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Short Communication

Stakeholder perceptions of a school food policy ten years on

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Abstract

Objective: To assess (i) the extent to which stakeholders have accepted and implemented a Healthy Food and Drink Policy for schools a decade after its introduction and (ii) any resulting implications for canteen profitability.
Design: Online survey distributed via electronic newsletter to school principals.
Setting: Western Australian public schools.
Subjects: Principals, teachers, canteen managers, and parents and citizens committee presidents (*n* 307).
Results: Large majorities of respondents reported that the policy has made the foods and drinks provided in schools healthier (85 %) and that the policy constitutes a good opportunity to teach children about healthy eating (90 %). Only small proportions of respondents felt it had been difficult to implement the policy in their schools (13 %) or that the policy fails to accommodate parents' rights to choose the foods consumed by their children (16 %). Most of the policy outcomes assessed in both the initial post-implementation evaluation (2008) and the 10-year follow-up evaluation (2016) demonstrated significant improvement over time.
Conclusions: The study results indicate that comprehensive school food policies can favourably influence the foods and drinks provided on school premises and can be highly acceptable to key stakeholders, without adversely affecting profitability. The results are encouraging for policy makers in other jurisdictions considering the implementation of similar policies.

Keywords
Food policy
Policy evaluation
Schools
Canteen
Children

Schools are key locations for the implementation of food policy due to the coverage of very large numbers of children and the ability to introduce both educative and structural policy components[1,2]. In Australia, a voluntary national school food policy was introduced in 2009 that is underpinned by a traffic light food categorisation system classifying foods as green (healthy), amber (moderately healthy) or red (unhealthy)[3]. Individual states have elected whether to implement this policy or introduce their own versions. In Western Australia (WA), the context of the present study, a mandatory policy for public schools (known as the Healthy Food and Drink Policy) had already been implemented by the WA Department of Education in 2007[4]. The WA policy meets the minimum requirements of the national policy and exceeds them in some areas. For example, the national policy does not define the proportion of green and amber products that should be offered[5], while the WA policy requires canteen menus to comprise a minimum of 60 % green choices and a maximum of 40 % amber choices[4].

Various elements of school food policies have been nominated as especially important in influencing policy effectiveness. These include coverage of numerous aspects of the school environment such as (i) foods supplied via the canteen, (ii) foods provided at school social and fundraising events, (iii) classroom rewards, (iv) foods brought in from home, (v) foods available in the local environment and (vi) the education curriculum[6–8]. The WA policy mandates three of these six elements: at least 60 % of canteen offerings must be green and no 'red' foods can be sold; no 'red' foods can be used for classroom rewards; and no 'red' foods can be supplied at school-run events.

While school food policies have been introduced in many countries[8], relatively few have been independently and/or comprehensively assessed. Work to date suggests that such policies can be appropriately implemented by food-service providers[9–12] and that policies that limit the supply of unhealthy 'discretionary' foods in schools can be associated with lower levels of student obesity[13,14].

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Such evidence is critical for providing policy makers with the justification they require to introduce comprehensive school food policies[15,16].

The need for evidence is especially important where there is division in the community about whether school food policies are appropriate and effective. For example, an initial evaluation of the WA policy undertaken in 2008 found that despite some high-publicity opposition to the policy, major stakeholders were highly supportive of the policy and its aim of improving children's diets[9,10]. In particular, a large majority felt that the foods available on school premises were healthier after the introduction of the policy[10]. However, 10 years later there continue to be media stories that are critical of the policy and its requirements on schools[17].

The aim of the present study was to assess the extent to which stakeholders have accepted and implemented the WA Healthy Food and Drink Policy and to explore their perceptions of the policy ten years post-implementation. Evidence of increasing acceptance over time may serve to provide policy makers with the assurance needed to enhance school food policies by progressively increasing the nutritional quality of the foods that are available to children on school premises. It has been noted that long-term evaluations assessing school food policy effectiveness and sustainability over time are lacking[18,19], which limits the evidence base available to policy makers. It is particularly important to understand the financial implications of school food policies given the substantial budgetary constraints experienced within the education sector[20]. The present study therefore included investigation of the economic viability of the WA policy for individual schools.

Materials and methods

Consistent with the methodology of the initial evaluation and similar evaluations conducted elsewhere[9–11], an online survey was administered to members of multiple stakeholder groups that play vital roles in policy implementation in the school environment: school principals, teachers, canteen managers, and presidents of parents and citizens (P&C) committees. These four groups have direct involvement in policy implementation. Principals have formal responsibility for ensuring the policy as a whole is implemented in their schools and are required to report annually to the WA Department of Education on compliance levels. Teachers assist in educating students about the policy and are required to avoid using 'red' foods as classroom rewards. Canteen managers and P&C presidents are typically responsible for ensuring all foods and beverages sold in the school canteen comply with the traffic light food categorisation system (most Australian public-school canteens are administered by P&C committees).

The survey link was distributed to principals of the 713 public schools in WA via a Department of Education regular update email. The email contained numerous news items, including a request to complete the survey and to share the link with two teachers in the school, the canteen manager and the P&C president. The request to share the survey with two teachers was as per the original evaluation[9,10] and reflected the larger number of members of this stakeholder group relative to the other three groups. Principals could select which teachers would be most appropriate for involvement in the study. To facilitate comparisons, the survey included the same items relating to compliance with the policy, attitudes to the policy and perceived policy outcomes that were in the initial evaluation survey conducted in 2008[9,10]. Consistent with recommendations[19], these items were based on formative research to ensure they were relevant and appropriate for the stakeholder groups involved in the research (see Pettigrew *et al.*[21] for a detailed account of the initial evaluation, including the survey instrument). Each respondent answered an average of seventy-nine questions (not all questions were relevant to all stakeholder groups). The questions related to the school's food environment, attitudes to the policy and perceptions of policy compliance. Ethics approval for the study was obtained from the Curtin University Human Research Ethics Committee and the WA Department of Education.

Data from both the 2008 and 2016 data sets were analysed. Significant differences between percentages (i.e. sample characteristics, canteen profitability) were assessed through the z ratio (and associated P value) for the two proportions, while differences among continuous variables (i.e. policy compliance, perceived policy outcomes) were assessed using independent-samples t tests.

Results

Sample

In total, 307 stakeholders responded to the online survey (see Table 1 for sample profile). Compared with the original (2008) evaluation survey, the sample was approximately half the size and there were fewer principals and more canteen managers and P&C presidents in 2016.

Compliance

The proportion of principals reporting compliance (selecting '4' or '5' on a 5-point scale, where 1 = 'not at all compliant' to 5 = 'fully compliant') was 81 % in 2016, which was lower than the 89 % reporting compliance in 2008 ($P < 0{\cdot}001$). Table 2 shows compliance outcomes by school type.

An open-ended response question allowed respondents to offer 'any suggestions that could make it easier for your school to comply with the policy'. Most of the responses from both the metropolitan and regional schools related to educating parents, the school community and the broader

community about the importance of healthy eating to engender greater support for the policy and encourage associated nutrition-related behaviours (e.g. parents packing healthy lunchboxes). Principals from regional areas were particularly interested in access to additional resources to distribute to key stakeholders (especially parents) to ensure they are aware of the specific requirements of the policy.

Profitability

Principals, canteen managers and P&C presidents were asked to report whether their school canteen operated at a profit, break-even or a loss. The 2016 results were compared with those of the earlier survey where respondents reported canteen profitability before (2006) and after (2008) policy implementation[10]. Across the three time periods, the proportion of respondents reporting break-even or being in profit ranged from 77 % in both 2006 and 2008 to 82 % in 2016 ($P = 0{\cdot}07$). The proportion reporting a loss was 10 % in 2006, 16 % in 2008 and 8 % in 2016 (2008–2016, $P = 0{\cdot}01$). The remaining respondents reported that they were unsure of the profitability status of their school canteens.

Table 1 Sample profile of respondents to the online survey about the Healthy Food and Drink Policy in Western Australian public schools at the initial post-implementation evaluation (2008) and the 10-year follow-up evaluation (2016)

	2008 (*n* 607)	2016 (*n* 307)
	%	%
Stakeholder group		
Principals	51	38**
Teachers	24	26
Canteen managers	14	19*
Parents & citizen committee presidents	11	17**
School type		
Primary	70	76
Secondary	21	17
Combined primary/secondary schools	3	5
Other	6	2**
School location		
Metropolitan	65	58*
Regional	35	42*

Significantly different compared with 2008: *$P < 0{\cdot}05$, **$P < 0{\cdot}01$.

Perceived outcomes

Table 3 provides a comparison of respondents' perceptions of key policy outcomes over the two evaluations conducted to date. The positive outcomes reported in the 2008 survey were found to have been consolidated or improved in the 2016 survey. The highest levels of respondent agreement were for the items relating to the policy as an opportunity to teach children about healthy eating (79 % in 2008 *v.* 90 % in 2016), improvements in the healthiness of foods provided at school (84 % *v.* 85 %) and ease of understanding the traffic light system (77 % *v.* 88 %).

Discussion

The current follow-up evaluation conducted a decade after the introduction of a school food policy in WA public schools provides further evidence that such policies can be valued by key stakeholders and can make a positive difference to food provision in the school environment[9–14,22]. Large majorities of respondents agreed that the policy has made the foods provided in schools healthier (85 %) and that it constitutes a valuable opportunity to teach children about healthy eating (90 %). Only small proportions of respondents felt it had been difficult to implement the policy in their schools (13 %) or that the policy fails to accommodate parents' rights to choose their children's food (16 %).

Across the policy outcomes assessed in the 1-year (2008) and 10-year (2016) follow-up evaluations, most demonstrated significant improvement over time. This suggests that the conditions required by the policy have become the 'new normal', which is consistent with the broader health policy literature that notes the tendency for support for policies to increase post-implementation[23]. An additional factor is likely to be the escalation in community concern about child obesity over the last decade[24], which may have contributed to higher scores in the 2016 evaluation due to growing acceptance of the need for policy measures to address this issue. Previous research has found that school food policies can be associated with lower levels of child obesity[13,14], highlighting the importance of such policies as a critical component of population-level child health strategies.

Table 2 Policy compliance with the Healthy Food and Drink Policy in Western Australian public schools at the initial post-implementation evaluation (2008) and the 10-year follow-up evaluation (2016): principals' data

	2008			2016			
School characteristic	Mean	*n*	%†	Mean	*n*	%†	Significance‡
Primary	4·47	173	90	4·09	60	81	$P < 0{\cdot}01$
Secondary	4·57	41	93	3·93	10	71	$P < 0{\cdot}01$
Metropolitan	4·52	143	91	4·21	43	90	$P < 0{\cdot}01$
Regional	4·35	91	86	3·96	36	72	$P < 0{\cdot}01$
All schools	4·45	234	89	4·08	79	81	$P < 0{\cdot}001$

†Percentage selecting '4' or '5' on a 5-point scale ranging from 1 = 'non-compliant' to 5 = 'fully compliant'.
‡Derived from the mean.

Table 3 Perceived policy outcomes of the Healthy Food and Drink Policy in Western Australian public schools at the initial post-implementation evaluation (2008) and the 10-year follow-up evaluation (2016): all stakeholder groups

	2008		2016	
	Mean†	% agree/strongly agree	Mean†	% agree/strongly agree
Policy is a good opportunity to teach children about healthy eating	3·95	79	4·26**	90
Traffic light system is easy to understand	3·82	77	4·17**	88
Policy has been effective in making foods provided at school healthier	3·95	84	4·12*	85
The children have shown interest in the traffic light system	3·09	35	3·24	42
Policy reflects parents' views on children's diets	2·93	31	3·24**	37
Policy ignores parents' rights to choose what food they want for their children	2·63	26	2·48	16
It has been difficult to implement the policy at our school	2·42	19	2·39	13
	Mean‡	% better	Mean‡	% better
Healthiness of the menu	2·77	78	2·82	82
Quality of the menu items	2·48	53	2·72**	72
Range of foods offered	2·00	30	2·45**	58
Children's satisfaction with the menu	1·93	19	2·30**	44
Healthiness of foods brought to school from home	1·99	16	2·17*	31
Quantity of snacks/meals bought at stores on the way to school	1·84	8	2·17**	31
Healthiness of snacks/meals bought at stores on the way to school	1·86	7	2·07**	22

Significantly different compared with 2008: *$P < 0·05$, **$P < 0·01$.
†On a 5-point scale, from 1 = 'strongly disagree' to 5 = 'strong agree'.
‡On a 3-point scale where 1 = 'worse', 2 = 'same' and 3 = 'better' ('don't know'/'not applicable' responses excluded).

Of note are the lower levels of policy compliance reported in the follow-up evaluation compared with the original evaluation (81 % *v.* 89 %). The difference was especially pronounced for regional schools (90 % *v.* 72 %). Although there did not appear to be any systematic differences in reported barriers to policy compliance between regional and metropolitan schools, it may be more difficult to achieve policy sustainability in regional areas due to reduced ability to consistently source healthy foods[12]. This points to the need for additional support to be provided to regional schools to assist them attain higher levels of compliance to achieve the same level of benefit from the policy as metropolitan schools. Encouragingly, the results indicate that the policy does not appear to adversely impact canteen profitability.

The present study has several limitations that could be addressed in future research. In the first instance, it was not possible to calculate school response rates because data relating to the number of principals who opened the mass distribution email and were exposed to the survey invitation were not available. Similarly, it was not possible to capture data relating to the number of teachers, canteen managers and P&C presidents who received the survey link from their principals. The recruitment method used for the 2008 evaluation involved a direct and single-purpose email request from the WA Department of Education, resulting in a substantially larger sample size. A further limitation was the reliance on self-report. Actual compliance is likely to be lower than reported compliance[25,26], resulting in the need for additional forms of monitoring (e.g. audits) to provide further insight into the policy-related practices occurring in schools.

Conclusion

In conclusion, the present follow-up evaluation of a school food policy that has been in operation for 10 years indicates that such policies can favourably influence the foods provided on school premises and can be highly acceptable to key stakeholders. The results are encouraging for policy makers in other jurisdictions considering the implementation of comprehensive school food policies.

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