Strategies used by schools to tackle food insecurity and hunger: a qualitative enquiry in 15 Victorian schools

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Food insecurity among children affects their health, education and development. School-aged children (typically aged five to 17 years) who cannot afford or obtain a healthy diet from a non-emergency source are considered 'food insecure'.[1] In high-income countries, food insecurity has been associated with increased risk of obesity in children,[2] depression and toxic stress (defined as frequent activation of stress response compounded by the absence of a supportive adult).[3] The diets of food insecure children have been found to be high in sugar and low in iron[3] and contain inadequate serves of fruit and vegetables.[4] Children living in food insecure households are more likely, compared to those from food secure households, to miss days from school or activities, and demonstrate behavioural difficulties.[5] Hunger is perhaps the most easily observable adverse outcome of food insecurity, although food insecurity can occur with or without hunger[5] and obesity and food insecurity can co-exist.[6] According to the United Nation's Food and Agriculture Organization (FAO), the average prevalence of food insecurity in 2017–19 across high-income countries was 7.5%. In Australia, the FAO estimated 13.5% of households experienced food insecurity.[7] There is known higher prevalence of food insecurity among specific sub-groups in Australia including single-parents,[8] households with children with special healthcare needs[9] and families living in socioeconomically deprived neighbourhoods.[5]

Abstract

Objective: Food insecurity is a threat to children's development and in Australia 13.5% of households experience food insecurity. Universal school food programs, however, are not provided nationally. Teachers and not-for-profit organisations have instead mobilised to tackle hunger. The strategies used and their effects on students have limited empirical evidence. The aim of this study is to gain perspectives on the causes and consequences of children's food insecurity in schools and describe food security strategies adopted.

Method: One hundred schools in Victoria, which participate in a not-for-profit lunch program provided by Eat Up were invited to take part in the study. Fifteen staff (including school principals and welfare officers) from 15 schools were recruited for semi-structured interviews.

Results: There was evidence that children experience adverse quantity, quality, social and psychological impacts of food insecurity whilst in school settings. Participants described employing multiple strategies including free meals (e.g. lunch, breakfast) and food (e.g. parcels) for food insecure students and their families.

Conclusions and implications for public health: In our sample, multiple strategies were being employed by schools to reduce food insecurity, but there remains unmet need for additional wide-scale initiatives to address this critical issue and its causes and consequences.

Key words: food insecurity, school food, children's nutrition

A range of food security strategies (i.e. interventions, policies and programs to alleviate food insecurity) have been implemented to benefit children and their families in high-income countries. For example, schools have been widely used to deliver nutrition education programs to children, parents and carers[10] and provide meals and/or catered holiday clubs.[10] Schools also implement local food programs, such as farm-to-school initiatives,[11] school gardens[12] and school healthy food-environment policies.[13]

A lack of access to food during the school day has been reported in Australia.[8,14,15]

Australian children typically bring a packed lunch to school from home or purchase lunch from a school canteen. Unlike some other high-income countries, there are no universal feeding programs or national school food or nutrition policies. Over the past decade, teachers, not-for-profit organisations and local communities have mobilised to tackle hunger in schools, yet the various strategies employed by these organisations are not extensively documented. Recent evaluations of free breakfast programs in Western Australia,[16] Tasmania,[14] South Australia[17] and Victoria[18] underscores this as an emerging setting that is responding to children's food insecurity.

This study aims to gain perspectives on the causes and consequences of children's food insecurity in schools in the Victorian context and describe strategies used by schools to tackle food insecurity and hunger.

Methods

This study was conducted in collaboration with Eat Up Australia (eatup.org.au). Eat Up, founded in 2013, is a not-for-profit organisation that provides free lunches (a sandwich and snack) for hungry school-children in over 600 primary and secondary schools in Victoria, New South Wales, Queensland, Northern Territory and Western Australia. This paper presents one part of a larger evaluation project (published for Eat Up's internal use) that devised process and impact indicators and pilot tested evaluation tools for Eat Up. This paper and our enquiry uses a qualitative description approach and was informed by a pragmatic research paradigm,[19] which is well suited for studies seeking participant perspectives on their reality and enabled pragmatic choices on data collection and analysis to achieve study aim. The study has been reported in accordance with best practice[20] and approved by both human research ethics committees at Deakin University and the Victorian Department of Education.

Participants

In term three (July–September 2019), a sample (n=100) from Eat Up's Victorian schools registration database (n=359 total) were contacted by Eat Up via email. The email invited school staff whose details were on the database because they were involved in implementing Eat Up in their school to participate in semi-structured telephone interviews. There was also an option for schools to contact parents or care-givers who had children accessing the Eat Up lunches to invite them to participate.

The schools were a purposive sample, organised by Eat Up, seeking participants that were receiving regular deliveries of between 10 and 300 sandwiches from Eat Up every three weeks and that had been involved with Eat Up for at least one year. Both primary and secondary schools, located in rural and metropolitan areas of Victoria, were invited.

Instruments

The interview guide (see Box 1) was designed to elicit information that would help to understand implementation and impacts of Eat Up and other food security strategies, in addition to the causes and consequences of hunger in school settings. Interviewees were not known to authors and all provided informed consent to participate.

The telephone interviews were conducted predominantly by a community dietitian (KC) with one conducted by the lead author, a qualitative researcher (RLi). Both interviewers have experience working with populations impacted by food insecurity. Each interview was recorded with permission, professionally transcribed and subsequently reviewed for accuracy by the lead author (RLi). The opportunity to review transcripts was not offered to participants, although they were provided with a report of the major findings.

Data analysis

Interviews were coded iteratively, allowing preliminary analysis to occur whilst data collection continued. Authors (KC, RLi, RLa) devised and applied a coding framework with the assistance of NVivo v11. Informed by Braun and Clark's[21] six step thematic analysis process, initially familiarization and organisation of the data occurred, grouping content in line with the study aim, i.e. causes of food insecurity, consequences of food insecurity and strategies to address food insecurity. Authors (KC and RLi) then identified inductive codes and themes emerging systematically and repetitively across the data relevant to the causes and food strategies. In regards to the data most relevant to the impacts of food insecurity, a framework known to authors[1,22] was discussed as potentially relevant to introduce to the analysis. Once agreed upon, the framework was applied to relevant sections of the data for deductive coding and thematic analysis. The framework describes the impacts of food insecurity:

- Quantity: running low on food supplies, not having enough food to eat for daily energy needs, and/or going without meals.
- Quality: changes in diets and food supplies characterised by restricted variety and monotony, and/or not being able to consume a balanced diet of healthy foods/ foods that met dietary requirements.
- Social: modifications to food practices, such as acquiring foods from charitable sources or stealing, being unable to maintain socially prescribed ways of eating, and being unable to participate in social food practices.
- Psychological: feelings of uncertainty/ anxiety about food supplies, feelings of deprivation and/or lack of choice.

Data collection concluded when the thematic analysis process established repeating and consistent themes across interviews to suggest saturation had been reached.

Results

One hundred schools were invited to participate. Twenty staff from 20 schools responded initially and 15 staff from 15 schools (15%) participated in interviews (see Table 1). Interviews ranged from 15 minutes to 30 minutes. Most were from Primary schools (n=10, 67%), which typically have students aged five to 12 years. No

Box 1: Semi-structured Interview Guide (School Staff).

- Can you tell me a little bit about your role at your school and generally, about the school itself?

Prompt: Primary? Secondary? Location? Student demographics?

- Can you tell me about Eat Up and how long you've worked with this program?
- Why did the school get involved with Eat Up?
- Who accesses this program and how often?

Prompt: No need to name particular students, just generally describe; which students, how often, what's causing hunger?

- Before Eat Up, what happened when students were hungry at school?
- Aside from Eat Up, what other programs do you have to feed hungry students?

Prompt: How many, how are they managed, who is involved?

- For the students that access Eat Up, what impacts does this have?

Prompts: behaviour, learning, fitting in, nutrition/hunger, truancy?

- For the teachers and classrooms, what are the impacts?

Prompts: class environment, peers, financial, family outreach?

- What are the benefits of Eat Up?
- Any limitations or areas to improve to better meet needs?
- How easy/difficult would it be for Eat Up to collect more data about their program at your school in the future?

Prompts: barriers, enablers?

- Anything else you'd like to share about what we have spoken about today?

parents or care-givers were recruited, despite two schools notifying this cohort of the opportunity to participate in the research.

The thematic analysis indicated that complex home environments, financial stress and minority-population status were some of the causes of school children's food insecurity and consequences were related to quantity, quality, social and psychological impacts of food insecurity. Schools provided breakfast and lunch programs alongside other food security strategies for both students and families, the strategies had implications for staff time and school resources, however varied benefits were reported.

Causes

The thematic analysis established that complex home environments, financial stress and minority-population status were some of the contributors to school children's food insecurity in this sample. Participants described home environments of food insecure children that included families living in short-term crisis housing, the presence of family violence, trauma and single parent households. Some students with parents in shift work, or who were from large families, did not always have assistance to prepare a packed-lunch for school. Participants noted that parents or carers of food insecure children were often reliant on government assistance and/or in financial stress as they managed competing costs.

> [The school] … has kids with high needs and one of the needs we've identified has been around the area of poverty and finances. So we have a lot of families who are doing it tough … and so we often are looking for ways and looking for food to feed them. (School Nurse)

All school staff interviewed reported that some students that attend the Eat Up program were from multi-cultural backgrounds with English as their second language (See Table 1). In some schools a small but regular group of students presented without lunch, whereas in others one third or even half the school would at some time require an Eat Up lunch or food relief. An increased demand for food programs towards the end of the week as household budgets dwindled was observed by school staff.

Consequences

Thematic analysis indicated that the quantity, quality, social and psychological impacts of food insecurity were observable to school staff as they taught and cared for their students.

The quantity dimension (running low on food, not having enough to eat, and/or going without meals) was evident in reports of children who eat 'irregularly', families where younger siblings or the male children get lunch but older children or the female children miss out, or parents that cannot afford sufficient food. This was illustrated by an interviewee from a secondary school:

> So we would have students come out of class … and say they haven't had anything all day and they're starving and or they might have not had much at home over the weekend. It's not unusual for students to come and say there was nothing for them to eat the day before … (School Nurse)

The quality impacts of food insecurity includes a diet that has restricted variety and monotony, and/or a diet that does not include sufficient healthy foods. Interviewees described school students who were '… lucky if there's water and bread at home that's not stale …' Students may bring 'lunch' that was a packet of biscuits to be shared amongst siblings, or attend school with only snacks. For example, from a Primary school:

> They may have food with them, but we wouldn't deem it as appropriate lunch. It may just be, you know, some chips and some sweets … things like that. It's not an actual sandwich, it's not your piece of fruit, it's not your healthy bars … we know it's not the sort of food that will sustain their learning. (Welfare Officer)

The adverse social impacts of experiencing food insecurity includes modifying food practices and being unable to maintain socially prescribed ways of eating. All schools in this study provided food security strategies (detailed further below) and hence, children were participating in modified food practices within schools. Stigma or an awareness that eating from these programs is outside of social norms, was observed by all interviewees.

There was evidence that students experienced the psychological impacts of food insecurity (which is characterised as feelings of uncertainty/anxiety about food supplies, feelings of deprivation and/or lack of choice). A Director of student welfare services described, for example:

> … there's that anxiety around I'm starving. I've got nothing in my lunch box, I've got no food, how am I going to survive the day …

Table 1: Description of participants and their schools.

Gender	
Female	14 (93%)
Male	1 (7%)
Role	
Principal/Assistant Principal	3 (20%)
Administration/Management	3 (20%)
Nurse/Welfare officer	8 (53%)
Teacher	1 (7%)
Location	
Metropolitan Melbourne	11 (73%)
Regional city	2 (13%)
Regional town	2 (13%)
Years schools has been accessing Eat Up	
<1 year	1 (7%)
1–1.5 years	6 (40%)
2 years	2 (13%)
3 years	2 (13%)
>3 years	2 (13%)
Unknown	2 (13%)
School's Index of Community Socio-Educational Advantage (ICSEA)[a]	
800–850	1 (7%)
851–900	0 (0%)
901–950	5 (33%)
951–1,000	6 (40%)
1,001–1,050	0 (0%)
1,051–1,100	2 (13%)
Missing	1 (7%)
School type	
Primary	10 (67%)
Secondary	3 (20%)
Mixed year	2 (13%)
School size	
<100 students	1 (7%)
100–250 students	6 (40%)
251–500 students	4 (26%)
501–1,000 students	2 (13%)
1,001–2,000 students	1 (7%)
>2,000 students	1 (7%)
Proportion of students that report language background other than English[b]	
0–20%	4 (26%)
21–40%	3 (20%)
41–60%	1
61–80%	3
81–100%	3
Missing	1

Notes:

a: ICSEA values are calculated on a scale which has a median of 1,000 and a standard deviation of 100. ICSEA values typically range from approximately 500 (representing schools with extremely disadvantaged student backgrounds) to about 1,300 (representing schools with extremely advantaged student backgrounds). Data based on 2019 school profile on MySchools website (myschool.edu.au)

b: Data based on 2019 school profile on MySchools website (myschool.edu.au)

Staff observed that this contributed to students struggling to concentrate or even attend school.

Food security strategies employed by schools

The thematic analysis established i) schools provided meal programs alongside other food security strategies for both students and families, ii) the strategies had implications for staff time and school resources, however iii) varied benefits were reported.

Food security strategies

All schools in this sample utilised a variety of strategies to promote food security, rather than relying on a single initiative (Table 2) as described by this participant:

> … we operate a breakfast club two mornings a week … and we've got … [youth organisation] … that come in here one day a week for breakfast. We also go to [food rescue organisation]. Our staff are rostered to go to … [there] … once a week to try and get a little bit of fruit for the kids … And we also have up here in our wellbeing space a budget where I can buy extra things for the kids. And then we have staff who also do buy … So to really try and give them some nutritional food … we've got so many children and with 2,500 [students] … when you look at it, I would say at least 50% would access food from the school at some point. (Welfare Officer)

School meals (free breakfast and/or lunch) were the most popular strategy used by schools to tackle hunger. Eat Up's regular delivery of sandwiches (and occasional snacks) were predominately offered to students for lunch, although could be for a snack or even taken home for dinner. Fourteen of the 15 schools also had a breakfast program, seven of which provided the state government-funded Foodbank operated breakfast program. Students could also access free 'fruit' and 'muesli bars' as snacks as needed, often available in the welfare office or school canteen.

Parents and families were also provided food relief through schools. Meals, pantry items and/or surplus supplies from the school food security strategies, were sent home to families in need. For some schools this was ad-hoc, whereas others had regular supplies to families. For example:

> … we've got this program … they … supply 15 boxes of fruit, vegetables, milk and bread to 15 of our families who were in need. We would target a group of families and they'd come in once a week, on a Wednesday, and pick up their box … (Welfare Officer)

Implications of managing strategies

The provision of food programs has implications for schools, particularly in terms of finances, staff time and sourcing food. All participants reported that staff were making lunches for their students prior to the Eat Up sandwich program.

> I was making lunches almost every lunch in the staffroom for students who were coming to school with no lunch or lunches that weren't suitable … It was getting a little bit out of hand. It was getting time consuming and hard to plan in advance how many students would need sandwiches. Many times the cost of the bread and jam was out of my pocket. (Administrator)

The introduction of the Eat Up service, therefore, helped reduce time and funding burden on schools. However, interviewees acknowledged that the management of multiple strategies within schools necessitated staff time to organise, attend, monitor students, stock and implement. Seven of the 15 schools interviewed collected data on students accessing the Eat Up sandwiches, such as student name, class and/or reason for presenting, although none conducted an evaluation to measure impacts or change over time. Despite the demands of running programs, all 15 schools were committed to offering programs and described multiple benefits:

> As you probably hear from lots of schools, budgets are incredibly tight. So it just really depends on what's there, although [our school] is very aware that if kids are unhappy and if kids are hungry, they're not going to be learning. So we try and address that. (School Nurse)

Interviewees described a range of food procurement strategies. Not-for-profit food rescue organisations were able to assist in supplying fruit, vegetables and bread, and schools also worked with local business or community agencies to provide funding, food or volunteer-labour to purchase and supply food. Several schools described that welfare budgets could be used to facilitate food-related programs.

> We've got a system … called Fresh Fruit Friday. And some of the … businesses sponsor fruit to schools. Again, because we're a low socioeconomic school, they drop off a big box of fruit and that box of fruit comes on Wednesdays … we often buy fruit anyway to go into classrooms, so there's always apples in classrooms … (Welfare Officer)

Effects of food security strategies

Finally, the analysis of the data demonstrated that staff perceived the strategies being implemented helped ameliorate the impacts of food insecurity that children experienced, and had educational benefits.

The immediate hunger alleviation and nutritional benefits were valued by interviewees as they helped alleviate the adverse quantity and quality impacts associated with food insecurity. Interviewees perceived that cranky, antagonistic, and/or

Table 2: Summary of food security strategies.		
Food security strategies		**Number of schools reporting** **nb: schools may have** **multiple strategies**
Eat Up	**15(100%)**	
Breakfast Program	FoodBank Victoria	
	5 days/week	3 (20%)
	3 days/week	2 (13%)
	2 days per week	1 (7%)
	1 day/week	1 (7%)
	Not specified	1 (7%)
	Other breakfast club	
	5 days/week	1 (7%)
	4 days/week	2 (13%)
	1 day/week	3 (20%)
Second Bite food relief organisation	Fruit / snacks	3 (20%)
Other food sources	Donations from school community	4 (27%)
	School funds	9 (60%)
	Teachers purchasing food from their own funds	8 (53%)
	Kitchen garden	3 (20%)
	Other donations (e.g.: local businesses)	4 (27%)
	Chickens (providing eggs for breakfast program)	1 (7%)
Other	Food parcels provided to families in need	5 (33%)

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lethargic students were sometimes actually hungry students, and after breakfast, lunch or a snack is provided, students are perceptively more settled, calm and happy. As described by a School Principal:

> There's a couple of kids … in our school who really struggle to contain their behaviour if they're hungry.

Interviewees noted that what was provided in the school was the 'most nutritious' food students receive throughout the day. In some circumstances, the school food was the only food consumed by students:

> We've had some students say there's no food in the cupboard at home, I need to eat a sandwich before I leave [school to go home] or I won't eat anything until the next day. (Welfare Officer)

Social benefits from hunger relief programs included the interactions and conversations that occurred when students and staff eat a meal together. This helped students to overcome the social impacts of food insecurity because it allowed them to participate in the social norm of having lunch at school.

> It's also a good social thing. So for a lot of these kids it's where they can connect not only with each other but they can connect with staff. Staff will come and sit and eat with them and spend some time with them and that's a really good connector. So I think it's been good for that. (School Nurse)

The need for hunger relief was monitored by staff and sometimes used to initiate discussions with the student and their family to plan for further support, leading to more social benefits.

> We do call parents every now and again and say, "Hey, they've had three lunches in the last week, is everything okay, is there anything else we can do to help?" (School Principal)

At the same time, many interviewees described the food security strategies as serving students who were already identified as vulnerable and that programs are offered to all students to ensure students didn't shy away from program attendance.

The provision of food security strategies in school was reported to reduce anxiety and the psychological impacts of food insecurity for children and their families. As described by a participant:

> We've got a few children that there just isn't much food at home, so having the sandwiches here is a great alternative to mum or dad, or their guardian stressing at home about not being able to provide them with some food. (Welfare Officer)

Interviewees described several educational benefits of schools offering hunger-relief programs. Students who were no longer hungry could 'focus and learn' and 'concentrate' and engage with school more. Some interviewees also explained that student truancy was reduced because not having food was no longer a reason to skip school.

> In terms of attendance I honestly think it does assist, we've got again a few of those students that you get the comment of 'why weren't you at school yesterday, is everything okay?' They say 'didn't have lunch, didn't have food' and I think it's really helpful then to reassure … and say if you don't have food don't worry about it, it's not a reason to stay home. (Welfare Officer)

Discussion

This qualitative enquiry is the first study to explore school staff perceptions of children's food insecurity in a sample of socioeconomically deprived schools in Victoria, Australia. Interviewees described complex home situations including single parent families, trauma and shift work, as some of the contributing factors to why children are hungry at school. Interviewees consistently described that students experienced adverse impacts of food insecurity, and that food security strategies aimed to ameliorate these impacts for students. Schools source food from a variety of places to provide meals and other food relief for both students and families. Managing varied relief programs has implications for staff time and school resources, but all school staff interviewed were highly committed.

The findings suggest there are public health and welfare concerns regarding children's food security in Australia. Children are not protected from the known impacts of food insecurity and further, their education is also potentially adversely impacted. School staff reported some students were not fed over the weekend, families needed food parcels and children employed coping mechanisms (e.g. they 'forgot lunch') to obfuscate their hunger. Research suggests that typically parents and care givers employ varied strategies, including skipping meals and hiding food, to protect their children.[14] However, this study shows that children remain exposed. Despite no national surveillance on Australian children's food insecurity, smaller studies and grey literature have identified that as many as one in five Australian children live in a food insecure household.[7] These children may perform poorly in non-cognitive school skills (such as attitudes and strategies required to learn) and have greater rates of depression, anxiety and suicide ideation, compared to those in food secure households.[23] This study is consistent with that evidence, highlighting that school staff directly observe these negative impacts. The plethora of programs documented in this sample, and staff's descriptions of the tension this places on their time and resources, indicates that this problem remains substantial despite the best efforts of individual schools.

The implementation of multifaceted strategies despite resource constraints and the perceived benefits of programs, suggests schools believe it is vital to feed their students. This hasn't typically been within the directive of schools nor their associated government departments. However as an example of recent policy shift, since 2015 the Victorian state government began to fund 500 disadvantaged schools to receive school breakfasts,[24] in place at seven of the participating schools. In a 2019 qualitative enquiry of food insecurity at five primary schools in the state of Tasmania, Australia, researchers found schools accepted their '… recent and growing responsibility …' to feed students.[14] However, apart from a government-funded breakfast program for 500 designated schools, at present it is up to individual schools in Victoria to coordinate and implement strategies to address food insecurity in collaboration with not-for-profit organisations such as Eat Up and/or local organisations for lunch meals or food hampers. Putting the onus on individual schools is not only inefficient but also potentially inequitable. Further research is required to quantify the extent of food insecurity amongst school students and to independently evaluate the food relief efforts of schools which require substantial resources. This would inform a more robust, coordinated and equitable policy response from government to address school food insecurity and help address the evidence-gap which suggests research on food security interventions for children is lacking in robustness and the best options for the future are systems-based approaches in both the implementation and evaluation of interventions.[9]

Limitations

Participants in this study were recruited via a single food security strategy (Eat Up) in one state of Australia, and were mainly (73%) located in metro-Melbourne. Hence, the perspectives they shared may not be relevant to all other schools and settings. Furthermore only 15 of the 100 invited were recruited for an interview, which also limited the likelihood the views captured in this study were widely held. These schools may also have a greater prevalence of children's food insecurity than the general population. We were unable to recruit parents and care-givers, despite two schools agreeing to notify them of this opportunity, and hence their perspectives were not included and should be the focus of future research. So too should the perspectives of children. The nutritional quality and appropriateness of foods provided in schools settings were not assessed nor discussed with participants. Eat Up helped to recruit schools, which could potentially bias school feedback despite assurance it would not impact service provision.

Conclusion

The findings of this qualitative enquiry suggest Victorian schools use a variety of ad hoc strategies to tackle food insecurity in an opportunistic way, largely focusing on alleviating hunger. Schools provide breakfast and lunch programs alongside other food relief, with the support of varied public and private organisations. Managing these food security strategies had both staff time and school resource implications, but all agreed the programs were beneficial and necessary. Interviewees reported complex social determinants as contributing factors to children's hunger and food insecurity in school settings, and described adverse quantity, quality, social, psychological and educational impacts. Further research is needed to quantify the extent of food insecurity in schools to inform a more coordinated policy response. Future interventions need to consider the causes and consequences of food insecurity in designing more comprehensive approaches in schools.

Human Subjects Approval Statement

The study obtained ethics clearance (ref: HEAG-H 11_2019) and the Victorian Department of Education and Training (ref: 2019_004057).

References

1. Radimer KL, Radimer KL. (2002). Measurement of household food security in the USA and other industrialised countries. *Public Health Nutr.* 2002;5(6A):859-64.
2. Oberle MM, Willson SR, Gross AC, Kelly AS, Fox CK. Relationships among child eating behaviors and household food insecurity in youth with obesity. *Child Obes.* 2019;15(5):298-305.
3. Ke J, Ford-Jones EL. Food insecurity and hunger: A review of the effects on children's health and behaviour. *Paediatr Child Health.* 2015;20(2):89-91.
4. Eicher-Miller HA, Zhao Y. Evidence for the age-specific relationship of food insecurity and key dietary outcomes among US children and adolescents. *Nutr Res Rev.* 2018;31(1):98-113.
5. Ramsey R, Giskes K, Turrell G, Gallegos D. Food insecurity among Australian children: Potential determinants, health and developmental consequences. *J Child Health Care.* 2011;15(4):401-16.
6. Victorian Agency for Health Information. *Challenges to Healthy Eating – Food Insecurity in Victoria: Findings from the 2014 Victorian Population Health Survey.* Melbourne (AUST): State Government of Victoria; 2017.
7. United Nations Food and Agriculture Organization. *State of Food Security and Nutrition in the World. Table A1.1.* Geneva (CHE): UNFAO.
8. Foodbank Australia and McCrindle. *Rumbling Tummies.* Sydney (AUST): Foodbank Australia, 2018.
9. Kerz A, Bell K, White M, Thompson A, Suter M, McKechnie R, et al. Development and preliminary validation of a brief household food insecurity screening tool for paediatric health services in Australia. *Health Soc Care Community.* 2021;29(5):1538-49.
10. Holley CE, Mason C. A systematic review of the evaluation of interventions to tackle children's food insecurity. *Curr Nutr Rep.* 2019;8(1):11-27.
11. Prescott MP, Cleary R, Bonanno A, Costanigro M, Jablonski BBR, Long AB. Farm to school activities and student outcomes: A systematic review. *Adv Nutr.* 2019;11(2):357-74.
12. Ohly H, Gentry S, Wigglesworth R, Bethel A, Lovell R, Garside R. A systematic review of the health and well-being impacts of school gardening: Synthesis of quantitative and qualitative evidence. *BMC Public Health.* 2016;16(1):286.
13. Micha R, Karageorgou D, Bakogianni I, Trichia E, Whitsel LP, Story M, et al. Effectiveness of school food environment policies on children's dietary behaviors: A systematic review and meta-analysis. *PLoS One.* 2018;13(3):e0194555.
14. Jose K, MacDonald F, Vandenberg M, Williams J, Abbott-Chapman J, Venn A, et al. School breakfast club programs in Australian primary schools. Not just addressing food insecurity: A qualitative study. *Health Educ Behav.* 2020;47(4):619-30.
15. McKenzie HJ, McHugh C, McKay FH. Life on Newstart allowance: A new reality for low-income single mothers. *J Fam Stud.* 2019;25(1):18-33.
16. Byrne M, Hill S, Wenden E, Devine A, Miller M, et al. *Evaluation of the Foodbank WA School Breakfast and Nutrition Education Program, Final Report* [Internet]. Perth (AUST): Foodbank Western Australia; 2018 [cited 2021 Sep 14]. Available from: https://www.foodbank.org.au/wp-content/uploads/2020/09/FBWA-2017-SBP-Evaluation-Report.pdf
17. Watson M, Velardo S, Drummond M. (2020). Perspectives of the key stakeholders of the KickStart for Kids school breakfast program. *Child Youth Serv Rev.* 2020;112:104895.
18. MacDonald F. *Evaluation of the School Breakfast Clubs Program, Final Report.* Melbourne (AUST): Victoria University; 2019 [cited 2019 May 25]. Available from: https://www.vu.edu.au/sites/default/files/evaluation-school-breakfast-clubs.pdf
19. Mackenzie N, Knipe S. Research dilemmas: Paradigms, methods and methodology. *Issues Educ Res.* 2006;16(2):193-205.
20. Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): A 32-item checklist for interviews and focus groups. *Int J Qual Health Care.* 2007;19(6):349-57.
21. Braun V, Clarke V. Using thematic analysis in psychology. *Qual Res Psychol.* 2006;3(2):77-101.
22. Loopstra R. Interventions to address household food insecurity in high-income countries. *Proc Nutr Soc.* 2018;77(3):270-81.
23. Gundersen C, Ziliak J. Food insecurity and health outcomes. *Health Aff.* 2015;34(11):1830-9.
24. Department of Education and Training. *Department of Education and Training Annual Report 2015–16.* Melbourne (AUST): DET; 2016.