RESEARCH ARTICLE



Awareness and use of the Eat Smart Play Smart resources in Out of School Hours Care services: A staff survey in New South Wales, Australia

Linda Patel 1,2 | Megan L. Hammersley 1,2 | Susan Furber 1,3 | Jennifer Norman^{1,3} | Sarah T. Ryan^{1,2} | Ruth Crowe^{2,4,5} | | Andrew J. Woods 1,2 | Yasmine C. Probst 5 | Rebecca M. Stanley 1,2 | Lauren Taylor Anthony D. Okely 1,2 0

Correspondence

Linda Patel, School of Health and Society, Faculty of the Arts, Social Sciences and Humanities, University of Wollongong, Wollongong, NSW, Australia. Email: le092@uowmail.edu.au

Funding information

Australian Government Research Training Program Scholarship; New South Wales Ministry of Health

Handling editor: Rosie Nash

Abstract

Issue Addressed: Out of School Hours Care (OSHC) is an important setting to promote healthy eating and physical activity. Between 2017 and 2018, The Eat Smart Play Smart (ESPS) resources were disseminated to OSHC services across New South Wales (NSW), Australia. The aim of this study was to evaluate the awareness and usability of ESPS to support OSHC healthy eating and physical activity practices.

Methods: All NSW OSHC services (approximately 1700) were invited to complete an online survey to assess awareness and use of the ESPS resources (manual and online modules). Data were analysed using SPSS (Version 29).

Results: A total of 393 OSHC staff responded to the survey. Most (75%) had used the ESPS resources. Of the 25% who had not used the resources, 63% indicated it was because they did not receive the manual and 52% were not aware of the resources. Of the OSHC services that knew about the resources, 69% indicated that ESPS contributed to their service's ability to meet the Australian National Quality Standards. Respondents identified additional support was required regarding physical activity educational materials and professional learning. Suggestions for improvements included offering content in different formats (e.g., digital).

Conclusion: This evaluation identified factors influencing the uptake of the ESPS resources and will inform future interventions for OSHC staff to improve knowledge and practices in healthy eating and physical activity promotion.

This is an open access article under the terms of the Creative Commons Attribution-NonCommercial-NoDerivs License, which permits use and distribution in any medium, provided the original work is properly cited, the use is non-commercial and no modifications or adaptations are made. © 2024 The Author(s). Health Promotion Journal of Australia published by John Wiley & Sons Australia, Ltd on behalf of Australian Health Promotion Association.



Health Promot J Austral. 2024;1-10. wileyonlinelibrary.com/journal/hpja

¹School of Health and Society, Faculty of the Arts, Social Sciences and Humanities, University of Wollongong, Wollongong, New South Wales, Australia

²Early Start, Faculty of the Arts, Social Sciences and Humanities, University of Wollongong, Wollongong, New South Wales, Australia

³Health Promotion Service, Illawarra Shoalhaven Local Health District, Warrawong, New South Wales, Australia

⁴Population Health Promotion, Northern Sydney Local Health District, Brookvale, New South Wales, Australia

⁵School of Medical, Indigenous and Health Sciences, Faculty of Science Medicine and Health, University of Wollongong, Wollongong, New South Wales, Australia

⁶Health Promotion Service, South Western Sydney Local Health District, Liverpool, New South Wales, Australia

So What? Our findings will support the optimisation of ESPS resources and inform future development of future healthy eating and physical activity interventions in the OSHC setting.

KEYWORDS

after-school care, before-school care, childcare, education, healthy eating, physical activity, professional learning

1 | INTRODUCTION

Out of School Hours Care (OSHC) services provide care to approximately 516 920 children in Australia. Approximately 4861 OSHC services operate in Australia (as of June 2022). New South Wales (NSW) has the largest enrolment in OSHC services with children spending an average of 11.3 h per week, and up to 5.5 h per day in care. OSHC services are increasingly important for Australian parents who work outside school hours. OSHC services provide care for children, aged 5–12 years, before (approximately 06:30–09:30) and after (14:30–18:30) school on weekdays during school terms. OSHC also operate on pupil-free days and school holidays (vacation care) from approximately 06:30–18:30. OSHC services offer breakfast, morning tea and afternoon tea to children, and opportunities for indoor play (e.g., board games, crafts, reading or recreational screentime) and physical activity (e.g., staff-led organised play or child-led free play). 6,7

OSHC services can positively impact child physical activity and nutrition however this can be limited by staff knowledge, behaviour and training.^{8,9} Therefore, there is a need for educators to be appropriately trained and supported.^{10,11} However, currently, there are no national or state-based (NSW) mandatory qualification requirements for educators in OSHC services, and formal training is non-mandatory and comprised of limited nutrition or physical activity content.^{12,13}

To assist OSHC services in meeting National Quality Standards (NQS) relating to healthy eating and physical activity, the Eat Smart Play Smart (ESPS) resources were developed with funding from the NSW Ministry of Health. Distribution of resources began in November 2017 across NSW OSHC services as hard copy manuals, followed by online self-paced learning modules in September 2018. The resources included evidence-based guidelines for healthy eating and physical activity for children, as well as practical tools for OSHC staff (including recipes, food activities, menu templates, indoor and outdoor physical activity games, sample policy statements, care plan for children with specific dietary needs, and food handling and hygiene checklists).

The use of the ESPS and other resources in supporting OSHC services to promote healthy eating and physical activity and meet the NQS is yet to be evaluated. Therefore, this study aims to:

 Evaluate the awareness and usefulness of the ESPS resources throughout NSW OSHC services and; 2. Determine which other resources and support staff would find useful in promoting healthy eating and physical activity behaviours in OSHC services.

2 | METHODS

A cross-sectional survey was conducted between December 2019 and August 2020 with NSW OSHC services. The online survey was pilot tested with the research team beforehand to trial its usability and technical functionality. OSHC services were eligible to participate if they (a) provided care to primary-school aged children (Kindergarten to 6th grade); (b) operated before school, after school or during vacation care hours; (c) were located within NSW, Australia, and; (d) had more than five students enrolled per day.

Approximately 1700 OSHC services were sent an email about the study, a participant information sheet, and instructions on how to complete the survey via email. The email addresses of OSHC services were obtained from the publicly accessible registry of the Australian Children's Education & Care Quality Authority. The survey was distributed via Qualtrics software (Qualtrics, Provo, UT, USA). Tacit consent was obtained from all respondents. The initial email was followed by a reminder email. The survey was also distributed locally via email to OSHC services through NSW Local Health Districts (health jurisdictions). The survey (Supplementary File 1) included 16 questions about usefulness of the content, frequency of use, other resources and professional learning used to promote physical activity and nutrition, additional support that would be beneficial for nutrition and physical activity promotion, and how the ESPS resources could be improved. The survey also included questions for respondents who had not used or known about the ESPS resources. This study has been reported according to STROBE guidelines and a checklist has been included (Supplementary File 2).

The study was approved by the University of Wollongong Human Research Ethics Committee (2019/ETH12429) and local promotion of the survey through NSW Local Health Districts was granted in May 2020. Site Specific Approval was granted for partner sites South Western Sydney Local Health District and Illawarra Shoalhaven Local Health District.

Descriptive statistics and frequencies were calculated to summarise survey responses. IBM SPSS Statistics (Version 29, 2022) was used for all analyses. Upon completion of the survey, participants

were offered the opportunity to enter a draw to win a \$500 gift voucher to spend on sports and kitchen equipment in their service.

Two researchers (LP, MH) examined the responses to the openended question. Each researcher independently coded the responses manually and coding consistency checks were conducted. A high level of coding consistency was achieved, with a rate of 98%. Any inconsistencies that arose were primarily due to differences in the labels assigned to the codes (for instance, 'cooking equipment not available' versus 'limited access to kitchen equipment') rather than misclassification. The codes were then organised into topics and sub-topics, which were subsequently reviewed and adjusted as necessary (i.e., renamed or collapsed).14

3 RESULTS

A total of 393 responses were received from a combination of completed and partially completed surveys (response rate of approximately 23%). Of those who provided the service postcode (n = 363), 71% were from metropolitan areas (n = 279), 21% were from regional areas (n = 82) and only two were from rural areas (n = 2). The OSHC services were from a range of areas within 14 (of a total of 15) NSW Local Health Districts.

Staff roles and types of OSHC services

Of those who responded to the staff role question (n = 361), 50% were coordinators (n = 180). 31% were directors (n = 111) and 6% were educators (n = 21). Other roles (n = 49) included kitchen supervisor, dietitian, manager, authorised supervisor, assistant director, service manager, educational leader, and team leader.

OSHC services offered before-school care, after-school care, vacation care and/ or other care (n = 361). 97% of OSHC services offered after-school care (n = 349). 82% also reported offering before-school care (n = 296) and 83% reported also offering vacation care (n = 298). Other types of care (5% percent) included long day care, occasional care, early childhood care, and pupil free day care (n = 18).

3.2 **Use of the Eat Smart Play Smart resources**

When asked about types of ESPS resources used (n = 352), 55% of respondents (n = 193) reported using the ESPS manual only, 15% reported using both manual and online learning modules (n = 54), 5% reported using the online learning modules only (n = 16) and 25% reported never having used the ESPS resources (n = 89).

Table 1 reports the ESPS content most used. This included afternoon tea recipes, menu planning and nutrition information and guidelines. The second column of Table 1 highlights the ESPS content ranked as being useful by OSHC staff. The highest-ranked section was afternoon tea recipes, followed by menu planning and nutrition information and guidelines.

Parts of Eat Smart Play Smart content used and ranked as most useful by Out of School Hours Care services.

| • | | |
|--|--------------------------------------|---|
| Eat Smart Play Smart (ESPS) content | Parts of ESPS content used (n = 254) | Parts of ESPS content ranked as most useful (n = 247) |
| Afternoon tea recipes | 77% | 28% |
| Menu planning | 57% | 15% |
| Nutrition information and guidelines | 49% | 12% |
| Food activities and games | 46% | 7% |
| Food handling and hygiene | 45% | 10% |
| Physical activity ideas or games | 42% | 7% |
| Food allergies, special and dietary requirements | 39% | 8% |
| Breakfast recipes | 33% | 7% |
| Physical activity checklist for Out of School Hours Care | 26% | 3% |
| Sample of physical activity program | 18% | 1% |
| Sample of nutrition policies | 14% | 2% |
| Sample of physical activity policies | 10% | 0% |
| Other | 2% | 0% |

Note: Results in last column is presented as weighted averages.

When responding to the question 'How often have you (or your staff) used the ESPS content?' (n = 246), 46% stated sometimes (i.e., once or twice per term) (n = 114), 29% responded often (i.e., once or twice per month) (n = 72), 14% rarely (i.e., less than once per term) (n = 35) and 10% very often (i.e., once or twice per week) (n = 24).

In response to the question, 'Does the Eat Smart Play Smart resource contribute to the ability of your service to meet the National Quality Standards?' (n = 246), most (69%) reported yes (n = 169), while 29% responded that it 'somewhat' did (n = 71) and only 2% reported that it did not (n = 6).

Resources other than the ESPS used to promote healthy eating and physical activity

Table 2 outlines the other resources currently used to promote healthy eating. Most respondents reported using the Australian Dietary Guidelines to promote healthy eating, followed by the Australian Guide to Healthy Eating and the Network of Community Activities (the peak organisation for OSHC services in NSW) resources. Regarding other physical activity resources, most respondents reported using

TABLE 2 Other resources used by Out-of-School Hours Care services to promote healthy eating to children by participants who had and had not used the ESPS resources.

| Other resources used to promote healthy eating | % of responses who had used ESPS (n $=$ 243) | % of responses who had not used ESPS (n = 88) | % of responses overall ($n = 331$) |
|---|--|---|--------------------------------------|
| Australian Dietary Guidelines | 76% | 69% | 74% |
| Australian Guide to Healthy Eating | 58% | 51% | 56% |
| Network of Community Activities | 50% | 35% | 46% |
| Resources accessed on the NSW Healthy Kids website | 49% | 32% | 45% |
| Munch & Move | 36% | 32% | 35% |
| Resources accessed on the Heart Foundation website | 22% | 10% | 19% |
| Crunch & Sip | 18% | 15% | 17% |
| Resources accessed on the Raising Children Network website | 17% | 8% | 15% |
| Nutrition Ready to Go at Out of School Hours Services: A Food and Nutrition Manual for Out of School Hours Services | 16% | 7% | 14% |
| Professional training about healthy eating and physical activity for children | 16% | 10% | 15% |
| Other (please specify) | 6% | 2% | 3% |

Note: Responses given for Other (please specify) include feedAustralia, Community services workshops, Premier's council for active living website.

TABLE 3 Other resources used by Out-of-School Hours Care services to promote physical activity to children by participants who had and had not used the ESPS resources.

| Other resources used to promote physical activity | % of responses who had used ESPS ($n=236$) | % of responses who had not used ESPS ($n=84$) | % of responses overall ($n = 320$) |
|---|--|---|--------------------------------------|
| Network of Community Activities | 47% | 35% | 43% |
| Resources accessed on the NSW Healthy Kids website | 39% | 29% | 36% |
| Munch & Move | 33% | 36% | 34% |
| Resources accessed on the Heart Foundation website | 24% | 6% | 19% |
| Australian 24-hour Movement Guidelines | 22% | 18% | 21% |
| Professional training about physical activity for children | 13% | 4% | 11% |
| Resources accessed on the Raising Children Network website | 13% | 7% | 11% |
| Other (please specify) | 6% | 10% | 7% |

Note: Responses given for Other (please specify) include Play for Life resources, Active after school resources and theory based research.

the Network of Community Activities, followed by resources on the NSW Healthy Kids website and the Munch & Move resources (NSW program targeting early childhood education and care services) as shown in Table 3.

3.4 | Recommended additional support to promote healthy eating and physical activity

Twenty-nine percent of respondents wanted more healthy eating educational materials, and 19% reported that they would like practical strategies to promote healthy eating (e.g., providing cooking utensils to encourage child involvement in food preparation). Professional learning (16%), opportunities to network with staff via online/social media or face-to-face groups (12%), nutrition curriculum development

(12%), and internet-based nutrition programs (11%) were also reported.

One-third of respondents reported that they would like more physical activity educational materials, while 28% reported improved facilities or equipment (e.g., grassed areas for outdoor play, and structured games ideas for indoor play). Professional learning (24%) and opportunities for staff networking (14%) were also reported.

3.5 | Suggestions for areas of improvement of the ESPS resources

Of those responding with suggested improvements (n = 231), most (64%) suggested offering content in different formats (e.g., smartphone application), followed by restructuring the manual,

Topics and sub-topics of open-ended question.

| Major topics | Sub-topics | Codes |
|-----------------------------------|--|---|
| Resource acceptability | Usefulness of resources | ESPS resource has been useful/appreciative of resource |
| | | ESPS manual useful in meeting NQF |
| | | ESPS manual useful for new educators |
| | | Have used for staff to promote healthy lifestyle to children |
| | | Resource is too long |
| | Resource format | Recommend online forum to share recipes and/or activity idea |
| | | Recommend smartphone application |
| | | Recommend someone to explain the document |
| | | Recommend resource site for activities |
| | | Recommend printable resources |
| | | Recommend downloadable resource pages |
| | | Recommend dividing book into sections |
| | | Recommends other resources to promote healthy eating |
| Content | Recipes | Recommend simpler recipes—minimal time to prepare |
| | | Recommend low cost recipes |
| | | Recipes can be expensive |
| | | Children will not eat the food from recipes provided |
| | | Recommend more culturally diverse recipes |
| | | Recipes not designed for large number of children |
| | | Have used recipes/recipes useful |
| | | Have adjusted recipes (e.g., for preferences or cultural diversity) |
| | | Resource highlighted that some recipes they were using were not healthy |
| | | Recommend wider variety of recipes |
| | | Recommend recipes for fussy eaters |
| | | Recipes result in food waste (from children not eating) |
| | | Recommend recipes with less refined carbohydrate and more wholegrains |
| | | Recommend recipes that are suitable for large numbers |
| | Activities | Use manual for activity suggestions |
| | | Have used healthy eating activities |
| | | Recommend more healthy eating activities |
| | Menu planning | Recommend menu planning section of app |
| | | Recommend setting up meal plans and weekly menus |
| | | Recommend more meal examples |
| | | Have used manual to plan menus |
| Professional development, support | Service facilities | Cooking equipment minimal |
| and facilities | | Space for food preparation minimal |
| | | Limited time for food preparation |
| | | Limited time to promote healthy eating |
| | | Centre burnt down |
| | | Too busy to use |
| | | Only just started to use manual |
| | Communication with staff, other services, and families | Information can be shared with families |
| | | Have shared resource with other centres |

TABLE 4 (Continued)

| Major topics | Sub-topics | Codes |
|--------------|---------------------------------|--|
| | | Discussed with other centres how they have included the resource in practice |
| | | Recommend tips to promote manual to staff (what have other services done?) |
| | More opportunities for training | No courses/training scheduled? |
| | | Recommend more opportunities for healthy eating and physical activity training |

that is, separate booklets for recipes and activities (40%), reducing the size (22%) and text message support to encourage the use of resources (15%).

3.6 | Respondents' comments on the ESPS resources

Thirty-four staff provided further feedback regarding the ESPS resources in the open-ended question. All topics and codes are listed in Table 4. The major areas of improvement identified were 'Resource Acceptability,' 'Content' and 'Professional learning, support and facilities.'

'Resource Acceptability' consisted of two parts: 'Usefulness of Resources', and 'Resource Format'. Most responses were regarding the 'Usefulness of resources', which largely discussed how staff found the resources beneficial in facilitating improvements to quality areas related to healthy eating and physical activity, and that the resources are useful for new educators. "This is a valuable resource for all OSHC programs, especially for new educators who may have limited experience or knowledge in these areas. The resource provides a good link to the national standards, information which can be shared with families and great activity suggestions. The look of the latest edition is very appealing!" (Participant 175). Comments regarding the first major topic 'Resource format' included recommendations for an ESPS smartphone application (app) and an online forum to share recipes and/or physical activity ideas. "I think the ESPS manual is a fantastic resource however the format, a large, thick, wordy book, makes it daunting and inaccessible for most educators. An app would be perfect" (Participant 244). Comments made about having an online platform to share ideas with other OSHC educators were also highlighted "... It would be great if we could also have a forum where OSHC services can upload or share recipes or physical activity ideas with each other" (Participant 192).

The second major topic that emerged from participants' comments was 'Content' which consisted of three parts: 'Recipes', 'Activities' and 'Menu Planning'. There were positive and negative comments regarding the recipes. This included recommendations around including low-cost recipes, simplifying recipes due to time constraints, and having culturally diverse recipes. Many respondents commented that they used the recipes and found them useful. Negative feedback included children's refusal to eat the food, "We tried to include some of the Eat Smart Play Smart meal ideas and the majority of

our children would refuse to eat... I also feel that some of the meals aren't designed to be made for a large group, please be mindful of costs and the number of children to prepare meals for" (Participant 102). The section 'Menu planning' captured comments around how the ESPS resources have been helpful in planning menus, "We are pleased to use the manual in our service when developing our menus. We would really love to have some healthy and budget friendly recipes or menus to use in our planning implementation. A resource site that we can access easy and fun games for our programs would be fantastic as well" (Participant 198) and "This tool... has assisted the educators in the creation of our menu, ensuring that we achieve what is required and it really highlighted that we were often using recipes that weren't the most healthy or nutritious of options" (Participant 224). Comments regarding 'Activities' were all positive and were related to how educators used the manual for activity suggestions.

The final major topic 'Professional learning, support and facilities' consisted of three sub-topics: 'Service facilities,' 'Communication with staff, other OSHC services and families' and 'More opportunities for training'. 'Service facilities' included having limited time, cooking facilities and space for food preparation. "I really appreciated the resources and manual when they were provided to me-and I had full intention of reading through and using the information contained in it, but the nature of OSHC meant that I kept putting it off to deal with more pressing concerns" (Participant 171). The sub-topic 'Communication with staff, other OSHC services and families' included the following: "Really worthwhile resource and the recipes are an incredible help-especially with larger sized groups and multiple services-we share ideas amongst us" (Participant 241). The sub-topic 'More opportunities for training' included comments about respondents wanting further resources and training, "We lost all our resources... It would be great to have some opportunities for healthy eating and physical activities training" (Participant 286).

3.7 | OSHC services who had not used the ESPS resources

Of those who reported not using the ESPS resources (n=88), 63% reported never receiving the ESPS manual and 52% reported not knowing about the ESPS online learning modules. Of those who had accessed the resources but never used them, 13% reported not having enough time. Other comments (8%) included OSHC services not preparing recipes from the manual due to lack of staff and resources.

Of those who had not used the ESPS resources (n = 88), 69% reported using the Australian Dietary Guidelines, 51% used the Australian Guide to Healthy Eating and 35% used the Network of Community Activities (35%) to help promote healthy eating, as shown in Table 2. Regarding physical activity resources used by those who had not used ESPS (n = 84), 35% reported using the Network of Community Activities, 29% reported accessing resources on the NSW Healthy Kids website and 18% reported using the Australian 24-h Movement Guidelines for children and young people, as shown in Table 3.

In response to the question about additional support to promote healthy eating (n = 85), 26% indicated that they would like access to educational materials. Similarly, in response to the question about additional support to promote physical activity (n = 82), 34% reported educational materials. Open-ended responses relating to healthy eating included providing extra time for staff to use for meal planning and research, and access to cheaper fruits and vegetables. For physical activity, open-ended responses included additional support in the form of increased funds to offer physical activity programs such as free sports clinics and having sporting organisations attend to conduct hands-on learning with the children at their service.

DISCUSSION

Our study reported outcomes of a survey to determine the awareness and usefulness of healthy eating and physical activity resources for OSHC services across NSW. Findings indicate that resources in the OSHC setting are not being accessed or need improvement. To our knowledge, no other studies have reported on levels of awareness or use of healthy eating and physical activity resources within OSHC services or any similar settings. However, a study conducted in New South Wales (NSW) investigated the uptake of the Munch & Move program-a NSW state-wide healthy eating and active play professional development program aimed at influencing child healthy eating and physical activity behaviours in Early Childhood Education and Care services. ¹⁵ The study found that 88% (n = 3328) of Early Childhood Education and Care services had staff trained in the Munch & Move program. It is important to note that the study focused on the completion of training, not on the level of awareness or use of the program or resources. However, we can reasonably assume that those who completed the training were aware of the program resources. In contrast, our findings are different with OSHC services making less use or being less aware of the ESPS resources. This difference could be attributed to the fact that service delivery (reach) and support from Local Health Districts in the OSHC setting is lower compared to the Early Childhood Education and Care setting as there is no core support function provided by Local Health Districts to OSHC. The difference in support could therefore influence the levels of awareness and use of OSHC training and resources.

Apart from ESPS, other resources reported to be used were not specific to OSHC services and were either general in nature or developed for a different age group. Interestingly, Munch & Move resources were reported in the survey as having been used by OSHC staff to promote both healthy eating and physical activity, however these resources are specific to the early childhood education and care settings (birth to 5 years). The use of Munch & Move resources in the OSHC setting could indicate the lack of OSHC-specific resources and training.⁶ Although several healthy eating and physical activity health promotion initiatives have successfully targeted early childhood and care settings, 16-18 they are not appropriate for the OSHC setting as they do not address specific healthy eating and physical activity needs of older (primary school-aged) children, the limited time and preparation facilities available and the fact that OSHC staff (not trained cooks) are responsible for food preparation. 19

Our findings are consistent with previous studies showing that training and resources to educate OSHC staff about physical activity and healthy eating are limited in Australia and opportunities exist to improve the provision of resources and staff training. 7,19-23 The dearth of resources may be due to OSHC services having a lower enrolment and run for less hours than early childhood education and care services and therefore a less funded/resourced setting.

All respondents ranked more educational materials as the top preference for additional support needed. When respondents were asked about using the ESPS resources, a quarter indicated that they had never used them. Those who had used the ESPS resources found them valuable, and many said they contributed to the ability of their service to meet the NQS. Moreover, respondents suggested the ESPS resources could be improved by delivering the content in more accessible formats such as through digital mediums. When respondents were asked about additional support to promote both physical activity and healthy eating, a majority selected 'further educational materials.' Interestingly, the lack of educational resources and professional learning opportunities can leave many educators feeling undervalued.²⁴ Additionally, when respondents were asked to provide suggestions to improve the ESPS resources, a majority suggested digital formats. This highlights the potential role of the growing OSHC sector in empowering educators to promote physical activity and healthy eating among Australian children by utilising digital platforms to facilitate wider reach and ease of access.²⁵

Potential factors influencing the preference of OSHC staff for a digital format may be time constraints for training and professional learning and high staff turnover. Delivering content in easily accessible formats can enable staff to access materials when convenient, allowing them to make the most of their available time. Digital formats can comprise of short videos, interactive modules or short articles, which educators may find easier to digest than lengthy manuals. These delivery methods align with the principles of adult learning, which emphasise the importance of educational materials being selfdirected, engaging and including both verbal and visual content.²⁶⁻²⁸ By simplifying information and presenting it in audio and visual formats in manageable sections, the cognitive load on the learner can be reduced and learning opportunities can be maximised.²⁸ Additionally, digital resources such as an app or website offer the advantage of notifications and easy content updates. This is crucial, as information evolves over time and is a significant contrast to the labour-intensive

and costly process of revising, reprinting, and distributing paper materials.

Furthermore, OSHC is staffed by a largely casualised, transient and younger workforce, with 68% employed for less than 20 h per week, only 10% working full-time, and 42% of employees being aged between 15 and 24 years.²⁹ Digital content may therefore be more appealing and effective than other formats, as younger generations are generally more accustomed to using digital resources.³⁰

Internet-based programs and Smartphone applications are a promising medium for delivery of health promotion initiatives.³¹ With the global proliferation in ownership of mobile and wireless technology, health researchers have capitalised on this trend.³² Research on the effectiveness of mobile health (mHealth) interventions in changing health behaviour is promising³³ with studies demonstrating that appbased interventions can lead to improved physical activity³⁴ and healthy eating³⁵ outcomes. Research monitoring implementation of healthy eating and physical activity standards within after-school settings in the United States demonstrated that an app was widely used and provided valuable information to educators.³⁶ The paucity of OSHC healthy lifestyle interventions in the Australian context is currently being addressed by the Activated OSHC trial, being conducted across 192 OSHC services in three Australian states.³⁷ The intervention involves tools and online training to implement the new Australian Physical Activity and Screen Time Guidelines for OSHC.38,39 When complete, the results of this implementation trial will provide a valuable contribution to the evidence-base.

To facilitate improvements in the promotion of physical activity and healthy eating, OSHC staff should be supported with professional learning training and resources specifically designed for this setting. Given healthy eating and physical activity are key elements of the NQS, having appropriate professional learning resources that are in a relevant format is critical. Our study is the first to investigate and document the usefulness of physical activity and healthy eating resources to OSHC staff in Australia. The most suggested area of improvement was developing resources in accessible formats thus indicating that the sector may benefit from digital or mobile health resources to facilitate healthy eating and physical activity professional learning to staff.

4.1 | Strengths and limitations

Strengths of this study include the survey's wide geographical reach within NSW providing generalisable results. Limitations of this study include: (1) contacting survey respondents through various channels and therefore not being able to determine the exact reach and, survey response rate; and (2) several survey questions were not mandatory resulting in variability in sample sizes for different questions.

5 | CONCLUSION

Our study identified a lack of awareness among OSHC services regarding the Eat Smart Play Smart resource. It also emphasised

educators' recommendations of potential benefits from additional information and training. While there has been some take up of the ESPS resources, respondents indicated a greater need for educational resources. Specifically, many respondents expressed a preference for digital formats. There are opportunities to enhance current resources to shape the eating and physical activity environments more positively within OSHC services, and ultimately facilitate improvements in child behaviours. Our findings have the potential to inform practice and policy and future research in this area.

ACKNOWLEDGEMENTS

This research has been conducted with the support of the Australian Government Research Training Program (RTP) Scholarship. This work was supported by the Prevention Research Support Program, funded by the New South Wales Ministry of Health. We declare the funding body has had no influence on the study design, data collection, analysis, interpretations of the findings or writing of this manuscript. Open access publishing facilitated by University of Wollongong, as part of the Wiley - University of Wollongong agreement via the Council of Australian University Librarians.

CONFLICT OF INTEREST STATEMENT

The authors declare no conflicts of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

ETHICS STATEMENT

The study was approved by the University of Wollongong Human Research Ethics Committee (2019/ETH12429) and local promotion of the survey through NSW Local Health Districts was granted in May 2020. Site Specific Approval was granted for partner sites: South Western Sydney Local Health District (Site Identifier: 2019/STE15662) and Illawarra Shoalhaven Local Health District (Site Identifier: 2019/STE15661).

PARTICIPANT CONSENT

Informed consent was received from all participants. Participants have consented for this research to be published.

ORCID

Linda Patel https://orcid.org/0009-0007-5212-3378

Megan L. Hammersley https://orcid.org/0000-0003-4326-480X

Susan Furber https://orcid.org/0000-0003-4933-1567

Jennifer Norman https://orcid.org/0000-0001-6344-2605

Sarah T. Ryan https://orcid.org/0000-0001-7574-1936

Ruth Crowe https://orcid.org/0000-0003-1439-8681

Andrew J. Woods https://orcid.org/0000-0003-2853-8809

Yasmine C. Probst https://orcid.org/0000-0002-1971-173X

Rebecca M. Stanley https://orcid.org/0000-0001-7007-3406

Anthony D. Okely https://orcid.org/0000-0002-1626-8170

REFERENCES

- Australian Government Department of Education. June quarter 2022 report (Accessed 31 August 2023). 2022. https://www.education. gov.au/early-childhood/early-childhood-data-and-reports/quarterly-reports-usage-services-fees-and-subsidies/june-quarter-2022-report.
- Australian Government Department of Education and Training. Early Childhood and Child Care in summary June quarter 2018 (Accessed 01 September 2023). 2018. https://www.education.gov.au/earlychildhood/resources/early-childhood-and-child-care-summary-reportjune-quarter-2018.
- NSW Department of Education. A guide to Outside School Hours Care (OSHC) For NSW School Principals (Accessed 25th October 2023). 2022. https://education.nsw.gov.au/content/dam/maineducation/early-childhood-education/operating-an-early-childhoodeducation-service/media/documents/oshc-guides-2022/A_guide_to_ outside_school_hours_care_OSHC-For_NSW_School_Principals_.pdf.
- Crowe R, Probst Y, Norman J, Furber S, Franco L, Stanley RM, et al. Healthy eating and physical activity environments in out-of-school hours care: an observational study protocol. BMJ Open. 2020;10(9): e036397. https://doi.org/10.1136/bmjopen-2019-036397
- NSW Department of Education. Outside School Hours Care (OSHC) Services (Accessed 31 August 2023). 2023. https://education.nsw. gov.au/early-childhood-education/information-for-parents-and-carers/outside-school-hours-care.
- Woods AJ, Probst YC, Norman J, Wardle K, Ryan ST, Patel L, et al. Correlates of physical activity and sedentary behaviour in children attending before and after school care: a systematic review. BMC Public Health. 2022;22(1):2364. https://doi.org/10.1186/s12889-022-14675-8
- Woods AJ, Norman J, Ryan ST, Wardle K, Probst YC, Crowe RK, et al. Children's physical activity and sedentary behaviour in before school care: an observational study. Prev Med. 2023;178:107810. https://doi.org/10.1016/j.ypmed.2023.107810
- Weaver RG, Beets MW, Saunders RP, Beighle A, Webster C. A comprehensive professional development training's effect on afterschool program staff behaviors to promote healthy eating and physical activity. J Public Health Manag Pract. 2014;20(4):E6–E14. https://doi.org/10.1097/PHH.0b013e3182a1fb5d
- Beets MW, Weaver RG, Turner-McGrievy G, Huberty J, Ward DS, Pate RR, et al. Making policy practice in afterschool programs: a randomized controlled trial on physical activity changes. Am J Prev Med. 2015;48(6):694–706. https://doi.org/10.1016/j.amepre.2015. 01.012
- Weaver RG, Beets MW, Webster C, Huberty J. System for observing staff promotion of activity and nutrition (SOSPAN). J Phys Act Health. 2014;11(1):173–85. https://doi.org/10.1123/jpah.2012-0007
- National Heart Foundation of Australia NSW Division. Eat Smart Play Smart: A Manual for Out of School Hours Care (Accessed 01 September 2023). 2016. https://www.healthykids.nsw.gov.au/ downloads/file/teacherschildcare/EatSmartPlaySmart_Manual_ ThirdEdition-V7.pdf.
- Australian Children's Education & Care Quality Authority. Qualifications for working in OSHC services (Accessed 31 August 2023).
 https://www.acecqa.gov.au/qualifications/requirements/working-in-OSHC-services.
- 13. Australian Children's Education & Care Quality Authority. School age qualification assessment (Accessed 4th October 2023). https://www.acecqa.gov.au/qualifications/assessment/apply/school-age.
- Saldaña J. The coding manual for qualitative researchers. 3rd ed. London: SAGE; 2016.
- Green AM, Mihrshahi S, Innes-Hughes C, O'Hara BJ, McGill B, Rissel C. Implementation of an early childhood healthy eating and physical activity program in New South Wales, Australia: Munch & Move. Front Public Health. 2020;8:34. https://doi.org/10.3389/ fpubh.2020.00034

- Seward K, Wolfenden L, Finch M, Wiggers J, Wyse R, Jones J, et al. Improving the implementation of nutrition guidelines in childcare centres improves child dietary intake: findings of a randomised trial of an implementation intervention. Public Health Nutr. 2018;21(3):607–17. https://doi.org/10.1017/S1368980017003366
- Wolfenden L, Barnes C, Jones J, Finch M, Wyse RJ, Kingsland M, et al. Strategies to improve the implementation of healthy eating, physical activity and obesity prevention policies, practices or programmes within childcare services. Cochrane Database Syst Rev. 2020;2020(2):CD011779. https://doi.org/10.1002/14651858.CD01 1779.pub3
- Bell AC, Davies L, Finch M, Wolfenden L, Francis JL, Sutherland R, et al. An implementation intervention to encourage healthy eating in centre-based child-care services: impact of the good for kids good for life programme. Public Health Nutr. 2015;18(9):1610-9. https://doi. org/10.1017/S1368980013003364
- 19. Crowe RK, Probst YC, Norman JA, Furber SE, Stanley RM, Ryan ST, et al. Foods and beverages provided in out of school hours care services: an observational study. BMC Public Health. 2022;22(1):277. https://doi.org/10.1186/s12889-022-12652-9
- Thompson E, Cooper C, Flanagan C, Crawford D, Worsley A. Food and activity in out of school hours care in Victoria. Nutrit Diet. 2006; 63(1):21–7. https://doi.org/10.1111/j.1747-0080.2006.00018.x
- Sangster J, Eccleston P, Porter S. Improving children's physical activity in Out-of-School Hours Care settings. Health Promot J Austr. 2008; 19(1):16-21. https://doi.org/10.1071/he08016
- Cooke L, Sangster J, Eccleston P. Improving the food provided and food safety practices in out-of-school-hours services. Health Promot J Austr. 2007;18(1):33–8. https://doi.org/10.1071/he07033
- Crowe RK, Probst YC, Stanley RM, Ryan ST, Weaver RG, Beets MW, et al. Physical activity in out of school hours care: an observational study. Int J Behav Nutr Phys Act. 2021;18(1):127. https://doi.org/10.1186/s12966-021-01197-6
- Australian Children's Education & Care Quality Authority. Progressing a national approach to the children's education and care workforce (Accessed 10 December 2023). 2019. https://www.acecqa.gov.au/ sites/default/files/2020-10/ChildrensEducationandCareNationalWork forceStrategy_0.pdf.
- Grady A, Yoong S, Sutherland R, Lee H, Nathan N, Wolfenden L. Improving the public health impact of eHealth and mHealth interventions. Aust N Z J Public Health. 2018;42(2):118-9. https://doi.org/10.1111/1753-6405.12771
- Mayer RE. Multimedia learning. 2nd ed. Cambridge: Cambridge University Press; 2009.
- Knowles M. The modern practice of adult education: andragogy versus pedagogy. Englewood Cliffs, NJ: Cambridge Adult Education; 1980.
- Merriam SB, Bierema LL. Adult learning: Linking theory and practice. Newark, NJ: John Wiley & Sons, Incorporated; 2013.
- 29. New South Wales Department of Education. More than 'just convenient care': what the research tells us about equitable access to outside school hours care (Accessed 10th December 2023). 2021. https://education.nsw.gov.au/content/dam/main-education/early-childhood-education/information-for-parents-and-carers/OSHC_More_than_just_convenient_care_policy_literature_review.PDF.
- Haddock A, Ward N, Yu R, O'Dea N. Positive effects of digital technology use by adolescents: a scoping review of the literature. Int J Environ Res Public Health. 2022;19(21):14009. https://doi.org/10.3390/ijerph192114009
- Denney-Wilson E, Laws R, Russell CG, Ong KL, Taki S, Elliot R, et al. Preventing obesity in infants: the growing healthy feasibility trial protocol. BMJ Open. 2015;5(11):e009258. https://doi.org/10.1136/bmjopen-2015-009258
- 32. Taki S, Russell CG, Lymer S, Laws R, Campbell K, Appleton J, et al. A mixed methods study to explore the effects of program design elements and participant characteristics on Parents' engagement with an



- mHealth program to promote healthy infant feeding: the growing healthy program. Front Endocrinol. 2019;10:397. https://doi.org/10.3389/fendo.2019.00397
- Militello LK, Kelly SA, Melnyk BM. Systematic review of textmessaging interventions to promote healthy behaviors in pediatric and adolescent populations: implications for clinical practice and research. Worldviews Evid Based Nurs. 2012;9(2):66-77. https://doi. org/10.1111/j.1741-6787.2011.00239.x
- Domin A, Spruijt-Metz D, Theisen D, Ouzzahra Y, Vogele C. Smartphone-based interventions for physical activity promotion: scoping review of the evidence over the last 10 years. JMIR Mhealth Uhealth. 2021;9(7):e24308. https://doi.org/10.2196/24308
- Han CY, Lim SL, Ong KW, Johal J, Gulyani A. Behavioral lifestyle intervention program using Mobile application improves diet quality in adults with prediabetes (D'LITE study): a randomized controlled trial. J Acad Nutr Diet. 2023;124:358–71. https://doi.org/10.1016/j. jand.2023.10.005
- Brazendale K, Beets MW, Weaver RG, Turner-McGrievy B, Brazendale AB, Chandler JL, et al. The application of mHealth to monitor implementation of best practices to support healthy eating and physical activity in afterschool programs. Glob Health Promot. 2018; 27(1):33–40. https://doi.org/10.1177/1757975918768442
- Activated OSHC and University of South Australia. Activated OSHC (Accessed 27 June 2024). 2024. https://activatedoshc.org.au/

- Virgara R, Phillips A, Lewis L, Richardson M, Maher C. Development of Australian physical activity and screen time guidelines for outside school hours care: an international Delphi study. Int J Behav Nutr Phys Act. 2021;18(1):3. https://doi.org/10.1186/s12966-020-01061-7
- Virgara R, Phillips A, Lewis LK, Richardson M, Maher CA. Physical activity and screen time in outside school hours care services across Australia: current versus best practice. BMC Public Health. 2022; 22(1):680. https://doi.org/10.1186/s12889-022-13135-7

SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

How to cite this article: Patel L, Hammersley ML, Furber S, Norman J, Ryan ST, Crowe R, et al. Awareness and use of the Eat Smart Play Smart resources in Out of School Hours Care services: A staff survey in New South Wales, Australia. Health Promot J Austral. 2024. https://doi.org/10.1002/hpja.925