Examining primary and secondary school canteens and their place within the school system: a South Australian study

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Abstract

In Australia, school canteens are an integral part of the school environment and an ideal site to encourage healthy eating. However, when the canteen is not supported within the school system, healthy menus may be difficult to implement. The aim of this study was to investigate school canteens and their place within the school system in primary and secondary schools in South Australia. Using a systems approach, 14 schools and their canteens located throughout metropolitan and rural South Australia are discussed. A range of qualitative interviews was conducted with school principals (n = 14), canteen managers (n = 14), parents (n = 50), teachers (n = 10) and focus group interviews were held with students (n = 450). This study showed that although school canteens were located on school grounds and should be supported as an integral part of the school system, in many cases they were not. A range of influences such as: maintaining profit, reduced volunteer support and student choice negatively impacted what was sold on the canteen menu. This study indicated that offering a sustainable healthy school canteen menu largely depended on the support and resources provided to the canteen by the school system in which it belonged.

Introduction

The school setting is a crucial part of the social environment that shapes eating behaviour, especially given that children’s food preferences are learned through repeated exposure to foods [1]. School food services are an integral part of the school environment and are an ideal site to focus efforts on improving the nutrition of schoolchildren. However, research indicates that many school food services face myriad concerns in their provision of healthy food items [2–4]. Although school food services should provide a practical example of good nutrition by supporting the nutritional education provided in the classroom, many do not [3, 5, 6]. If the school relies on the school food service to make a profit, those making the financial decisions within the school may believe that products containing high fat and sodium are thought to be most profitable [7, 8]. Given the place of school canteens within the school system, there are ethical challenges that require attention regarding the sale of such products. This raises concerns regarding the effectiveness of the entire school system in its delivery of healthy behaviour.

The school can be viewed as a complex but permeable open system [9]. When all parts of that system are functioning efficiently, there is a greater likelihood of producing desired outcomes. School food services sit within that system and should be an integral part of the school environment [10]. If the
school system supports the ethos of a health-oriented canteen, together they can provide an ideal site upon which to focus efforts on improving the nutrition of school students. Unlike the UK and the US school food models, where a national school lunch programme provides many school students with a sit-down cafeteria-style meal, most children in Australia generally bring their lunch from home or purchase from the canteen [4]. Food purchased from the canteen can provide students with a complete lunch or can supplement food brought from home. Therefore, the foods sold at the school canteen may have consequences for the health of students. Research indicates that canteen users consume greater amounts of foods likely to create unhealthy weight gain, such as confectionery and packaged foods [4, 11]. As school canteens in Australia are generally profit driven, these types of unhealthy products are thought to attract the most sales [4, 8]. Whereas the need to maintain profit is clear in terms of financial viability, the desired health outcomes of the school system may be compromised.

Notable studies [4, 5, 12–14] have investigated children’s purchasing habits, parents’ perceptions and the impact of the school canteen on childhood obesity. However, the role and function of the school canteen as it sits within the school system has been largely unexplored. Pressure from influences within the school system may require school canteens to act as a source of revenue and this further restricts many canteens from selling foods that reflect healthy eating practices. Although this aspect is changing in some Australian states [15], conflicting ideologies still exist between managing a canteen for profit and healthy food provision [16].

The purpose of this paper is to present significant findings of an in-depth qualitative study which investigated South Australian school canteens and their place within the school system [3].

**Methods**

**Systems approach**

An interpretive inquiry using a thick descriptive approach [17] supported by a systems perspective [18] was the framework for this research. Interpretivism is central to a systems perspective as it seeks to understand the system as a whole that is both greater than and different from its parts [19, 20]. The ‘Health Promoting Schools’ framework determines the basis for the School System model [3] applied to this study. The Health Promoting School framework [21] is underpinned by certain dimensions of health being interconnected and their influences on each other. Figure 1 shows how the three parts of the interconnected inner section of the School System model are reliant on and influenced by each other in some way. For example, the school canteen is dependent on the immediate school environment to provide important feedback on the canteen menu. What is sold on that menu can either support or negate what is taught within the school’s health curriculum and is subject to what is profitable for the school. Overarching influences such as television advertising, peer groups and government health policies such as the Dietary Guidelines for Australians [22] and the Australian Guide to Healthy Eating [23] also have significant consequences for the school system.

**Participants, recruitment and data collection**

Fourteen schools were randomly selected from both metropolitan (n = 10) and rural government schools (n = 4) in South Australia from a range of culturally diverse and socio-economic standing [24]. All participants were recruited with the assistance of the school’s governing council (the group who provides the governance in South Australian state schools where the majority of members are school parents) and the school principal. Interviews were conducted with school principals (n = 14), canteen managers (n = 14), parents (n = 50), teachers (n = 10) and focus group interviews were held with both primary and secondary school students with ages ranging from 5 to 16 years (n = 450) over a course of two school terms in 2007 (approximately 6 months). Approximately 45 student focus groups were conducted. All the focus groups contained 8–10 participants. Table I shows a summary of school and participant breakdown.
Differentiation based on age was considered to reflect changes in eating patterns and using primary and secondary schools was thought to attract a range of ages. The use of rural schools was considered to attract another aspect of the school system. The number of schools was decided upon by the project’s reference committee to gain an adequate number of case studies without making the data collection unmanageable [25]. Detailed information and consent forms were sent to each participant and parents of the students involved in the study were asked to return signed consent forms prior to any data collection. All adult interviews were held in the school’s staff room or school canteen and were approximately 60 min in duration. The student focus group interviews took approximately 30–45 min and were held in an area close to the student’s classroom or a vacant classroom nearby as well as being in close proximity to a teacher. The principal of the school approved all student focus group interviews. Interview questions (Table II) were based on the outcomes of pilot research [26] and reflected a mixed mode interviewing strategy [17]. All interviews were conducted by the lead investigator (C.D.) and audiotaped and transcribed verbatim. Ethics approval was granted from the Institutional Ethics Committee and the South Australian Department of Education and Children’s Services (DECS). As is the standard when working with school students in South Australia, the researcher obtained a personal police check.

Analysis

Interview data were analysed manually using colour-coding procedure [17]. Repeated examination of the colour-coded passages back to the original transcripts occurred. This was to identify common themes among the experiences of the case study participants in regard to their school canteen [27]. At all times, the thematic process underwent strict scrutiny by members of the advisory committee who oversaw the study. The credibility of the themes was assessed by triangulating the data, which were based on documentation and the interviews in order to maximize breadth and range [27]. No attempt was made to quantify the data, given that the study was...
underpinned by rich descriptive analysis reflective of sound qualitative research [17].

### Results and discussion

The major findings in relation to the School System model (see Fig. 1) are addressed in this paper. Results for the primary and secondary schools are presented together where the results were congruent. Themes relating to other issues, for example the major differences between primary and secondary school canteens in South Australia will be presented in a separate paper. This paper will report on the broad themes and subthemes that emerged from the case studies as they fell within the three influences in the ‘school system’ component of the system model: (i) school food service, (ii) school curriculum and (iii) school community.

I cannot rely on volunteers to help me and the school will not pay for help so I have to have an easy menu to prepare. Making sandwiches or making salads from scratch takes time which I don’t have, not unless I get some help. (Canteen manager: metropolitan primary school)

There are chicken nuggets that are already made, they look okay. … processed food, nuggets and things are not my ideal, but when you work with the limited resources and staffing-wise, and there are days I’m on my own, so you can’t put anything on the menu that requires a workload,
because I’m just not guaranteed to get it, so that would be the worst if I had, a high workload and then no one turned up. (Canteen manager: metropolitan secondary school)

In contrast to the metropolitan schools, the rural schools used volunteers regularly and therefore could offer a menu with many freshly prepared food items.

It’s becoming difficult to find reliable volunteers to work on a regular basis but we’re quite lucky in this school. As you can see by our menu, we can offer fresh salads and I have the time to make all of my hot food [like pasta] from scratch because I have some help. (Canteen manager: rural secondary school)

The majority of secondary schools supplemented the food sold within the canteen with closely located vending machines. Whereas vending machines were not present in primary schools, they were located in all the secondary schools. These machines were available to the school population even when the canteen was closed. In these instances, the canteen may not have sold high-sugar drinks or many foods containing a high percentage of fat and sodium, but these products were still available from the vending machines.

Many teachers did not see food provision as part of their core responsibility and lacked the inclination or resources to take on this ‘added responsibility’. However, unconditional support from the principal was the catalyst for a change in menu. This was especially evident in one of the primary schools where an advantageous working relationship between the canteen manager, the principal and the school community had been forged, and there was commitment from the principal to support and encourage the healthy initiatives introduced by the school canteen.

The fact that there are parents in the school who never gave it a thought, and who therefore think oh, hang on what’s wrong with the kid buying this at lunchtime or a packet of chips or this or that. They’re slowly coming to realise too, and I think they just respect the fact that the canteen is working to give their kid choice, but that they’re choosing from appropriate foods. (Principal: metropolitan primary school)

In this instance, the principal introduced a nutrition curriculum into the school to support the healthy example set by the canteen.

**Profit**

Asking whether the school required a profit to be made from the canteen, the majority of canteen managers maintained that it was expected that the canteen should make one. The amount of profit differed from school to school, with some schools stating that they were required to make large profits to help finance other areas of the school, whereas other managers claimed that they ‘just had to break-even’. However, most of the school principals were more concerned with what was sold to the students and to ‘cover costs’ rather than make a substantial profit. Some comments made by some canteen managers were in direct contradiction with those made by many of the schools principals. One canteen manager argued, ‘you need to make a profit so that you can pay for staff, cleaning and things like that’. Another claimed that as far as the school was concerned, there was ‘an underlying expectation that we should cover our costs’ and the school ‘would probably like the money because it would probably go towards computers and other things’. These comments seem to support literature, which claims that canteens are required to make a profit to ‘prop up’ other areas of the school [28].

**Volunteers and implications for outsourcing**

Lack of volunteers within the schools was one of the main reasons for the outsourcing of the canteens, although this was only evident in secondary schools. Although primary schools did struggle with attracting volunteer help, they had not taken
the step to outsourcing in order to stay viable, but some could not stay open every day. The resulting unavailability of the service 1 or 2 days a week put some students at a disadvantage. The shortage of volunteers in many schools meant a lack of time to prepare healthy alternatives. Some schools identified that their only option was to sell pre-packaged pre-made products in favour of freshly made. In many cases, schools were hesitant to outsource, concerned with the lack of control they might then have over the canteen. Although the school canteen might sell a ‘few unhealthy alternatives’, respondents felt they still had the opportunity to change the menu to incorporate healthy ideas where possible. The general consensus from canteen managers and teachers particularly from the primary schools was that they did not want their canteen full of unhealthy products, which according to the participants was a by-product of outsourcing.

Student choice
An interesting finding from this research was that some of the upper primary and secondary students were leaving the school campus to buy food at nearby ‘competitors’. Adult participants claimed that students found it easy to explore ways in which to purchase food options off campus, and students claimed that it was ‘very easy’ to go off campus during the school day to purchase from neighbouring shops. Referring to the difficulties schools faced keeping students on school grounds at recess and lunch, one teacher from a metropolitan secondary school stated:

That’s part of the reason that I think schools have problems, because [students] like to skip across the road, and we do have lots of, you know, many exits. We don’t fence them in. (Teacher: metropolitan secondary school)

We get the Year 12 students involved and Year 11s to act as role models for the junior kids. Because if the junior kids see the older kids going across the road, bringing junk food in, or not supporting the healthy food that’s here in the canteen, then obviously it’s not going to take off, so the big emphasis has been those kids’ role modelling behaviour and eating habits. (Teacher: metropolitan secondary school)

Built environment
Many of the school canteen managers cited space concerns as the limiting factor in preparation of freshly prepared foods. The managers were ambivalent between wanting to provide fresh alternatives for the students and not having the required bench space to do so. When asked whether the school was able to utilize space more functionally, only one school was able to change their canteen layout to increase bench space. The general comment from the school principals was that sufficient funds were not available to make their canteen workspaces larger. When the principals were asked if it was
likely that a canteen upgrade would ever be a school priority, only one principal answered that it would:

Sure, if we can fundraise and also receive some local or state government support we would definitely upgrade the canteen space. But that’s just the thing, how do we fundraise enough to do this. The government would also need to see this as a priority otherwise we would not receive funding. (Principal: metropolitan primary school)

School canteen guidelines
Canteen guidelines developed in most Australian states and territories apply to all situations where food and beverages are supplied in the school environment [15]. The aims of the guidelines are to provide a framework to support the implementation of sale of healthy food in school canteens. Currently, canteen guidelines refer only to the school canteens in the state or territory in which they were developed, however, national canteen guidelines have been written which harmonize existing state and territory school canteen guidelines [31]. Canteen guidelines for schools in South Australia were not applicable at the time of this research; however, the position paper explaining the guidelines [32] was available to schools. A few school canteen managers who had seen the position paper were concerned that the guidelines would prevent the sale of the canteen’s ‘profitable’ foods, such as pies and hot dogs. Theses comments concur with research [4] indicating a reliance on profits from canteens, vending machines and ‘junk food fundraising’ makes it difficult for schools, particularly secondary schools, to model healthy eating. Certainly, this was the case in some of the schools. Many participants understood healthy behaviour and some were despondent about the food available in their canteen. This was particularly evident in the secondary schools, especially when take-away outlets surrounded the schools. If the school deemed keeping their students on campus as a high priority, then the school food services generally stocked items to keep the students from purchasing elsewhere. Some secondary school principals were of the opinion that although the school did have an ethical obligation to sell healthier alternatives, the school canteen was still required to sell food in keeping with their ‘competition’. Similar research carried out in Victorian schools [12] indicated that a high percentage of respondents did not think that the foods sold at the canteen reflected classroom teaching. According to Hesketh et al. [35], teachers should provide pupils with accurate and consistent health information that they require to develop skills to make correct eating choices [22, 36]. However, in many schools, although the teaching curriculum integrated nutrition concepts into the teaching and learning process, it did not trickle down into other areas of the school system. Skill development appeared compromised when the school food service did not support the nutrition messages taught within the schools. If the school community maintains that the canteen is a profit-making venture rather than a service for the students, then the school system does not support a whole-school approach to health.

School community
The concept of adopting a whole-school approach to healthy eating raised much debate. A number of
Canteen managers, teachers and parents provided contradictory comments on the role of the canteen in the whole-school approach. Whereas they were certainly in agreement that the school canteen should supply ‘some healthy food’, there were varying degrees of how much should be healthy and how much should be a ‘treat’.

**The governing council**

Currently, school councils in many state schools make the financial decisions that affect the day-to-day running of the school. According to Bush and Gamage [37], this is a move away from the traditional centralized control and is based on the assumption that individual schools take ownership of their own economic outcomes rather than national or local politicians determining on national or local need. Schools or governing councils have influential power to manage the schools’ own affairs within a national framework and are usually composed of major stakeholders such as staff and parents with operational management devolved to the school principal [37]. Although this makes sense at the local level, it also can raise some concerns. The governing councils within this research made the majority of financial decisions in the schools, incorporating (among other areas) the canteens’ profit and loss. The council, run by volunteer parents and teachers in after-school hours, were sometimes unlikely to include the canteen manager in any decision making regarding the canteen. In some instances, the canteen manager was given instructions on products or ‘special fundraising’ events that should be included and marketed in order to increase profits. This is alarming given that in only one school did the member of the school council have any specific nutritional training. Some of the school principals did concur that the financial decisions sometimes made by the council did not reflect healthy practice, especially when it came to fundraising and sponsorship at school sport events.

**Principal and teaching staff**

Acceptable role modelling from the teaching staff is critical to the success of the whole-school approach to health. If teachers are not seen to be supporting the healthy ethos of the school, conflicting messages are given to the students. Without a healthy social environment, many lessons become irrelevant and may undermine the status of those that do support healthy practice [38]. This issue brought up mixed comments from participants in regard to what was a good role model and how far the role extended. Some participants were torn between their role as a teacher within the classroom in juxtaposition to their role outside the classroom. For example, many secondary teachers agreed that within the classroom, their actions must coincide with the healthy teaching practice. However, at lunch, many thought that going off campus to source food from neighbouring food outlets was not in violation of their duties as health agents. One area that most participants agreed on was that their school canteen should offer a good range of healthy alternatives at reasonable prices. One secondary school teacher stated:

> Schools, especially secondary high schools, should supply a good range of healthy food options that are within the range of what the kids would choose at competitive prices, bearing in mind the unique situation of each school. It shouldn’t be seen as an essential part of their food intake because in normal cases it’s not, just a really good range of foods that they can make choices from. (Teacher: secondary metropolitan school)

This notion of providing choices for students is also apparent in other literature associated with school food [39], which highlights that upon the provision of healthy choices and options to students, these items are frequently purchased. Several teachers claimed that the canteen should encapsulate the ‘healthy ethos’ of the school environment and offer healthy options to a ‘captive audience’. This idea of providing healthy food to a captive audience is an interesting point in that school students are required to remain on the school grounds for the majority of the weekday. If the school is promoting a health focus within a working system,
clearly the school canteen is an ideal site to support such a focus.

Parents

Parents are able to contribute to supportive healthy environments by creating links with the school decision making, working cooperatively with the school through involvement in work experience and the provision of resources [40, 41]. Many of the primary school parents interviewed were consistent with this view and the success of healthy initiatives was reliant on the positive contribution and involvement of parents at the schools. Some considered the canteen as a provider of other services such as teaching children about money and providing them with social skills, although this was not shared by all adult participants who ‘took care of that stuff at home’. This view is also provided by the wider literature [35]. Summing up the majority of views held by the parent participants in this study regarding expectations of a school canteen, a parent with a child in a primary school stated:

A school canteen should provide fairly healthy options for children and an alternative for parents should they need to give the canteen some lunch orders. It’s a process where children can learn about retail, it’s a process where children can learn about choice but I don’t think that school canteens are the place where things like Coca Cola and chips should be sold. I just think that if we’re talking about kids’ brains and so forth, that kind of stuff, they can source that from elsewhere but a school really should be held responsible for health. (Parent: metropolitan primary school)

In keeping with a whole-school approach to health, some primary schools successfully ran programmes such fruit days where students were either required to bring fruit from home to cut and share or ‘no waste day’ where foods in their lunchboxes produced no throw away waste. Parents were involved with the running of nutritional pro-

grams within some primary schools with the introduction of specialized committees. However, utilizing volunteers created some difficulties due to the availability of parents.

The parents in secondary schools were not as proactive. The comments from the parents were that their children would not appreciate their involvement, with many students citing that it ‘wasn’t cool’ to have their parents ‘hanging around’. None of the secondary school parents volunteered in the school canteen and the main reason cited for the non-involvement was parent employment during school hours. This non-involvement had a trickling-down effect in the secondary schools as none of the metropolitan canteens were able to rely on volunteers to help and hence two school food services in this study were outsourced to private companies. The rural secondary schools still successfully ran their canteens with volunteer help and this is consistent with Drummond and Sheppard’s [42] research of canteens in rural areas.

Students

A noteworthy issue raised within this theme of provision of healthy food alternatives related to the gender differences in food choice from the canteen menu. Whereas the male student participants were somewhat ambivalent regarding the food on the canteen menu, the female participants, both students and teachers, overwhelmingly claimed that they would like to see healthier food choices available. One teacher from a secondary school claimed that when it came to purchasing from the canteen, girls were more likely to buy healthier foods rather than ‘junk’ food if offered. This is portrayed in the dialogue below:

My students who are in Nutrition, mainly girls, they’re very health conscious and they were complaining that they couldn’t get healthy options at the canteen. The boys are the ones that still eat the junk food and they’re the ones that tend to get out of the school yard and go to the shops. [Girls] are generally more health conscious. And they’re not trying to be really...
skinny a lot of them, but they just want to be really healthy. (Teacher: secondary metropolitan school)

This issue was further supported by the numerous student participants who agreed that although the food selection in their canteen was good, they would also like to see additional healthy alternatives available. One student from a metropolitan secondary school summed this up with:

Generally I am happy with the food but it could be healthier though. Maybe sell some fruit, like cheaper than someone else does. Like watermelon and like pieces of fruit and stuff, like 30 cents. We have a choice then to buy it when we want it. (Student: secondary metropolitan school)

Another issue raised by both primary and secondary students was the cost of food purchased at the canteen. Students claimed that food was not only expensive but also that the canteen lacked ‘variety’ in food items. Moreover, claims were made that ‘the healthy stuff is always more expensive than the fatty foods so it’s cheaper to buy a pie or sausage roll’.

Implications for schools

When viewing the school canteen as part of the school system, this research has shown that there are many differing influences acting on the delivery of a healthy food service. When the school canteen is fully supported by the school system in which it belongs, healthy food implementation within the canteen can occur. Strategies must be employed within the entire school system to ensure that schools do not fail in their attempt to offer a superior health-promoting school model. For example, nutrition education taught in the classroom should be closely supported by what is sold within the canteen. Arguably, the school principal’s unconditional support along with the teachers’ and parents’ endorsement of the school’s commitment to a healthy service will be the main reasons behind a school’s success. This is consistent with system design research that establishes that a successful system design in schools requires unconditional support from the school principal for practical and sustainable change. Further evidence of a systematic approach to healthy eating in schools is where the school community supports the school canteen that may be reliant on a volunteer model to operate in order to produce healthy menus. A range of initiatives to sustain volunteer recruitment and retention must be implemented and sustained.

When the school food service is not considered part of a functioning school system, one pivotal element of the whole-school systems approach to healthy eating is not upheld and this raises concerns regarding the effectiveness of the entire school system. Working in ways that allow those in the school system to find common ground is the essence of the whole-school system approach. Moreover, it is the connection between the parts that can prove the most important aspect of that system.

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