



District-Wide Survey Results: Understanding Food Insecurity in the School District of Philadelphia, 2018-19

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Key Findings

Thirteen percent of parents and guardians who responded to the 2018-19 District-Wide Survey answered “yes” to the question “In the past 30 days, have you worried about having enough food for you or your family?”

Thirty-two percent of principals who responded to the survey rated student food insecurity as a “moderate” or “great” challenge to learning in their school. Network 11 and the Acceleration Network had the highest percentage of principal respondents who rated student food insecurity as a “moderate” or “great” challenge to student learning in their school.

This brief summarizes selected findings related to hunger and food insecurity in the School District of Philadelphia (SDP) based on 2018-19 District-Wide Survey (DWS) responses from parent/guardians of students attending District schools and principals of District schools.¹ We used responses from parents/guardians and principals to answer the following research questions:

1. To what extent did SDP parents and guardians report being worried about having enough food for themselves and their families?
2. To what extent did principals identify food insecurity as a challenge to student learning?

SDP’s Office of Research and Evaluation (ORE) administers the District-Wide Survey each spring to students, teachers, principals, and parents and guardians. The survey asks respondents about how they experience and perceive their schools. In 2018-19, 22% of SDP parents and guardians responded to the DWS.² This brief includes data from 146 District schools that met the 10% reporting threshold for

parent and guardian responses in 2018-19 (that is, at least 10% of parents responded). In 2018-19, 64% of principals responded to the DWS. This brief also includes data from District schools where the principal responded to the food insecurity question.

¹ SDP’s Office of Research and Evaluation (ORE) administers the District-wide Survey (DWS) each spring to students, teachers, principals, and parents/guardians of students in District and charter schools. The surveys ask respondents to share their perspectives and provide feedback about how they experience and perceive their schools. This brief does not present findings from charter or alternative education schools. For more information on the DWS, visit <https://www.philasd.org/research/programsservices/district-wide-surveys/>.

² For more information on 2018-19 District-Wide Survey response rates, see <https://www.philasd.org/research/wp-content/uploads/sites/90/2019/10/DWS-2018-19-Results-Overview-District-Only-Slide-Deck-September-2019.pdf>.

The 2018-19 DWS included two questions related to hunger and food insecurity:

- The survey asked *parents and guardians*: In the past 30 days, have you worried about having enough food for you and your family? (Response choices: yes, no.)
- The survey asked *principals*: To what extent do you consider student food insecurity a challenge to student learning in your school? (Response choices: a great challenge, a moderate challenge, a slight challenge, not a challenge.)

Why is Food Insecurity Important to SDP?

- Philadelphia has the highest poverty rate among major U.S. cities, and an estimated one in five Philadelphians experience food insecurity.³
- Family food insecurity is associated with negative academic and psychosocial outcomes (such as self-control and interpersonal skills).^{4, 5, 6}
- Food insecurity in the developmental years has been strongly linked to poor academic performance in mathematics and reading.^{7, 8}
- Ensuring access to quality, healthy foods is especially important in schools, where children cannot learn if they are hungry.⁹

The Challenge of Measuring Food Insecurity

The USDA measures food insecurity in two ranges of severity. *Low food security* is defined as “reports of reduced quality, variety, or desirability of diet. Little or no indication of reduced food intake.” *Very low food security* is defined as “reports of multiple indications of disrupted eating patterns and reduced food intake.”¹⁰ Food insecurity is challenging to capture for several reasons. Poverty and federal food assistance rates are not valid indicators, as people who earn incomes above the federal poverty level can still be food insecure. Food-insecure households may not be

³ Feeding America (2019). Map the meal gap 2019: A report on county and congressional district food insecurity and county food cost in the United States in 2017. Retrieved from <https://www.feedingamerica.org/sites/default/files/2019-05/2017-map-the-meal-gap-full.pdf>.

⁴ Alaimo, K., Olson, C. M., & Frongillo, E.A. (2001). Food insufficiency and American school-aged children's cognitive, academic, and psychosocial development. *Pediatrics*, 108(1), 44-53.

⁵ Grineski, S. E., Morales, D.X., Collins, T.W., & Rubio, R. (2018). Transitional dynamics of household food insecurity impact children's developmental outcomes. *Journal of Developmental & Behavioral Pediatrics*, 39(9), 715-725.

⁶ Howard, L. L. (2011). Does food insecurity at home affect non-cognitive performance at school? A longitudinal analysis of elementary student classroom behavior. *Economics of Education Review*, 30, 157-176.

⁷ Grineski, S.E., Morales, D.X., Collins, T.W., & Rubio, R. (2018). Transitional dynamics of household food insecurity impact children's developmental outcomes. *Journal of Developmental & Behavioral Pediatrics*, 39(9), 715-725.

⁸ Jyoti, D.F., Frongillo, E.A., & Jones, S.J. (2005). Food insecurity affects school children's academic performance, weight gain, and social skills. *The Journal of Nutrition*, 135(12), 2831-2839.

⁹ Alaimo, K., Olson, C.M., & Frongillo, E.A. (2001). Food insufficiency and American school-aged children's cognitive, academic, and psychosocial development. *Pediatrics*, 108(1), 44-53.

¹⁰ United States Department of Agriculture (2019). Definitions of food security. Retrieved from <https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/definitions-of-food-security/>.

food insecure all the time, and food insecurity may reflect a need to choose between food and other basic needs, such as housing. Moreover, food insecurity is generally underreported.¹¹

There are further challenges specific to the nature of this data. Low District-Wide Survey response rates could lead us to underestimate rates of food insecurity, and the personal nature of the question may lead respondents to exaggerate or withhold information. Still, this brief serves as a starting point for understanding food insecurity in the District. It emphasizes the issue of food insecurity in SDP and underscores the importance of DWS responses in improving our understanding of the issue. We hope it will lead stakeholders to take a deeper look at the issue to ensure that schools are utilizing the hunger- and nutrition-related supports available to SDP students, families, and community members.

What We Found

Thirteen percent of responding parents and guardians reported that, in the past 30 days, they had worried about having enough food for their family.

Thirteen percent of the parents and guardians who responded to the 2018-19 DWS food insecurity question reported they had worried about having enough food for themselves and their families. If we apply this response rate (13%) to 2018-19 SDP student enrollment (n=126,994)¹², it represents the parent and guardians of approximately 16,000 students.

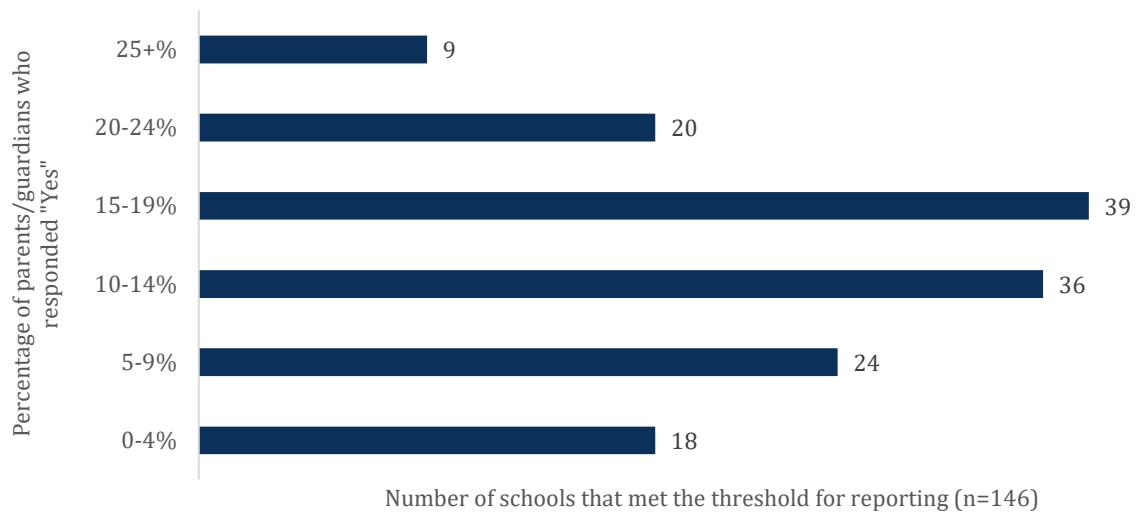
In nine schools, more than 25% of responding parents and guardians reported they had worried about having enough food for their family in the past 30 days.

In 2018-19, 146 District schools met the 10% reporting threshold for DWS parent and guardian responses (that is, at least 10% of parents responded). Among the 146 schools that met this threshold, the percentage of parents/guardians who responded “yes” to the survey question “In the past 30 days, have you worried about having enough food for you or your family?” ranged from 0-46%. While most schools fell within the 10-19% range, some schools had a higher percentage of parents and guardians concerned about food insecurity. Responses also demonstrate that food insecurity impacts some schools more than others. For instance, at nine District schools, more than 25% of parents and guardians reported worrying about having enough food (Figure 2).

¹¹ Feeding America. (2019). Map the meal gap 2019: A report on county and congressional district food insecurity and county food cost in the United States in 2017. Retrieved from <https://www.feedingamerica.org/sites/default/files/2019-05/2017-map-the-meal-gap-full.pdf>.

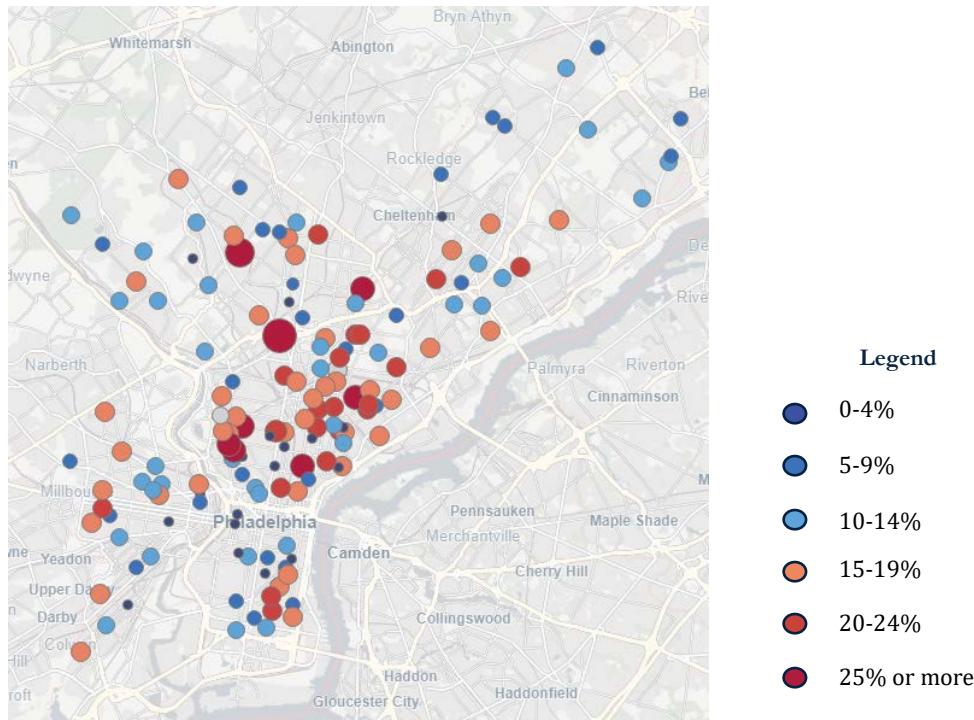
¹² For more information on District enrollment visit https://www.philasd.org/performance/programsservices/open-data/school-information/#district_enrollment.

Figure 2. The number of schools where 0-4%, 5-9%, 10-14%, 15-19%, 20-24%, and more than 25% of parents and guardians responded “yes” to the question “In the past 30 days, have you worried about having enough food for you or your family?”



The map below shows the location of schools with the highest percentages of parents and guardians concerned about food insecurity. Schools with the highest percentages (greater than 25% of respondents) are marked with red circles. As the map shows, these areas of insecurity are spread throughout the city. However, there are areas where multiple schools have high rates of concern (indicated by dark orange and red circles on the map) (Image 1).

Image 1. Percentage of parents and guardians who answered “yes” to the survey question “In the past 30 days, have you worried about having enough food for you or your family?”



To better understand food insecurity in the District, we looked at how many respondents **in each Learning Network** answered “yes” to the question “In the past 30 days, have you worried about having enough food for you or your family?”. We also looked at the number of schools that met the reporting threshold in each Network (that is, where more than 10% of parents and guardians responded to the survey) compared to the total number of schools in that Network (Table 1). We can have the most confidence that the percentage of “yes” responses represents food insecurity rates in the Learning Networks with the highest proportion of schools that met the reporting threshold.

Table 1. The percentage of parents and guardians in each 2019-20 Learning Network who answered “yes” to the survey question “In the past 30 days, have you worried about having enough food for you or your family?”

2019-20 Learning Network	Number of Schools in Learning Network	Number of Schools that Met Reporting Threshold	Number of Parent/Guardian Responses to this Question	Percentage of Respondents who Answered “Yes”
Network 1	19	9 (47%)	1,437	7%
Network 2	13	8 (62%)	849	10%
Network 3	15	14 (93%)	1,487	12%
Network 4	15	7 (47%)	774	16%
Network 5	14	14 (100%)	2,090	16%
Network 6	15	10 (67%)	1,090	12%
Network 7	15	7 (47%)	1,327	19%
Network 8	16	12 (75%)	2,975	12%
Network 9	13	7 (54%)	1,381	11%
Network 10	14	10 (71%)	1,361	13%
Network 11	13	12 (92%)	1,141	17%
Network 12	15	9 (60%)	1,107	11%
Network 13	9	3 (33%)	276	15%
Acceleration	17	17 (100%)	2,697	15%
Innovation	12*	7 (58%)	395	11%

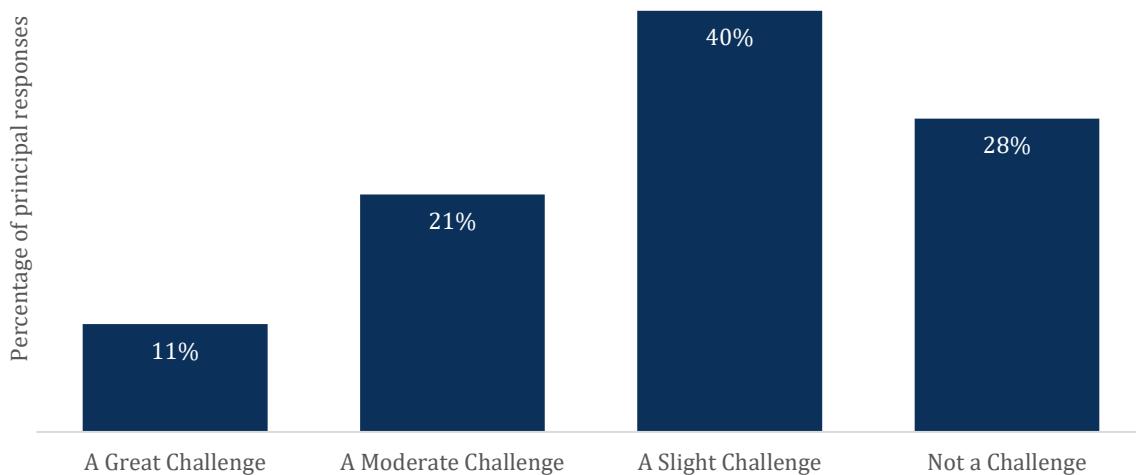
*This does not include alternative schools in the Innovation Network.

There were four SDP Learning Networks where more than 15% of parents and guardians responded “yes” to the food insecurity question. In **Network 7**, 19% of parents and guardians indicated concern over food insecurity. However, fewer than half of the schools in Network 7 (seven out of 15) met the reporting threshold for this analysis. While a slightly smaller percentage of parents and guardians (17%) responded “yes” in **Network 11**, 12 of the 13 Network 11 schools (92%) met the reporting threshold and are reported in this analysis. In **Network 5**, 16% of parents and guardians indicated concern over food insecurity. Network 5 represents 14 schools, and all of them met the reporting threshold for this analysis. The same percentage of parents and guardians (16%) responded “yes” in **Network 4**: seven of 15 schools (47%) met the reporting threshold and are included in this analysis.

Thirty-two percent of principals identified student food insecurity as a “moderate” or “great” challenge to learning in their schools.

Of the 143 Principals who responded to the 2018-19 District-Wide Survey question related to hunger and food insecurity, 72% reported that food security posed some degree of challenge (*slight, moderate, or great*) to student learning at their school (Figure 3). Eleven percent of principal respondents viewed student food insecurity as a great challenge, and 21% viewed it as a moderate challenge.

Figure 3. Principal responses to the District-Wide Survey question: “To what extent do you consider student food insecurity a challenge to student learning in your school?” (n=143)



While the parent and guardian responses indicate Learning Networks where food insecurity was a challenge to families, principal responses indicate the Learning Networks where student food insecurity impacts learning. The table below identifies the percentage of principal respondents **in each Learning Network** who indicated that student food insecurity is a “moderate” or “great” challenge to student learning at their school. It also includes information on the principal response rate for that Network (Table 2). We can have the most confidence in data from Learning Networks with high principal response rates.

Table 2. Percentage of principals, by 2019-20 Learning Network, who responded that student food insecurity is a “moderate” or “great” challenge to student learning at their school

2019-20 Learning Network	Number of schools in SDP Network	Number (and %) of responding principals	Number of principals who responded that student food insecurity is a “moderate” or “great” challenge to student learning at their school (%)
Network 1	19	13 (68%)	4 (31%)
Network 2	13	9 (69%)	4 (44%)
Network 3	15	9 (60%)	3 (33%)
Network 4	15	12 (80%)	5 (42%)
Network 5	14	15 (100%)	3 (20%)
Network 6	15	6 (40%)	2 (33%)
Network 7	15	10 (67%)	3 (30%)
Network 8	16	13 (81%)	0 (0%)
Network 9	13	7 (54%)	1 (14%)
Network 10	14	10 (71%)	3 (30%)
Network 11	13	9 (69%)	6 (67%)
Network 12	15	6 (40%)	2 (33%)
Network 13	9	5 (56%)	2 (40%)
Acceleration	17	11 (65%)	6 (55%)
Innovation	12*	8 (67%)	2 (25%)

*This does not include alternative schools in the Innovation Network

There were two SDP Learning Networks where over half of responding principals indicated that food insecurity was a “moderate” or “great” challenge to student learning. **Network 11** had the highest percentage of principals (67%) who indicated student food insecurity was a “moderate” or “great” challenge to student learning at their school. Network 11 represents 13 schools, and nine (69%) of those school principals responded to the DWS. In the **Acceleration Network**, over half of the responding principals (55%) rated student food insecurity as a “moderate” or “great” challenge to student learning at their school. The Acceleration Network includes 17 schools across the District, and 11 (65%) of those principals responded to the DWS.

Conclusions

Of the parents and guardians who responded to the 2018-19 District-Wide Survey question related to food insecurity, 13% indicated that, in the previous 30 days, they had worried about having enough food for themselves or their family. Of the 143 principals who responded to the 2018-19 DWS question related to student food insecurity, 32% identified student food insecurity as a “moderate” or “great” challenge to learning in their schools.

The School District of Philadelphia offers a variety of supports to students, schools, and community members to mitigate the impacts of food insecurity. Every District school offers all students breakfast and lunch at no cost daily.¹³ To reach more students, many SDP schools have adopted alternative breakfast models, such as Breakfast in the Classroom.¹⁴ Additionally, SDP's nutrition and wellness program, Eat Right Philly,¹⁵ supports increased access to healthy foods in a variety of ways. For example, Eat Right Philly coordinates public produce stands, hosted by select schools, that distribute produce at cost or for free, and Eat Right Philly also supports hunger relief by supporting regular distribution of free food, including produce, and/or food pantries at select schools.¹⁶ This brief points to Learning Networks where District supports could be expanded and prioritized by, for instance, focusing on increasing the number of students eating school breakfast and leveraging community partnerships to increase food access programs.

¹³ To learn more about the School District of Philadelphia Division of Food Services Programs and services, including breakfast and lunch, visit <https://www.philasd.org/foodservices/>.

¹⁴ To learn more about School District of Philadelphia Division of Food Services alternative breakfast service models, visit <https://www.philasd.org/foodservices/programs-services/breakfast/alternate-breakfast-service-models/>.

¹⁵ To learn more about the School District of Philadelphia Eat Right Philly Nutrition and Wellness Program, visit <https://www.philasd.org/nutrition/>.

¹⁶ To learn more about Eat Right Philly support for families and communities, including produce stands, hunger relief, and food pantries, visit <https://www.philasd.org/nutrition/supportforschools/familyandcommunityprogramming/>.