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Susan M. Hill
Edith Cowan University, susan.hill@ecu.edu.au

Matthew F. Byrne
Edith Cowan University, m.byrne@ecu.edu.au

Elizabeth Wenden
Edith Cowan University

Amanda Devine
Edith Cowan University, a.devine@ecu.edu.au

Margaret Miller
Edith Cowan University, m.miller@ecu.edu.au

See next page for additional authors

Authors

Susan M. Hill, Matthew F. Byrne, Elizabeth Wenden, Amanda Devine, Margaret Miller, Henrietta Quinlan, Donna Cross, Judy Eastham, and Miranda Chester
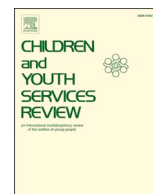
Models of school breakfast program implementation in Western Australia and the implications for supporting disadvantaged students

Susan M. Hill [a],[*], Matthew F. Byrne [a], Elizabeth Wenden [b],[c], Amanda Devine [b], Margaret Miller [b], Henrietta Quinlan [a], Donna Cross [b],[c],[d], Judy Eastham [c], Miranda Chester [e]

[a] *School of Education, Edith Cowan University, Western Australia, Australia*
[b] *School of Medical and Health Sciences, Edith Cowan University, Western Australia, Australia*
[c] *Telethon Kids Institute, Nedlands, Western Australia, Australia*
[d] *The University of Western Australia, Crawley, Western Australia, Australia*
[e] *Foodbank WA, Perth Airport, Western Australia, Australia*

ABSTRACT

A substantial body of literature points to the educational and social benefits of school breakfast programs. Most high-income countries provide free or subsidized school breakfasts to support disadvantaged children. Australia does not have a nationally-funded school meal program. Instead, charitable organizations offer school breakfast programs on a voluntary basis, often with funding support from state/territory governments. Decisions about participating in a school breakfast program (SBP), which students to support, and the degree of integration with other strategies to support disadvantaged students are made at the school level. This large-scale, multi-year study examined models of SBP implementation in Western Australian (WA) schools and stakeholder perceptions of the impact of SBPs at the classroom and whole school level. Findings indicate that the approaches adopted by WA schools reflect the extent to which SBPs are part of an integrated approach to supporting disadvantaged students. Minimalist approaches were evident where the focus was limited to alleviating hunger. More inclusive, resource-intensive models were apparent where the SBP was positioned within a whole school approach to student wellbeing and/or community capacity-building. All schools reported benefits for disadvantaged students, however, the social benefits of SBPs that manifested at the classroom and whole school level were more pronounced in schools that had adopted more integrated, whole school approaches. The findings have implications for Australian schools and other countries that seek to optimize the role of SBPs to provide more holistic support for vulnerable students and reduce the impact of social and economic disadvantage.

1. Introduction

Despite being a high-income economy (World Bank, 2019), Australia has a relatively high level of food insecurity. Recent United Nations Children's Fund (UNICEF) data on hunger and access to food shows that Australia ranks only 30th among other high-income countries, with more than one in six Australian children below the age of 15 living in a food-insecure household (UNICEF Office of Research, 2017). This rate is considerably higher among children in Australia's remote and very remote Indigenous communities (Australian Bureau of Statistics (ABS), 2015; Godrich et al., 2017; National Rural Health Alliance, 2016).

Almost all countries provide some form of school feeding program to ameliorate the detrimental effects of food insecurity on children's health, wellbeing, and overall development (Bundy et al., 2009; UNICEF Office of Research, 2017; World Food Programme, 2013). In high-income economies, school feeding programs have existed, on average, for almost 40 years (World Food Programme, 2013). Australia is an exception to this, with no history of providing free or subsidized school meals other than the Commonwealth Government "free school milk" scheme which ran from 1951 to 1974 (Queensland Government, Department of Education, n.d.; Thorley, 2014)[1]. As such, there is no coordinated national or state-based program to ensure all low-income families have access to free or subsidized school meals for their children. Instead, state and territory governments typically provide support

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[1] Milk was delivered to creches, kindergartens and primary schools. Each child under the age of 13 received a half-pint of milk per day.

for charitable organizations to tackle food insecurity at the community level (Wills, 2017). School breakfast programs run by charities began to emerge in Australia in the early 2000s in response to a growing recognition that many children go to school hungry. Notably, decisions about participating in a school breakfast program are made at the individual school level, including whether to make the program universal (i.e., inclusive of all students) and how it is positioned within the school's strategic planning and overall approach to supporting disadvantaged students.

The current study investigated the school breakfast program implementation models adopted by schools in Western Australia (WA) and sought to understand their perceived social impact on students and how this is manifest at the classroom and whole school level. It draws from a larger 3-year study of the School Breakfast Program and Food Sensations® nutrition education program (Byrne et al., 2018) operated by hunger relief agency Foodbank WA.

2. Context

The Foodbank WA School Breakfast Program (SBP) is currently accessed by more than 21,000 students in 490 schools (Chester, 2020) distributed across WA – a region stretching 4,000 km north–south and 3,600 km east–west. To participate in the program, schools must be formally classified as educationally disadvantaged, as determined by the Index of Community Socio-Educational Advantage (ICSEA)[2] (Australian Curriculum, Assessment and Reporting Authority (ACARA), 2020), or be able to identify vulnerable groups within their school community, including Aboriginal and Torres Strait Islander (Indigenous) students, culturally and linguistically diverse students, or other students experiencing disadvantage due to factors such as poverty, homelessness, family dysfunction, family food insecurity, or poor attendance. The SBP is accessible to schools from public and private sectors and caters to students from Kindergarten through to Year 12.

Foodbank WA receives funding from three state government agencies to cover the bulk purchase of seven shelf-stable core food products, plus transportation costs and a staff member to coordinate the program. The range of products provided free-of-charge to schools includes two types of breakfast cereal (wheat biscuits and traditional oats), canned fruit in natural juice, canned spaghetti in tomato sauce, canned baked beans, long-life milk, and Vegemite® (a Vitamin B-rich savory spread for bread/toast). The nutritional value of each product aligns with the Healthy Food and Drink in Public Schools Policy implemented by the WA Department of Education (2014). The SBP is administered from Foodbank WA's head office and main distribution center based in the state capital, Perth. Food is distributed to schools from the Perth branch and five regional distribution centers. Schools located relatively close to a Foodbank branch must order and pick up the food products themselves on a weekly, two-weekly, monthly, or per-term basis. For schools located too distant from a Foodbank branch, core products are transported by road four times per year at the start of each school term.

Foodbank WA offers some additional support to schools by leveraging its existing infrastructure as a hunger relief charity and drawing on donations of fresh food products (e.g., bread, yogurt, fresh fruit, fresh vegetables) and/or funds from the public and corporate sectors for specific initiatives. Given the variability in donated fresh produce and logistical difficulties of delivery, schools in remote regions

of WA cannot access fresh produce through the SBP and therefore need to source this themselves. Although Foodbank WA also provides support and advice on how to set up and run a successful breakfast program, individual schools choose their own delivery model and bear the responsibility for the day-to-day running costs. Most schools rely on volunteers (e.g., teachers, support staff, students, parents, other community members) to run their breakfast program. Since this can place a considerable burden on school and community resources, decisions about SBP participation and which delivery model to adopt are not taken lightly. We note that WA schools typically run their SBP before the start of the school day. This is in contrast to many schools and school districts in the USA which, in order to boost student participation in the breakfast program, have adopted "after the bell" or "in-classroom" service models whereby students eat at their desks during the first period of the school day (Folta et al., 2016; Krueger et al., 2018; Sanderson et al., 2015; Schanzenbach & Zaki, 2014; Soldavini & Ammerman, 2019; Stokes et al., 2019; Van Wye et al., 2013).

The following sections provide a brief review of the literature regarding the benefits of school breakfast programs and the conceptual lenses through which data from the present study have been interpreted.

2.1. Potential benefits of school breakfast programs

An ample body of research points to the benefits of school breakfast programs (e.g., Bartfeld et al., 2020; Bartfeld et al., 2019; Brown et al., 2008; Douglas, 2019; Hearst et al., 2019; Hoyland et al., 2009; Khan et al., 2011; Moore et al., 2014; Schanzenbach & Zaki, 2014) for children and adolescents experiencing social and economic disadvantage. The benefits relate not only to improvements in nutritional quality and caloric intake (Gleason & Dodd, 2009; Murphy et al., 2011; Robinson-O'Brien et al., 2010; Smith, 2017), but to flow-on effects for educational outcomes, including improvements in school attendance (Anzman-Frasca et al., 2015; Bartfeld et al., 2019; Hoyland et al., 2009; Mosehauer, 2013; Zenebe et al., 2018), readiness to learn (Basch, 2011), ability to concentrate (Hochfeld et al., 2016), on-task classroom behavior (Adolphus et al., 2013; Kristjansson et al., 2010; Murphy et al., 1998), and academic performance (Adolphus et al., 2013; Boschloo et al., 2012; Crawford et al., 2019; Frisvold, 2015; Hearst et al., 2019; Hoyland et al., 2009; Imberman & Kugler, 2014; Mosehauer, 2013). The positive impact on academic performance is evidenced across numerous school breakfast studies with typically small or modest gains, though relatively strong results were seen in a recent large-scale evaluation of the Magic Breakfast project in the UK that used a comparison group design (Crawford et al., 2019). This found that Year 2 children in the intervention group made an additional two months' progress as compared to the control group.

Not all studies that have examined the impact of school breakfast programs report positive effects in terms of educational outcomes. For example, cluster randomized trials conducted over 1-year in the UK (Shemilt et al., 2004) and New Zealand (Ni Mhurchu et al., 2013) did not reveal significant effects on measures of conduct or academic achievement, respectively. In reflecting on their findings, Shemilt et al. (2004) acknowledged that school breakfast programs need to have "a period of stable operation and development to have a chance of impacting on schools and individuals", while Ni Mhurchu et al. (2013) concluded that higher rates of attendance at breakfast programs were likely needed to positively influence education outcomes. The issue of attendance was also flagged by Kristjansson et al. (2010) in discussing the "small benefits" of school meals evidenced from their early systematic review of the effectiveness of school feeding programs. As they point out, "it is unrealistic to expect that school meals or any other single intervention can be a panacea for all of the deprivation of children living in poverty" (Kristjansson et al., 2010).

Despite such caveats, there are clear indications throughout the academic and grey literature that well-supported school breakfast programs can achieve positive outcomes that extend beyond the immediate

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[2] The ICSEA is a scale developed by the Australian Curriculum, Assessment and Reporting Authority (ACARA) to indicate the level of relative socio-educational advantage of each school, based on a range of factors including parents' occupation and education, proportion of Indigenous students, and geographical location and remoteness of the school. The ICSEA ranges from 500 to 1300 with a median of 1000 and standard deviation of 100. The lower the ICSEA value, the lower the level of educational advantage of students who attend the school.

social protection aims of addressing the hunger and nutrition needs of food-insecure school children. There is good evidence to suggest school breakfast programs can add value in terms of children's social-emotional development. For example, they have been shown to provide enhanced opportunities for students to develop positive social relationships (Graham et al., 2014; Watson & Marr, 2003; Xu, 2016) and to contribute to improved psychosocial functioning (Murphy et al., 1998) and the building of a sense of community (Haesly et al., 2014) and school connectedness (Godin et al., 2018). The latter two are of particular interest, since feeling part of or connected to one's school community has been identified as an important protective factor for mental health (Foster et al., 2017; Joyce & Early, 2014; Lester et al., 2013), antisocial behavior and risk-taking in youth (Catalano et al., 2004; Chapman et al., 2014; Dornbusch et al., 2001; Rudasill et al., 2013), and as a key determinant of educational outcomes and academic success (Fong Lam et al., 2015; Hopson et al., 2014; Kutsyuruba et al., 2015; Osterman, 2000; Reyes et al., 2012). Attending to students' emotional needs and fostering social and emotional learning and social relationships have clear benefits for classroom conduct, prosocial behaviors, academic engagement, and academic performance (Cipriano et al., 2019; Durlak et al., 2011; Osterman, 2000; Reyes et al., 2012).

2.2. Conceptual lenses

The imperative for schools to play a key role in ameliorating the impact of socio-economic disadvantage is perhaps made starkly evident by two recent UNICEF reports on outcomes for children in rich countries. Innocenti Report Card 15 (UNICEF Office of Research, 2018) highlights Australia's poor performance relative to other rich nations in terms of ensuring equality for children across all stages of education (preschool, primary and secondary), ranking 30th overall. Innocenti Report Card 16 (UNICEF Office of Research, 2020), which focuses on child wellbeing, places Australia well below many other rich countries, ranking 35th on mental wellbeing (p. 11), 37th in terms of rates of suicide among 15–19-year-olds (p. 13), and in "the bottom third for social and education policies to support child well-being" (p. 54). With these sobering indicators in mind, our approach to the investigation of SBP implementation in WA is underpinned by a view that health, wellbeing, and education are inextricably linked, and that holistic, integrated approaches are needed to ameliorate the detrimental effects of poverty and disadvantage for children of all ages. In particular, we have drawn on two key ideas or conceptions: 1) whole school approaches to supporting student health and wellbeing, and 2) the influential role of school-based food practices within that holistic framework. In considering the implications of our analyses and findings, we have also been influenced by the notion of school breakfast programs as "spaces of belonging" (Baroutsis & Mills, 2018; te Riele, 2018) and the potential for this conceptual lens to be applied to further research aimed at better understanding the social role and value of school breakfast programs for disadvantaged students.

2.3. Whole school approaches and school connectedness

As we have seen, the research literature suggests school breakfast programs can make a positive contribution to healthy child development through the promotion of social-emotional learning, wellbeing, and school connectedness. The notion of school connectedness or "school belonging" (Allen et al., 2016; Arslan, 2019) generally refers to students having a positive orientation towards school where they feel involved, liked, accepted, and cared about by peers, teachers, and other members of the school community. Australian researchers Rowe and Stewart (2009, 2011) emphasized the powerful influence of whole school approaches to health promotion on the building of school connectedness. Whole-school approaches, as exemplified by the Health Promoting School (HPS) framework (World Health Organization, n.d.) and Whole School, Whole Community, Whole Child (WSCC) model (Association for

Supervision and Curriculum Development (ASCD), 2014), are inclusive of curriculum, policy, social and emotional climate, and parent/community involvement. They are also underpinned by a holistic conceptualization of "health" that encompasses "physical, social and emotional wellbeing" (World Health Organization, n.d.) and an ecological perspective of human development that recognizes the complex interrelationships between an individual and their community and environment (Bronfenbrenner, 1979). Rowe and Stewart's (2011) investigation of the pathways through which whole school approaches influence school connectedness identified "food and eating together" as a crucial mechanism for promoting inclusion and diversity, by "connecting students of different abilities, school staff, and other community members in a shared activity and environment" (Rowe & Stewart, 2011).

2.4. The influential role of school-based food practices

Building on the work of Rowe and Stewart (2009, 2011), Neely et al. (2015, 2016) in a New Zealand context subsequently concluded that "food practices… may be valuable assets for an HPS approach to school connectedness" (Neely et al., 2016). These authors offer a modified HPS framework that illustrates how food practices can promote connectedness at the individual, classroom, whole school, and wider school community levels. The potential for school-based food practices to play an influential role in supporting students at risk was corroborated in a recent study by Jose et al. (2020). Their qualitative investigation of school breakfast programs in 10 schools in the eastern states of Australia emphasized the role of communal eating in delivering a range of social benefits, including building school connectedness and "generating social capital" (Jose et al., 2020, p. 9). Miller and Krause (2015) reported a range of social benefits for the participating students, school, and community in their case study of a breakfast club in one public school in New South Wales (NSW) involving volunteers from a local church. Such benefits included the positive "socialising effect" (Miller & Krause, 2015, p. 51) on individual students, and the development of a "spirit of service and community mindedness in students" (p. 51) and "wider social connections" (p. 53) among parents, teachers, volunteers, and students. While Ichumar et al.'s (2018) study of two disadvantaged WA rural schools with high proportions of Aboriginal students also highlighted the opportunities for holistic student support that SBPs afford, particularly psychosocial support, they reported that the schools were unable to capitalize on these opportunities due to "lack of volunteer support" and "a view constraining their primary role as food delivery" (Ichumar et al., 2018, p. 1).

2.5. Spaces of belonging within school environments

School breakfast programs occupy a defined space, place, and time within their respective school curricula and environments. It is interesting then to consider their potential in terms of "spaces of belonging within spaces of learning" for students who might otherwise feel disengaged, alienated, or marginalized (Baroutsis & Mills, 2018). Through their analysis of young people's experiences at an alternative school, Baroutsis and Mills (2018) have conceptualized spaces of belonging in terms of the intersection of practices that promote and support social-emotional wellbeing ("relational spaces"), physical environments that are more akin to a home than an institution ("material spaces"), and learning environments that are responsive to individual needs ("pedagogical spaces") (Baroutsis & Mills, 2018). While our study did not aim to analyze or define the implementation of school breakfast programs in terms of spaces of belonging, we offer it as a potential departure point from which to consider future research on the role of school breakfast programs in supporting disadvantaged students.

2.6. The present study

To the best of our knowledge, this is the first large-scale, multi-year study of school breakfast programs in Australia. In light of the potential benefits that school breakfast programs and other school-based food practices can deliver for students experiencing disadvantage, it is important to understand how the SBP is operationalized in WA schools and what impact different models of implementation have at the classroom level and whole school levels. The project, therefore, aimed to:

- Describe the operational characteristics or models of implementation that are evident among WA SBPs.
- Identify the factors that drive or influence models of SBP implementation in WA.
- Explore stakeholder perceptions of the impact of SBPs in relation to benefits or changes observed at the classroom and whole school levels.
- Identify the characteristics of SBPs that offer more holistic support for vulnerable students.

3. Methods

A mixed methods approach was employed for this study, drawing on state-wide survey responses and interviews conducted with stakeholders in five case study schools. Since the population of SBP schools varies from year to year, a cross-sectional rather than longitudinal design was used to capture information over three consecutive years. Ethical approval for the study was received from the Edith Cowan University Human Research Ethics Committee. Formal approval to conduct research on school sites was also obtained from the WA Department of Education and Catholic Education WA before commencing the research.

3.1. SBP Coordinator Survey

As part of WA state government program monitoring and reporting requirements, Foodbank WA administers an annual online survey to all participating schools which is completed by the designated SBP coordinator or school principal on behalf of the whole school (i.e., one survey response per school). For the present study, this survey instrument was comprehensively revised and administered to schools at the end of the school year in 2015, 2016, and 2017 via the Qualtrics web-based survey platform. Modifications were made to the 2016 and 2017 surveys to capture greater detail about the operational characteristics of SBPs, based on the responses from the previous year. The surveys ranged from 36 to 38 items, with some comprising multiple parts. There was a mix of numerical data (ND) questions, fixed-response (FR) questions measured at the nominal and ordinal levels, and open-ended (OE) questions that sought more detailed, contextual feedback or clarification/elaborations. The survey items were arranged under the broad topics shown below, with the type of question indicated in brackets. Note that for many of the fixed-response items, respondents also had the option of providing further comments:

1. Operational details: number of students accessing the SBP (ND); average breakfasts served per day (ND); frequency of operation (FR); level of inclusivity (e.g., open to other members of the school community?) (FR + OE); provision of emergency meals (FR + OE); food products (FR) and types of menus offered (FR); type and source of additional food products (FR); satisfaction with quality and variety of Foodbank WA products (FR + OE); and integration of SBP with other school programs/activities, including the impact or value of this integration (OE).
2. Impact on individual students: perceptions of the proportions of students positively impacted by the SBP in relation to capacity for learning (FR + OE), personal and social capability (FR + OE), social

relations (FR + OE), and knowledge/skills/attitudes to healthy eating (FR + OE).
3. Impact at the classroom and whole school levels: perceptions of the impact of the SBP on the health promoting environment of the school (FR + OE) and the overall functioning of the school at classroom (FR + OE) and whole school (FR + OE) levels, including any negative effects on students or the school environment/community (FR + OE).
4. School partnerships and collaboration: staffing of the SBP (ND + FR); use and source of volunteer helpers (FR + OE); extent of student involvement in running the SBP (OE); difficulties/challenges in accessing volunteers (FR + OE); and partnerships with local food/ produce suppliers (FR + OE) and other community groups/organizations (FR + OE).
5. Sustainability and improvement: changes made to the operation of the SBP in the past year (FR + OE); perceptions of program sustainability (FR + OE); strategies/measures used to ensure sustainability (OE); perceptions of program strengths (OE) and improvements needed (OE); factors limiting improvement or expansion of the SBP (OE); support from other sources that could help improve the impact of the SBP (OE); and other comments (OE).

In this paper, we draw on data from sections 1, 3, 4, and 5 of the annual surveys, with a particular focus on the open-ended responses regarding impact at the classroom and whole school levels.

3.2. Case studies

Informed by the results of the 2015 SBP Coordinator Survey, a purposive sample of five schools was selected for more detailed study to reflect the variation in student age range, school size, region, and remoteness classification of SBP schools, as well as SBP operational differences. To ensure the confidentiality of the case study schools, they are identified by letter only (i.e., School A, School B, etc.).

3.3. Site visits and interviews

The research team conducted site visits to each case study school in late 2016 and/or early 2017 to observe the breakfast program in operation and interview the designated SBP coordinator and other consenting representatives from the school leadership team, teachers of students who attend the SBP, staff/parents/volunteers who assist in running the SBP, students who attend the SBP, and parents/carers of SBP students. In Schools A, C, and E, some of the students were interviewed in small groups of two or three. The interviews covered issues relating to the purpose, operation and impact of the SBP.

3.4. Analyses

To guide the analysis, a matrix display mapping key questions/issues and stakeholder groups to the different data sources was created. Initial analyses of the annual surveys were conducted within a few weeks of data collection. Fixed-response survey items were transferred to SPSS Statistics software for descriptive quantitative analyses, while responses to open-ended survey questions were collated in separate documents and subjected to content analysis to identify key themes, issues, concepts, or practices. Given the cross-sectional design of the research, no attempt was made to track changes in individual schools across time. However, some separate analyses were conducted to understand the characteristics of the unique schools captured across the three surveys (see Section 6.1).

Initial sets of codes for the 2015 open-ended survey questions were developed based on a repeated careful reading of the responses (inductive codes) and, where appropriate, understandings gleaned from the SBP research literature (deductive codes). Tables were constructed with these initial codes as column headings, then individual responses

were copied and pasted under the relevant heading(s). Since individual answers to the open-ended questions could encompass several ideas or themes, underlining (and sometimes highlighting) was used to indicate the relevant section of the response to preserve the context and avoid overly segmenting the data. As the coding progressed, the initial codes were refined, and new ones added as needed. Codes were further refined following discussion at research team meetings. All coded data were checked by at least one other member of the team. Frequencies and percentages (based on the number of respondents) were recorded for each code. Similar processes were used for the 2016 and 2017 surveys, but with the themes/categories identified in the 2015 survey set up as "a priori" codes. New inductive codes were added and further cycles of analysis were conducted as needed.

All case study interviews were fully transcribed then analysed using a thematic approach involving an iterative process of examining, sorting, describing, categorizing, and coding data according to the key ideas, concepts, or practices conveyed. The perceptions of different stakeholder groups were then compared to identify similarities and differences. Although conducted separately, there was a reciprocal relationship between the case study and survey analyses in that insights gleaned from one dataset could prompt further lines of inquiry in the other. Memoing processes and regular team discussion and critical reflection were crucial in identifying links between the survey and case study datasets, examining relationships between codes within and across datasets, generating propositions, and developing an integrated understanding of the data.

4. Results

4.1. Levels of participation

Table 1 shows the total number of schools registered for the SBP in 2015, 2016, and 2017 together with the number of schools that completed the annual surveys and corresponding response rates. Excluding school vacations, the data collection periods were approximately 4 weeks, 12 weeks, and 7 weeks in 2015, 2016, and 2017, respectively. The fluctuation in survey sample sizes reflects the time allowed for schools to complete the survey – a factor influenced by Department of Education and Foodbank WA annual reporting requirements. A total of 417 different schools ("unique schools") were represented across the three surveys (Table 1), of which 44 % completed one survey, 39 % completed two surveys, and only 17 % completed all three. Throughout the paper, results reported for the unique schools are based on the most recent survey data available for individual schools (i. e., 2017: 241 schools; 2016: 147 schools; 2015: 29 schools).

Each survey sample was closely representative of the SBP population

in terms of type of school and remoteness of school location (Table 1). The higher proportions of primary schools registered for the SBP and represented in the survey samples reflect WA's school system whereby primary schools (Kindergarten to Year 6) typically serve smaller, more localized communities, whereas secondary schools (usually Years 7–12) draw from much wider areas and have substantially higher student populations. District high schools are based in rural communities and cater for Kindergarten through to Year 10 or sometimes to Year 12. The category "other education institution" includes vocational colleges and education support centers that cater for students with special needs. The broad characteristics of the five case study schools are summarized in Table 2 along with a breakdown of the interview sample. A total of 36 school staff/stakeholders and 30 students were interviewed.

4.2. SBP operational characteristics

Comprehensive evidence gathered from the annual surveys and case studies showed that the Foodbank WA SBP delivery model offers schools the flexibility to adapt the program to suit their local context and the specific needs of their students at risk. Drawing from case study interviews with school leaders and SBP Coordinators, and responses to FR and OE survey items relating to integration of the SBP with other school programs/activities, impact of the SBP on the health promoting environment of the school, school partnerships and collaboration, and sustainability and improvement (see Section 5.1), we were able to identify three key factors that appear to influence or underly the operational approach adopted by individual schools: 1) the overarching rationale for the SBP and integration with the school's strategic planning and curriculum, 2) the level of staff support for and involvement in the SBP, and 3) school-community relations.

The variation and nuances in SBP implementation revealed through the surveys and case studies defy a straightforward categorization of SBP types. However, key operational characteristics of breakfast programs can be depicted via a series of continua that illustrate the diversity of SBP operation in WA schools and the mechanisms that seem to influence this diversity. In Fig. 1, these continua are grouped according to those that indicate the strategic focus or rationale for the SBP and those that reflect how the rationale is operationalized. Explanations of the most noteworthy continua together with illustrative quotes from key stakeholders are provided in the following sections.

5. Program rationale and integration

The "Purpose/Rationale" continuum represents the extent to which schools implement the SBP as a stand-alone hunger intervention, as part of a more comprehensive approach supporting educational outcomes

Table 1

Distribution of schools registered for the SBP (all), schools that completed the annual SBP Coordinator Surveys (sample), and the "unique schools" represented in the study from 2015 to 2017, by type of school and remoteness classification.

		SBP Schools						Unique Schools 2015–2017
		2015		2016		2017		
		All	Sample	All	Sample	All	Sample	
Registered SBP schools	N	414	157	434	324	428	241	417
Survey response rate	%		37.9		74.7		56.3	N/A
School Type:								
Primary school	%	44.8	50.3	45.9	48.1	47.9	52.7	48.4
Senior high school / Senior college	%	23.9	19.1	20.0	20.4	20.6	17.4	22.5
District high school, K-12 school	%	12.5	12.1	12.0	11.4	11.7	12.0	11.8
Remote community school	%	9.6	10.8	9.7	9.0	9.1	9.1	9.1
Other education institution	%	9.2	7.6	12.4	11.1	10.7	8.7	8.2
Remoteness Classifications:								
Metropolitan	%	42.7	41.4	43.5	45.7	43.0	43.2	43.9
Provincial	%	34.0	35.0	33.9	34.9	33.9	33.6	33.6
Remote	%	8.7	10.2	8.3	7.4	9.1	8.7	9.6
Very Remote	%	14.7	13.4	14.3	12.0	14.0	14.5	12.9

Table 2
Characteristics of the case study schools and number of interviews conducted.

	School A	School B	School C	School D	School E
Remoteness classification	Metropolitan	Metropolitan	Provincial	Remote	Very Remote
Geographic location	State capital, suburban	State capital, suburban	Inland, South West	Coastal, North West	Inland, far North
Type of school or program	Primary school	Senior high school	District high school	Program for Aboriginal students	Aboriginal community school
Year levels	K-6	7–12	K-10	4–12	K-12
Level of educational disadvantage (Decile)*	10	9	9	10	10
Total student population	270	660	270	90	100
Typical SBP attendance (n)	50	100	40	45	30
Number of interviews					
Staff/stakeholders (n = 36)	10	2	3	4	17
Students (n = 30)	13	2	3	2	10

* Based on the Index of Community Socio-Educational Advantage. Decile 10 = Most disadvantaged school community. Decile 9 = Very disadvantaged school community.
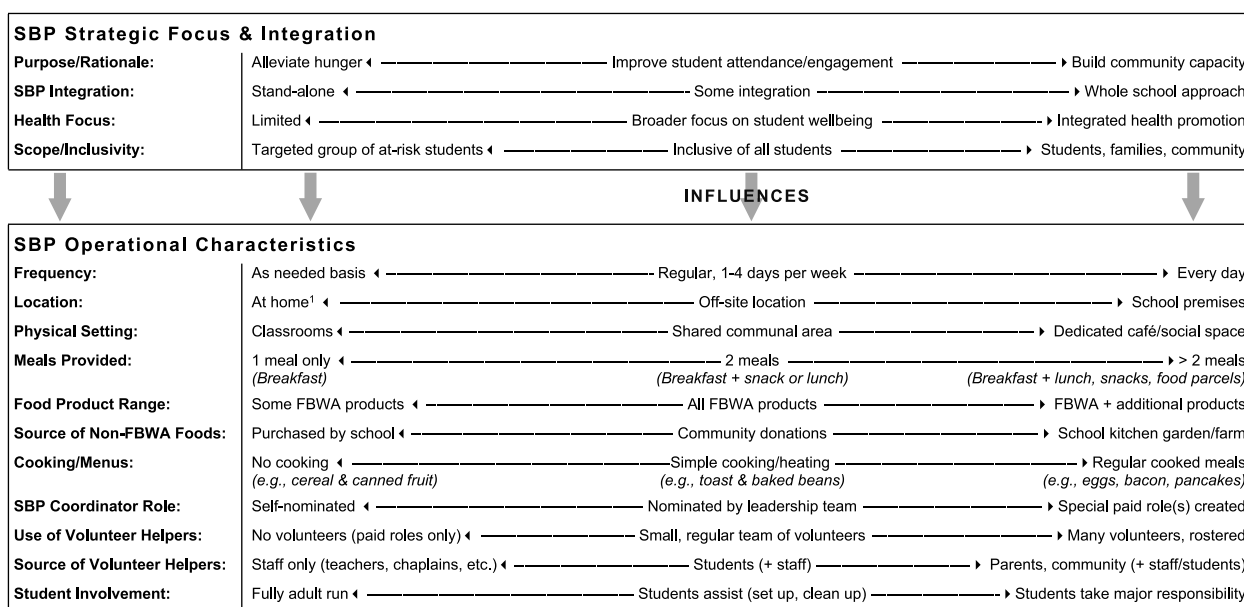
Fig. 1. Key characteristics and implementation continua of the Foodbank WA School Breakfast Program in WA schools. [1] At least one remote community school provides breakfast products to families in need so they can "continue to be the provider for their children and share the meal with them".

and wellbeing for at-risk students, or as the centerpiece of a whole school strategy to increase student and family engagement and build capacity at the community level. This in turn influences the degree to which the SBP is incorporated in school planning and curriculum ("Program Integration"), the breadth of focus on student health and wellbeing ("Health Focus"), and the "Scope" or inclusiveness of the SBP (e.g., targeted to particular groups of at-risk students, accessible to all students, or extended to students' families).

To illustrate, the school in the first example shown below positions the SBP as central to its pastoral care strategy and emphasizes the social role and value of the SBP for students' overall wellbeing. The second example illustrates a whole school approach where the SBP is not only seen as an "engine room" for the school's approach to pastoral care and promotion of student wellbeing but as an integral part of the school curriculum. The varying degrees of program integration in these two examples contrast with the third example where the school's involvement in the SBP is limited to accessing the Foodbank-supplied products to meet the hunger needs of their vulnerable students. This "only as needed" approach to school meals was reported by 4 %, 3 %, and 5 % of the 2015, 2016, and 2017 SBP survey samples, respectively, or 4 % of

the unique schools represented across all three samples (Table 3).

Example 1. *Daily Breakfast Club is an integral part of our whole school operations. It is a cornerstone of our pastoral care, providing an opportunity at the beginning of the school day for staff to assess the mood, preparedness, health and attitude of students. It provides an opportunity for relationship building, mentoring (both active and silent) and the provision of practical support: [it is] more than just breakfast. It provides the opportunity for students to learn important social skills and table manners. The Breakfast Club is seen as a refuge. Operating Breakfast Club and having it manned by school staff each day sends the strong message that healthy eating and individual students are valued in our school.* (SBP Coordinator, 2016 Survey, Provincial, K-6).

Example 2. *…the school promotes an atmosphere of safety, [and] family and home behaviors which unite the students in a large age range. The philosophy of the school is to provide a holistic and quality education within a family community-centered context in order for children to become lifelong learners. The…School Breakfast Program is part of the learning and teaching curriculum with the teachers involved, while the local parent workers and volunteers gather at [the SBP venue] and supervise children as part of being*

Table 3

Characteristics of SBPs by survey year and unique schools.

	2015 SBP Survey		2016 SBP Survey		2017 SBP Survey		Unique Schools (2015–2017)	
	n	**%**	**n**	**%**	**n**	**%**	**n**	**%**
Frequency of SBP operation								
5 days	79	50.3	164	51.1	120	49.8	204	48.9
4 days	10	6.4	12	3.7	12	5.0	20	4.8
3 days	16	10.2	31	9.7	26	10.8	43	10.3
2 days	27	17.2	53	16.5	44	18.3	70	16.8
1 day	15	9.6	42	13.1	27	11.2	53	12.7
As needed basis	6	3.8	9	2.8	12	5.0	17	4.1
Other (e.g., sports events, monthly)	4	2.5	10	3.1	–	–	10	2.4
Total respondents	157		321		241		417	
Additional food products provided?								
Yes	121	79.6	250	77.6	198	82.2	335	80.3
No – FBWA products only	31	20.4	72	22.4	43	17.8	80	19.2
Total respondents	152		322		241		415	
Sources of additional food products[1]								
School funds	73	61.9	186	74.4	150	76.5	248	74.7
Parents/carers	26	22.0	102	40.8	62	31.6	106	31.9
Local retail stores	30	25.4	60	24.0	62	31.6	84	25.3
Staff members	13	11.0	12	4.8	81	41.3	84	25.3
Charities and community groups	13	11.0	35	14.0	51	26.0	74	22.3
School/community kitchen garden	18	15.2	27	10.8	18	9.2	34	10.2
Local growers/farmers	5	4.2	12	4.8	15	7.7	22	6.6
Other	5	4.2	–	–	4	2.0	4	1.2
Total respondents	118		250		196		332	
SBP staffing / volunteers[1]								
Staff volunteers			173	54.7	137	58.5	213	56.3
Staff assigned to SBP			169	53.5	107	45.7	180	47.6
Staff position created to run the SBP			32	10.1	27	11.5	44	11.6
Parent/carer volunteers			111	35.1	94	40.2	136	36.0
SBP students			56	17.7	116	49.6	145	38.4
Other student volunteers			64	20.3	38	16.2	60	15.9
Outside volunteers			74	23.4	41	17.5	71	18.8
Total respondents			316		234		378	

Note: 'Unique schools' are a composite of the 2015–2017 survey samples based on data derived from the most recent survey completed by individual schools (see Section 6.1).

[1] Responses to the open-ended questions may have been coded to multiple categories, hence percentages add to more than 100. Survey items that specifically sought information about types of staff/volunteers were not included in the 2015 SBP survey.

Fig. 2. Operational characteristics of the Foodbank WA School Breakfast Program in five case study schools according to implementation continua (see Fig. 1). Note: Colour coding: Light gray = left side of Fig. 1 continua; Mid-gray = middle of Fig. 1 continua; Dark gray = right side of Fig. 1 continua.

interested in education themselves. (SBP Coordinator, 2016 Survey, Very Remote, K-10).

Example 3. *We do not use the SBP as an opportunity for our children to sit and socialize (although I appreciate that it's a great idea) or require an army of volunteers to man the program. Our children know they need SBP to fuel their body and to feed their brain for the day ahead. It is a no fuss program.* (SBP Coordinator, 2015 Survey, Provincial, K-6).

A more detailed illustration of the variation in SBP models is provided in Fig. 2 via a "heat map" comparison of the five case study schools. School A is distinctive in that it actively promotes the SBP as a communal event where all students, their parents/caregivers, grandparents, siblings, and other family members are welcomed. In the following extract, the Principal of School A describes how the regular shared breakfasts have helped to break down school-community barriers and establish more genial relationships with parents.

…it has a positive impact with some tough parents who may not have shared a brilliant relationship with the school. We've been able to bring some of them in - and they've been quite negative in the past - but the informal…conversations we're able to have with them as staff members just changes the relationship a bit. It's more informal, it's more social at breakfast club. And so it allows them to see you more as a person, and not as a principal, or the teacher, or the deputy, and they're more approachable when we need to have the tougher conversations, or when they feel more comfortable to come in and have a chat to us about some of their concerns … because they see us in a different light. And I think that's important. (Principal, Interview, School A).

5.1. Frequency of operation

Each operational continuum shown in Fig. 1 and Fig. 2 has important resourcing and organizational implications. In the annual surveys, schools were asked to describe any changes made to their SBP in the previous year. Around a third of schools in 2015, 2016 and 2017 indicated they had modified their SBP in some way in response to changing needs or conditions within their school community, including expanding the program from only 2–3 days per week to every school day to address increased levels of food insecurity. According to the registration data participating schools provide to Foodbank WA at the start of each year, the proportion of schools intending to provide breakfast 5 days per week rose from 64 % in 2015 to 75 % in 2017. However, the figures derived from the SBP survey samples at the end of each year were somewhat lower, with only around 50 % of schools in 2015, 2016, and 2017 (and the unique schools) reporting they had run their program 5 days per week (Table 3).

5.2. Physical setting

Space prohibits detailed discussion of each operational continuum; however, it is important to acknowledge that the physical setting in which school breakfasts are provided can play an important role in either supporting or limiting their potential social value. With no history of school meals, Australian schools were typically not built with communal cafeterias or dining areas. However, newer schools may now include these, and many older schools have invested in new buildings or re-purposed existing structures. The scenarios below depict the contrasting conditions within WA schools and the implications for SBPs:

Students love breakfast club. They are made to feel important; they are served with dignity and have good, positive social interactions with the team. Students line up to come to [the school's] Café. The décor is special and reflects the time of the year. Students participate in the atmosphere, and behavior in the Breakfast Club is excellent. (SBP Coordinator, 2015 Survey, Metropolitan, K-6).

We serve breakfast on a veranda. No room for sitting around tables for social interaction. Limited possibility to involve children in chores. (SBP Coordinator, 2016 Survey, Provincial, K-6).

Most schools ($\approx$ 80 %, Table 3) indicated they complement the Foodbank WA core food products to increase the range and appeal of the breakfast menus provided to students. However, this was less prevalent among schools in very remote school communities that often have limited access to retail outlets and fresh produce. Some schools reported that they deliberately provide "treat" foods such as pancakes or bacon and eggs to attract students to the breakfast program and thus boost overall school attendance. As shown in Table 3, while supplementary food products are often purchased with school funds, many schools also source donations from staff or families within the school community, local supermarkets, charities and community groups, and local growers/farmers. Some schools can draw on fresh foods from a school or community kitchen garden.

5.3. Staffing and volunteer helpers

The staffing of school breakfast programs and access to volunteers has been highlighted by other studies as a significant issue for long-term sustainability. The present study found that over the 3-year data collection period, more than 50 % of the schools in our samples (Table 3) drew on teaching and support staff to coordinate and run the program in addition to their normal duties. As seen for School E (Fig. 2), around 10 % of schools created paid-staff positions to run their SBP to relieve the pressure on teaching staff and maintain its viability. More than a half of the SBP schools indicated they also drew on non-staff volunteers. Parents/carers were a common source of volunteers and many schools also enlist the support of students in running their program. In 2016, for example, 105 schools (32 % of the sample) indicated they involve student helpers (SBP students and/or other students), compared to 133 schools (55 %) in 2017. Outside volunteers, such as local senior citizens, charities, or church groups, either assisted or ran the SBP in 17–23 % of schools in our samples.

Having insufficient volunteer helpers was one of the key factors that schools identified as inhibiting the expansion and/or improvement of their SBP – particularly among the 2015 survey sample (see Table 4). While it was recognized that many parents work and/or care for younger children, volunteering was often seen as falling to the same small sector of the community. Some metropolitan schools with large non-English speaking populations cited communication difficulties as a barrier to volunteerism, while remote communities attributed their isolation, limited resources, and local cultural practices as barriers.

At that time of day most people are organizing their own children to get to school or themselves are heading off to work. (SBP Coordinator, 2016 Survey, Provincial, K-6).

Our school has a large migrant and non or low English-speaking population whom it is difficult to communicate the need for volunteers to. (SBP Coordinator, 2016 Survey, Metropolitan, K-6).

Low socioeconomic area – those in town that are volunteers tend to be the volunteers for everything already. (SBP Coordinator, 2015 Survey, Very Remote, K-6).

It can be difficult in [Aboriginal] communities with "sorry time" [period of mourning]. (SBP Coordinator, 2016 Survey, Very Remote, K-10).

5.4. Level of student involvement

An important operational difference that is particularly evident among the case study schools (Fig. 2) is the level of student involvement in the day-to-day running of the SBP. In School B, the SBP is planned and run by senior secondary school students who - through planning the menus, drawing up rosters, and preparing and serving a cooked breakfast for fellow students each day - receive credit towards a vocational

Table 4

Factors limiting the ability of schools to improve or expand their SBPs, by survey year and unique schools.

	2015 SBP Survey		2016 SBP Survey		2017 SBP Survey		Unique Schools	
	n	**%**	**n**	**%**	**n**	**%**	**n**	**%**
Are there any factors limiting your school's ability to improve or expand your SBP?								
Yes	72	48.6	124	39.4	99	42.5	167	41.6
No	76	51.4	191	60.6	134	57.5	234	58.4
Total respondents	148		315		233		401	
Factors limiting improvement/expansion of SBP[1]								
Lack of volunteers/helpers	42	58.3	40	32.8	33	34.4	56	34.4
Staffing restrictions/time pressures	23	31.9	45	36.9	28	29.2	52	31.9
Insufficient funding	15	20.8	21	17.2	29	30.2	37	22.7
Limited facilities/equipment	14	19.4	21	17.2	20	20.8	31	19.0
Difficulty accessing food supplies	2	2.8	11	9.0	14	14.6	22	13.5
Negative attitudes; lack of community support	3	4.2	6	4.9	–	–	3	1.8
Limited student numbers	1	1.4	3	2.5	5	5.2	6	3.7
Threat to viability of school canteen	–	–	4	3.3	1	1.0	5	3.1
Other	5	6.9	–	–	3	3.1	4	2.5
Total respondents	72		122		96		163	

[1] Responses to open-ended questions may have been coded to multiple categories, hence percentages add to more than 100.

certificate in Hospitality. Students who were interviewed for the case study expressed pride in their contribution to the SBP, noting how rewarding it felt to help others while developing their own skills, confidence, and work readiness for the hospitality industry. By contrast, School E employs adult Aboriginal community members to organize and deliver both the SBP and school lunch program. In an interview, the Principal of School E explained he has no qualms about committing a substantial portion of the school budget to staff its school meals program and supplement the Foodbank-supplied products, noting that it "pays off for the general health of the kids, and their ability to learn long-term".

5.5. Impact of SBPs at the classroom level

In the annual surveys, SBP Coordinators were asked to comment on the overall impact of the SBP at the classroom level. Some of the key themes evident in the responses (Table 5) included: better concentration and ability to focus on learning; greater readiness for learning by supporting students' daily transition between home and school; improvement in students' mood or demeanor contributing to more calm and orderly classrooms; improved engagement and participation in learning; and fewer incidences of unruly behavior requiring disciplinary measures.

Table 5

Impact of SBPs on the functioning of schools at the classroom and whole school levels, by survey year and unique schools.

	2015 SBP Survey		2016 SBP Survey		2017 SBP Survey		Unique Schools	
	n	**%**	**n**	**%**	**n**	**%**	**n**	**%**
Has the SBP impacted the functioning of the school at the classroom level?								
Yes	114	76.5	226	71.5	158	67.2	278	68.6
Unsure	31	20.8	65	20.6	62	26.4	99	24.4
No	4	2.7	25	7.9	15	6.4	28	6.9
Total respondents	149		316		235		405	
Nature of classroom level impact[1]								
Better concentration, focus, alertness	37	33.3	65	30.8	50	40.0	80	33.8
Ready to learn	8	7.2	37	17.5	27	21.6	44	18.6
Calmer, settled, improved mood/attitude	20	18	36	17.1	25	20.0	44	18.6
Better engagement/participation	–	–	21	9.95	28	22.4	40	16.9
Improved behavior, less disruptions	22	20.8	23	10.9	22	17.6	36	15.2
Alleviates hunger; health benefits	8	7.2	15	7.1	44	35.2	59	24.9
Improved attendance, punctuality	10	9	9	4.3	8	6.4	16	6.8
Better social skills and relationships	3	2.7	12	5.7	8	6.4	13	5.5
Integration with other learning activities	6	5.4	5	2.4	2	1.6	7	3.0
Improved academic performance	–	–	–	–	3	2.4	3	1.3
Other positive impact	12	10.8	13	6.1	3	2.4	7	3.0
Total respondents	111		211		125		349	
Has the SBP impacted the functioning of the school at the whole school level?								
Yes	124	83.2	229	72.5	147	62.8	261	64.9
Unsure	22	14.8	72	22.8	71	30.3	118	29.4
No	3	2.0	15	4.7	16	6.8	23	5.7
Total respondents	149		316		234		402	
Nature of whole school level impact[1]								
Improved social inclusion, school connectedness, sense of community	40	33.3	88	39.8	48	38.7	92	39.1
Improved student behavior & social skills	40	33.3	32	14.5	26	21.0	52	22.1
Improved student attendance, capacity to learn, engagement	39	32.5	49	22.2	46	37.1	70	29.8
Supportive of students who are disadvantaged/struggling/hungry	21	17.5	20	9.1	28	22.6	36	15.3
Increased health knowledge & promotion of healthy habits	7	5.8	9	4.1	7	5.6	13	5.5
Benefits school budget (due to free Foodbank WA food products)	2	1.7	3	1.4	–	–	–	–
Other positive impact	5	4.2	19	8.6	17	13.7	24	10.2
Negative impact	2	1.7	1	0.4	2	1.6	3	1.3
Total respondents	120		217		124		235	

[1] Responses to open-ended questions may have been coded to multiple categories, hence percentages add to more than 100.

Students and teachers access the breakfast club which also provides them with a positive shared experience before the day begins. Great process for transition between a stressful/chaotic morning at home to a more positive mindset for learning at school. (SBP Coordinator, 2017 Survey, Provincial, K-6).

I work in student services and have seen a decrease in referrals for behavior management. My role includes working with students and behavior modification, which requires them to check in with me 4 times per day. At first break on [breakfast club days], I have seen an improvement on their behavior report cards, indicating an improvement in class behavior. (SBP Coordinator, 2017 Survey, Metropolitan, Years 7–12).

The breakfast program ran at our school 2 days per week for years. Just over a year ago it moved to 5 days per week because we noticed the positive impact it had on students' preparation for the school day. It is a very positive way to start the day and the teachers note improvement in the children's capacity to engage in the classroom. (SBP Coordinator, 2017 Survey, Metropolitan, K-6).

In commenting on students' improved engagement and readiness for learning, several respondents noted that the SBP had reduced the burden for teachers who had previously been providing food for students themselves or dealing with the negative effects of hungry students arriving to class in a distressed or distracted state.

The school breakfast program complements our mentoring program which has led to increased classroom engagement, ability to stay on task during class and staff are less likely to remove a student from class to "talk" about what is distracting them from class work. Student retention and ability to socialize with mainstream is improving. (SBP Coordinator, 2017 Survey, Provincial, Years 7–12).

Students were also able to articulate the impact of the SBP on their ability to function and focus on learning, as illustrated in the following interview extracts.

[Without breakfast] we be naughty. And we get more hungry. You talk while the teacher's talking. And you muck around with your shoes, or your hair. Yeah. You play with other people's hair. Oh yeah, and you don't do your work and stuff. And you get distracted by boys too, and girls. (Year 4 student, Interview, School A).

[Not having breakfast] make my engine run low. I just sit, and just feel tired, and I keep worrying about breakfast. [When we eat breakfast] then we run good. We run around, play here, and then when you go back to the class we get back just right. We're working well. Listening to instruction and focusing on work. (Year 6 student, Interview, School E).

From a parental perspective, the SBP offers the opportunity to get to know their children's teachers and feel more comfortable about approaching them:

There's a lot of meet and greet… so you get to meet a lot of teachers that you don't get that chance to meet when you drop your kids off at school, or pick them up, or have that parent/teacher meeting, or whatever, so it's really good. So I've actually got to know a lot more teachers than I did when [my son] first started. …Yeah, I'm really close to a lot of teachers here…When I first started, well when [my daughter] first started, well, she's 17 now, I was, like, a really shy person. I didn't really get to know them, but now it's just like second family to me. (Parent, Interview, School A).

Both survey respondents and interviewees highlighted the role of SBPs in helping students develop their social skills and build social connections.

It improves the social skills of some students which makes the classroom more functional. It also brings a sense of belonging to those who may not be, or may not feel, as socially connected as others. It has a calming effect on some who might be prone to exaggerated mood/activity. (SBP Coordinator, 2017 Survey, Provincial, K-10).

Students tended to focus on the opportunities that school breakfasts give them to mix with a wider range of students and make new friends:

You socialize a lot with people who you don't know, like teachers, maybe, and maybe kids, or students. And you make better friends. And then you're more popular. …Yeah, you could go out there and hang out with mates, talk about upcoming events, talk about stuff, like friends normally talk about. (Year 6 student, Interview, School A).

Parents and staff also pointed out that enabling students to interact with teachers and other adults in an informal setting helps build rapport and engenders students with a greater sense of trust and feeling of being supported by their school.

[The children have] just got everything that they need in the mornings. The teachers are all there making sure that they're right, they're not just left alone …they all have chats with the kids, and it's not like telling them what to do, they're kind of building rapport with the kids and stuff as well. …Yeah, because they can chat to them about their weekend, or what they did last night. It's just normal chat, it's not about school, and it's not disciplining them… So then I think it makes the kids feel more comfortable with the teachers around the school. (Parent, Interview, School A).

Students will have had an opportunity to talk with others and discuss any worries with an adult. This assists students in moving into class in a calmer state of mind. The Breakfast Club is a safe space within our school for many of our students. (SBP Coordinator, 2017 Survey, Remote, K-6).

Socially, children are meeting and connecting with others, forming friendships and confidence, learning new skills and this too is mirrored in a classroom environment. Teachers who help at the club have the highest levels of attendance at classroom level as the relationship between student and teacher outside the classroom is positive. (SBP Coordinator, 2016 Survey, Metropolitan, K-6).

A particularly powerful description of the influence of the SBP in breaking down barriers, establishing friendships, and building more trusting relationships between students and staff was provided by the coordinator of a special program for very disengaged, at-risk secondary school students. In the following extract, the respondent explains why the SBP and communal eating events are a crucial part of their program's holistic approach to bringing highly disadvantaged and socially isolated students "back into the fold".

…Food can act as an incentive to attend, even if they do not achieve academic results for some time. Food breaks down barriers between long established "enemies" that may have existed in previous school settings. In a supportive, non-judgmental environment, where discrimination, bullying and fighting is not tolerated, gathering to share food or teaming up to help with the preparation of food can be the conduit to establishing new and positive relationships. The sharing and eating of food aids in socialization of students who may have been isolated for some time. To celebrate special events, or honor special milestones, [we] may choose to host a full-scale lunch, with set tables, cutlery, serviettes and decorations. The young people are included in the planning and preparation. Sadly, for some it is their first experience of celebrating a sit-down meal with others and being involved in the etiquette involved in such an event. Events like these bond the students from some very diverse backgrounds. (SBP Coordinator, 2016 Survey, Metropolitan, Years 10–12).

5.6. Whole school impact of the SBP

Through open-ended survey questions and case study interviews, we also asked SBP Coordinators, school staff, and parents whether they believed the SBP had impacted the functioning of their school at the whole school level. In the annual surveys, from 63 to 83 % of schools in our samples indicated the effects of their SBP spread to the larger school community (Table 5). Survey respondents and interviewees commonly cited the important role the SBP plays in building a stronger sense of

inclusion, connectedness, and community. For some, this was seen as a direct outcome of the school's proactive support for the welfare and wellbeing of students and families. Others felt the involvement of parents in running the SBP was helping to build better school-community relations.

> *… the feedback from staff and parents is that this program builds social cohesion within the school. It provides an opportunity for relaxed and friendly interactions between staff, students, and parents at the beginning of each school day. Various staff contribute in food preparation, and ensuring the students are sitting, sharing, washing up, etc., and definitely builds greater relational connections, and community, and a sense that the school takes a holistic approach to student wellbeing.* (SBP Coordinator, 2017 Survey, Metropolitan, K-6).
> *… The SBP has resulted in parents being welcomed into the class to assist with breakfast which is aiding parent - classroom relationships.* (SBP Coordinator, 2017 Survey, Provincial, K-6).

Whole school impact was also linked to improvement in educational indicators such as student attendance, engagement, and capacity for learning, and to improvement in students' social skills and behavior. In case study School D, the SBP was part of a community-wide strategy involving other service providers that aimed to boost school attendance and reduce antisocial behavior beyond the school grounds. The extracts from open-ended survey questions and interview transcripts below illustrate the importance of the SBP to the functioning of schools. They reflect a recognition of the negative consequences for teaching and learning and school-community relationships if the SBP could not be sustained:

> *It's a really good program for us. … it contributes to the fabric of our school, helps us become calm and consistent, and all those sorts of things. It's a really worthy thing… it's something that's really needed in this part of the world. We wouldn't survive without it in lots of ways. It would just make life 20 % more complicated, straight up.* (Principal, Interview, School E).
> *I don't want there to be a time that we can't provide breakfast club to our students. It has become an integral part of the school environment.* (SBP Coordinator, 2016 Survey, Metropolitan, K-6).
> *It is a part of our culture of caring, acceptance and integrating cultures and overcoming language barriers.* (SBP Coordinator, 2017 Survey, Metropolitan, K-6).
> *The program has united our small school and helped to develop a more positive and friendly culture amongst staff and students.* (SBP Coordinator, 2017 Survey, Remote, K-6).
> *I believe that if there was no breakfast program at the school the attendance would drop and the suspension rate would rise.* (SBP Coordinator, 2017 Survey, Provincial, Years 7–12).
> *We see the School Breakfast program as an essential aspect of allowing this school to run efficiently.* (SBP Coordinator, 2015 Survey, Metropolitan, K-6).
> *We believe it makes an important difference to the lives of a significant number of our at-risk students. If their physical needs are met, we can then concentrate on assisting them with their emotional and learning needs.* (SBP Coordinator, 2016 Survey, Provincial, Years 7–12).

6. Discussion

The varied approaches to SBP delivery in WA described in this study are indicative of the geographic and socio-cultural diversity of school communities across the state and the differing needs of at-risk or disadvantaged students within those communities. We have attempted to encapsulate these varied approaches in a series of continua that define the key implementation criteria (purpose/rationale, SBP integration, health focus, scope/inclusivity) and operational characteristics of SBPs (program frequency, location and physical setting, meals provided, range and source of food products, menus offered, status of SBP

coordinator role, use and source of volunteers, student involvement). Our data suggest that more inclusive, resource-intense delivery models are characteristic of schools in which the SBP is an integral part of a whole school approach to health promotion and/or community capacity-building. This should not be seen as devaluing SBPs that have a narrower focus or are not well-integrated with other programs, since they still provide an essential service in alleviating hunger among students who are experiencing disadvantage or food insecurity. However, both the literature (Neely et al., 2015; Rowe & Stewart, 2009) and the present study suggest that positioning SBPs within a strategic whole school approach affords greater potential for achieving positive impact at the classroom and whole school levels.

Both quantitative and qualitative empirical studies have found that school breakfast programs can have a positive impact on the wellbeing and educational outcomes of students at risk (Adolphus et al., 2016; Crawford et al., 2019; Folta et al., 2016; Frisvold, 2015; Graham et al., 2014; Hoyland et al., 2009; Imberman & Kugler, 2014). Consistent with this, our descriptive study of the WA context found consensus among school staff, students, and parents that the SBP had a positive influence across a range of factors that affect students' capacity to learn - including attendance, calmness, concentration, and behavior. Whilst acknowledging the limitations of self-report qualitative evidence, it is clear from the data that many schools see strong benefits of the SBP for students in "setting them up" for the start of the day so they are ready and receptive to learning. At the classroom level, the SBP was described as helping to create conditions that are conducive to learning by smoothing students' transition from home to school, fostering a sense of calmness and composure, and reducing disruptive behavior. Schools contending with acute levels of food insecurity and disadvantage emphasized that the ability to feed their students was critical to the functioning of their classrooms and overall teaching and learning program. The benefits of the SBP observed at the classroom level were also seen to flow through to the whole school level by fostering a calmer, safer school environment.

Beyond its fundamental purpose of meeting students' hunger needs, the welcoming social environment of SBPs was also seen as providing a positive start to the day (Graham et al., 2015) by lifting students' mood and demeanor and thus boosting their predisposition for learning. Importantly, in our case study schools, the students themselves were aware of and able to describe how the SBP positively influenced their ability to focus and engage with their learning.

At the whole school level, we have seen that SBPs can have a positive impact on the quality of students' relationships with adults (staff and SBP volunteers) and peers. As other studies have found (Godin et al., 2018; Graham et al., 2017; Graham et al., 2015; Shemilt et al., 2003; Watson et al., 2020), participants in the present study, including students, reported that the SBP was a safe and supportive environment which enabled students to make new friends and hone their social skills. For many schools, the social benefits of the SBP were not only highly valued but attributed as the "catalyst" for the positive impact on students' readiness and capacity for learning. The relaxed social setting of the SBP was also seen to encourage better staff-student relationships, the widening of student friendship groups between and across age levels, and stronger school connectedness. Where SBPs were extended to parents and families, schools reported improvements in school-community relationships in that the sharing of food in an informal social setting facilitated more trusting, cooperative relationships with families who had previously harbored negative attitudes to education and schooling.

A pervasive theme in relation to the impact of the SBP at the whole school level was that of calmness. Students reported that participation in the SBP helped them to feel settled at the start of class; teachers observed marked differences in the behavior and disposition of some students if breakfast club was missed. School leaders and teachers described the SBP as having a discernable effect on the overall "tone" of the whole school, engendering an atmosphere of greater calm and orderliness. Fig. 3 attempts to represent the "cascading" influence of the SBP that
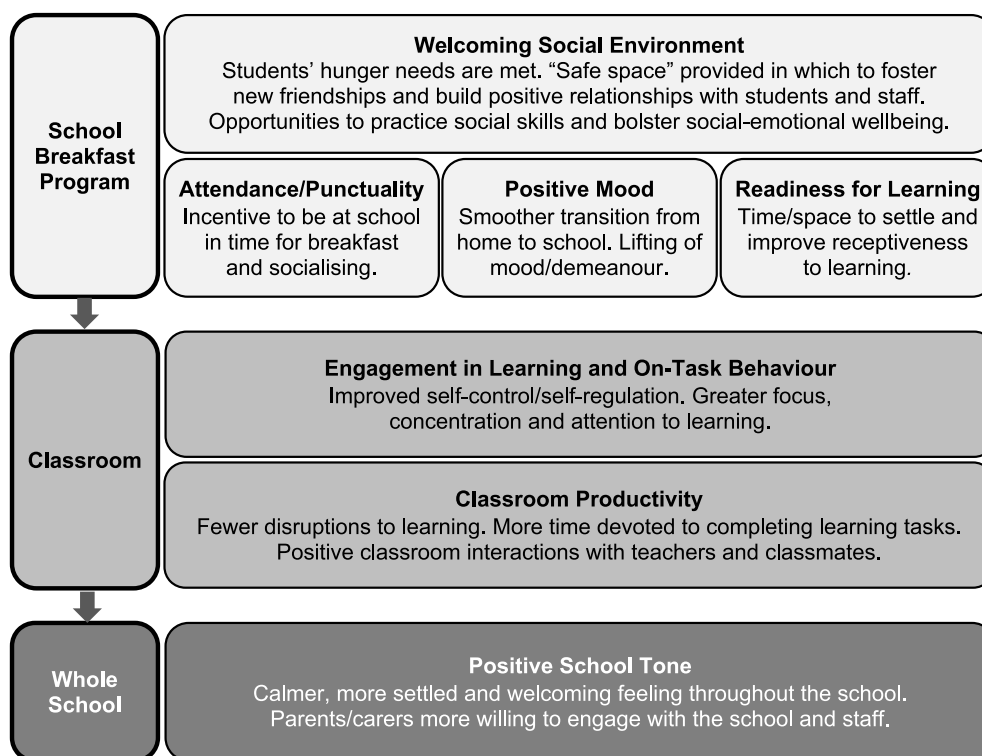
Fig. 3. School Breakfast Program model of engagement and impact at the classroom and whole school levels.

was described to us by many of the participating schools. The diagram builds on the representation developed in an earlier small-scale investigation of the School Breakfast Program (Byrne et al., 2014, unpublished) and attempts to illustrate the mechanisms by which the social and educational benefits of the SBP are realized at the classroom and whole school level. In one of our case study schools, the benefits described at the whole school level were seen to cascade further, resulting in a reduction in the incidence of antisocial behavior within the wider local community.

Food and communal eating occupy an important role in the social fabric of all cultures and societies given their close association with celebration, ritual, and social connection. Previous studies have proposed that this is also true of school communities (Neely et al., 2016; Rowe & Stewart, 2011) and that food practices can be an important vehicle for building school connectedness. This was borne out in the present study where the SBP was described as an effective means for regularly bringing together adults and students of different age groups in a social rather than educational setting. Many schools capitalized on this to promote stronger relationships between students, teachers/staff, volunteers, and often also parents/carers and families. They recognized these social occasions afford rich opportunities for children to improve their interpersonal skills, build their overall social capability and self-awareness, and strengthen their sense of connection to the school community.

7. Conclusion and limitations

A limitation of this study is its strong reliance on self-report data. Such data rely on individuals' recall of events and may be prone to social desirability bias whereby participants are more likely to respond positively. Whilst mindful of this limitation, our findings corroborate those in other studies of more limited scope. Importantly, the study provides compelling evidence that, for many WA schools, the value of the SBP extends well beyond the social imperative of ensuring students from disadvantaged circumstances are not held back socially and educationally by a struggle with hunger and exclusion at school. The social

benefits for individual students translate to improved functioning of classrooms and positive school tone. While we did not set out to specifically examine or conceptualize school breakfast programs as "spaces of belonging" (Baroutsis & Mills, 2018), aspects of the data point to the likelihood that SBPs can serve as a "thirdspace" (Baroutsis & Mills, 2018) where students feel safe, accepted, and nurtured. It offers intriguing possibilities to investigate SBPs as material, relational, and pedagogical spaces that help to redress some of the damaging effects of disadvantage. Regardless of the conceptual lens, we contend that our study highlights the need for further research to better understand and assess the social value of school breakfast programs for students at risk and the school communities to which they belong. In particular, greater understanding is needed as to the extent and mechanisms by which more integrated, whole school approaches to the SBP may contribute to children's wellbeing outcomes and offer substantial social return on the resources invested in them.

Declaration of Competing Interest

The authors declare the following financial interests/personal

relationships which may be considered as potential competing interests: Miranda Chester is an employee of Foodbank WA, but did not participate in the collection, analysis and interpretation of data. She provided access to the School Breakfast Program registration records, validated the findings, and proof-read the manuscript to check for factual errors regarding administration of the SBP. The remaining authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

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