be more opportunities to explore differences between these two groups.

References

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4. King County. American Community Survey. 2021. <https://kingcounty.gov/depts/health/data/community-health-indicators/american-community-survey.aspx>. Accessed December 5, 2021.