

# Eat well be active.

## Community Programs

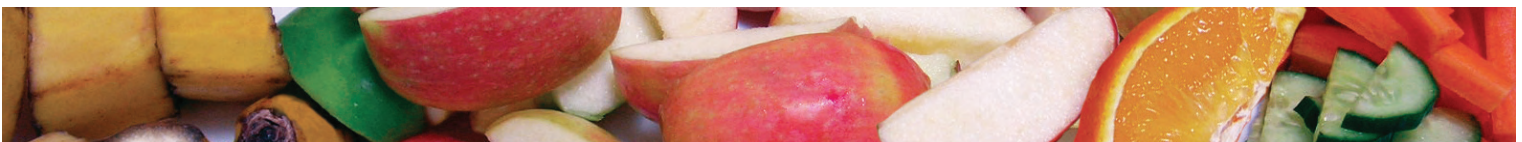


## Evaluation Report

### Part 2: Baseline Data Collection

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## List of Abbreviations

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Active After Schools Communities Program	AASCP
Australian Bureau of Statistics	ABS
Body Mass Index	BMI
Child & Youth Health	CYH
Children Youth Women's Health Service	CYWHS
Department of Education and Children's Services	DECS
<i>eat well be active</i> Community Programs	<i>ewba</i>
Evaluation Academic Team	EAT
Family Day Care	FDC
Full Time Equivalent	FTE
Healthy eating	HE
Human Research Ethics Committee	HREC
Index of Relative Social Disadvantage	IRSD
International Obesity Taskforce	IOTF
Long Day Care	LDC
National Health and Medical Research Centre	NH&MRC
Out of School Hours Care	OSHC
Physical activity	PA
Primary School	PS
Start Right Eat Right	SRER
Statistical Package for the Social Sciences	SPSS
World Health Organisation	WHO

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- Lily Chan, student Dietitian from Flinders University for undertaking the analysis of parent and teacher data.

The *ewba* Part 1: Baseline Data Collection Evaluation Report, which precedes this current report, is available at: <http://www.health.sa.gov.au/pehs/branches/health-promotion/hp-eat-well-be-active.htm>

# Executive Summary

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## Introduction

The *eat well be active* Community Programs (*ewba*) comprise two intervention communities – one in the metropolitan suburb of Morphett Vale and the other in the Rural City of Murray Bridge. The *ewba* Community Programs aim to contribute to the healthy weight of children, young people and their families by increasing healthy eating and physical activity. To determine the effectiveness of this approach, a comprehensive evaluation framework, including qualitative and quantitative methods and comparison communities, was developed.

This report contains infant breastfeeding rates and overweight and obesity prevalence of 4-5 year olds in *ewba* intervention and comparison sites in 2005. It also reports data describing the healthy eating and physical activity environments in which children (0-18 years) live, play and learn including early childhood and education settings, local community and the home. The data in this report forms the second and final part of the baseline data for the quantitative evaluation of *ewba*. Data will be collected from intervention and comparison sites at the second quantitative data collection period at the end of 2009 and analyses will be presented in the Final Report 2010 in conjunction with the qualitative data collection outcomes.

## Methods

Child Youth and Women's Health Service (CYWHS) 2006 de-identified data on breastfeeding rates for 1475 infants and height and weight measures of 1005 4-5 year old children in *ewba* intervention and comparison sites were analysed.

A suite of questionnaires were developed specifically by *ewba* to describe the healthy eating and physical activity environments in which children live, play and learn in 2005. Items included carer knowledge and attitudes, and the physical, policy, socio-cultural and financial environments. Completed questionnaires were received from;

- 44 Early Childhood Centres including 9 Long Day Care (LDC) and 19 Pre-school Directors and 16 Family Day Care (FDC) Providers
- 36 Primary School Principals, 286 Primary School Teachers, 26 Canteen Managers and 13 Out of School Hours Care (OSHC) Directors
- 983 parents of primary school aged children
- 9 High School Principals and 7 High School Canteen Managers.

## Key Findings

Due to the large volume of data reported within the full report, a selection of items has been reported within the Executive Summary.

### **Early Childhood (n=44)**

Breastfeeding:

- was the most commonly used choice of nutrition for infants aged 1-4 weeks (78.5%) and 6-8 weeks (61%).
- at the Six Month Health Check 46% chose breastfeeding while non-breastfeeding/ artificial feeding was the most popular (48.9%).
- there was no significant difference found between urban and rural regions.

Prevalence of overweight and obesity in 4-5 year old children in *ewba* intervention and comparison sites (using IOTF cut-points (Cole et al 2000)):

- 18.4% overweight and 7.0% obese, with a combined overweight and obesity level of 25.4%
- there were no significant differences in prevalence between boys and girls or urban and rural populations.

Policy Environment:

- the majority of the LDC Centres and Pre-schools had some form of healthy eating policy
- none of the LDC Centres, Pre-schools or FDC respondents had a physical activity policy.

Healthy Eating Environment:

- All LDC Centres and Pre-schools reported that children were encouraged to eat fruit and vegetables.

- Nearly all (43 of 44) early childhood settings allowed children to drink water throughout the day.
- Most (36 of 42) early childhood settings did not allow children to be rewarded with food or drink.
- Physical Activity Environment:
- limiting TV/video viewing and electronic games and including activities to develop fundamental movement were the most frequently reported strategies to promote physical activity
- just over half of respondents described their outside space as very adequate and nearly one third described their outside equipment as very adequate for promoting active play.

### **Primary Schools (n=36)**

#### Policy Environment:

- Primary Schools and OSHC were more likely to have a healthy eating/nutrition policy (n=10 schools, n=9 OSHC) than a physical activity policy (n=8 schools, n=6 OSHC)

#### Healthy Eating Environment:

- a sausage sizzle was the most used and confectionary (such as chocolates and lollies) was the second most used fundraising activity
- the top selling Canteen food and drink items in summer and winter were most likely to be red\* and amber\* items respectively

#### Physical Activity Environment:

- all schools provided play or sporting equipment for use during break times

#### Curriculum:

- less than half (41%) of teachers reported embedding 'healthy eating into the key curriculum areas a little bit', while 13% reported doing it a lot
- less than half (41%) of teachers reported including 'developmentally appropriate physical activities into their curriculum to some extent', while 40% reported doing it a lot.

### **Parents (n=975) of primary school children**

#### Attitudes:

- 93% agreed/strongly agreed that getting their primary school aged child to eat fruit and vegetables was a high priority for them
- 88% reported that their child being physically active was a high priority for them.

#### Home Environment:

- 95% agreed/strongly agreed that there was sufficient equipment variety at home to enable children to be physically active.
- 46% of parents reported that there was a television in their child's bedroom.

#### Community Environment:

- half agreed/strongly agreed that fresh fruit and vegetables are too expensive
- 44% agreed/strongly agreed that it is not safe for primary school aged children to walk or cycle alone in their neighbourhood during the day
- 53% agreed/strongly agreed that there are enough recreation/sports facilities in their neighbourhood to encourage children to be physically active.

### **High Schools (n=9)**

#### Policy Environment:

- high schools were unlikely to have a healthy eating (n=1) or a physical activity policy (n=2).

#### Healthy Eating Environment:

- the top selling Canteen food items in summer were likely to be green\* and in winter were most likely to be red\* items.
- the top selling drink items in summer and winter were most likely to be amber\* or red\* respectively.
- most provided easy access to clean drinking water for students.

#### Physical Activity Environment:

- all high schools provided play or sporting equipment for use during break times and over half reported that the play or sporting equipment was regularly used by students all of the time.
- most agreed/strongly agreed that they provided a variety of non-competitive physical activity options that reflected the interests of the school population.

*M Jones, A Magarey, J Dollman, F Verity, A Wilson, N Mastersson. Feb 2010.*

\* as classified using the SA Government Right Bite food and drink spectrum

## 1.0 Introduction

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This report is the second of two baseline reports for the *eat well be active (ewba)* Community Programs. *ewba* Evaluation Report Part 1: Baseline Data Collection (Jones et al 2008) contains the outcomes from the surveys and anthropometric data collected from students only. This report, Part 2: Baseline Data Collection reports the outcomes of questionnaires administered to LDC Centres, Pre-schools, and FDC Providers, Primary and High School Principals, Primary School Teachers, Primary and High School Canteen Managers, Primary School OSHC Directors and parents of primary school students. In addition, de-identified breastfeeding and 4-5 year old weight data (from CYWHS) for the same baseline period is reported.

These results, in conjunction with outcomes reported in *ewba* Evaluation Report Part 1: Baseline Data Collection and follow-up data in late 2009, will be used to measure the efficacy of the *ewba* Community Programs.

Section 1 of this report introduces the *ewba* Community Programs describing the aims and nature of *ewba*. Section 2 describes the quantitative methods and intervention and comparison sites of the evaluation. Section 3 summarises the response rates to each of the surveys. Section 4, 5, 6 and 7 provide the outcomes of the baseline data collection in the Early Childhood, Primary School, parents and High Schools sections respectively. Sections 4, 5 and 7 of the report contain an overview of the healthy eating and physical activity environment in the setting as well as providing insight into the healthy eating and physical activity attitudes, knowledge and professional development of the staff.

### 1.1 Background to eat well be active Community Programs

South Australia, consistent with national and international trends, is experiencing a trend of increasing overweight and obesity across the whole population. Data from Children Youth and Women's Health Service clearly show that the increase in relative weight is occurring in children as young as 4 years old (Vaska & Volkmer 2004). In response to this trend, a whole of population approach that considers a wide variety of wellbeing activities was adopted.

SA Health is committed to promoting healthy weight. This has been demonstrated through the funding of *ewba* Community Programs that support healthy eating and physical activity in two geographically based communities. The *ewba* Community Programs recognise the importance of adopting a population health approach to preventing overweight and obesity and promoting healthy weight. There is a need to address not only individuals' and families' knowledge and behaviour but also the environment and social issues that impact on peoples' lives, with the goal of making it easier for people to eat healthy food and be physically active.

The *ewba* Community Programs are a component of the state-wide plan to prevent overweight and obesity, developed by a state-wide government inter-sectoral task force. The *ewba* Community Programs will contribute to the State-wide plan (SA Dept Health, 2004) by building on existing activities, measuring effectiveness and identifying further opportunities to foster innovation in healthy weight promotion.

### 1.2 Aims of eat well be active Community Programs

SA Health has allocated \$2.5 million over five years to the *ewba* Community Programs. *ewba* comprises two linked projects – one in Morphett Vale (southern metropolitan Adelaide, through Southern Adelaide Health Service) and one in the Rural City of Murray Bridge (Country region, through Murray Mallee Community Health Service) – that aim to

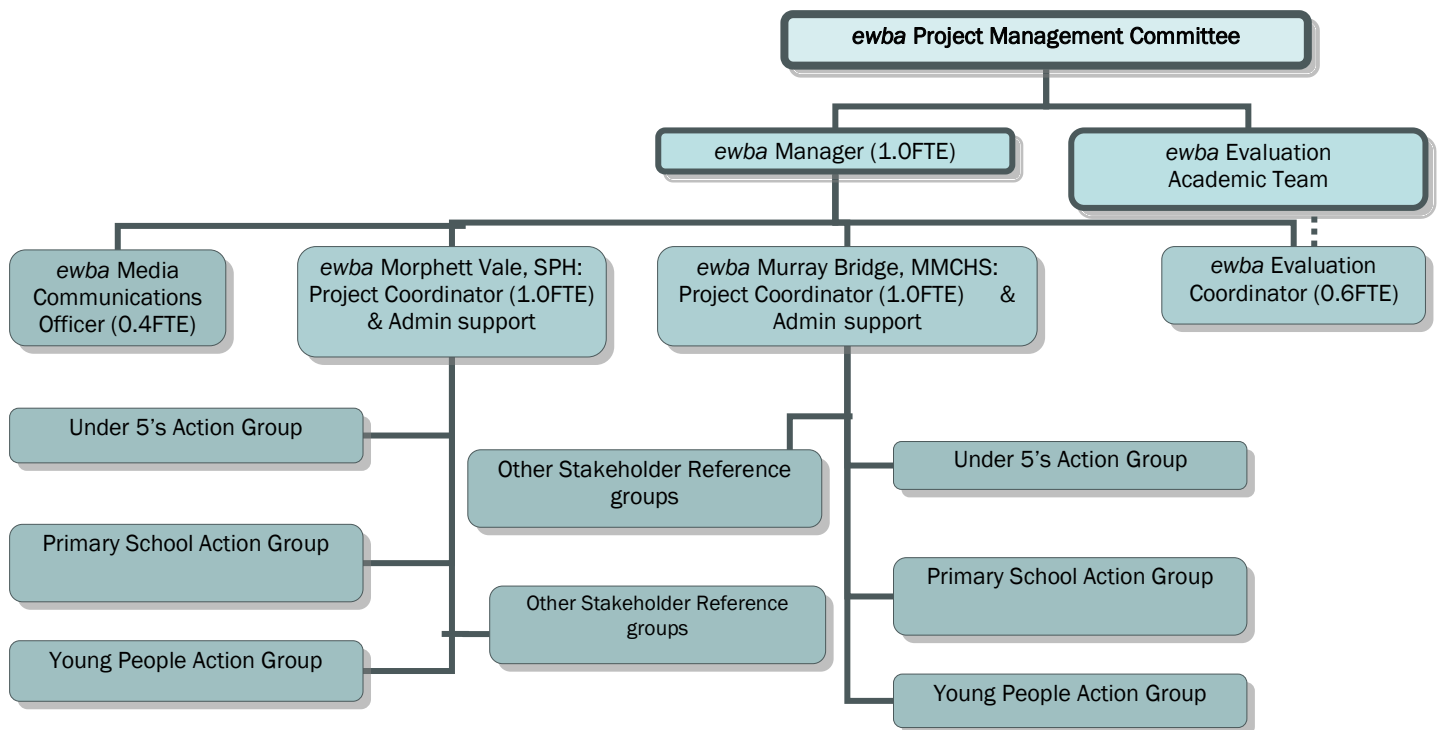
contribute to the healthy weight of children, young people and their families through increasing healthy eating and physical activity. *ewba* will:

- 🕒 Increase healthy eating and physical activity in partnership with a variety of settings (eg. schools, Under 5's settings, local government, homes, food services) by addressing both environmental and individual barriers.
- 🕒 Determine the key components of a coordinated community approach to promoting physical activity and healthy eating that are sustainable and transferable to other areas.
- 🕒 Determine the effectiveness of the community-wide programs to improve healthy eating and physical activity levels in the community.

### 1.3 Management of eat well be active Community Programs

The programs are overseen by the Project Management Committee (see Figure 1) and managed by the *ewba* Manager reporting to this committee. The purpose of the Project Management Committee is to coordinate and endorse the development, implementation, evaluation and sustainability of *ewba*. The committee meets bi-monthly and has membership from the SA Health's Health Promotion Branch, Southern Adelaide Health Service and Murray Mallee Community Health Service. In each site the program is coordinated by a Project Coordinator and has administrative support.

Figure 1: *ewba* Governance Structure



The Evaluation Academic Team is responsible for the development and implementation of all aspects of *ewba*'s evaluation and also provides support in ensuring the programs operate according to the best available evidence. The Evaluation Academic Team is

chaired by the *ewba* Manager, Executive officer support is provided by the Evaluation Coordinator, and the team includes three University Academics with expertise in key fields including nutrition and childhood obesity, physical activity and community development and hosts research students.

## 1.4 Nature of eat well be active Community Programs Interventions

The *ewba* model of intervention follows notions of an ecological approach whereby both individuals and social environmental factors are the focus of the health promotion interventions. An ecological approach is based on the assumptions that suitable changes in the social environment will support changes in individuals, and that the support of individuals in the population is essential for implementing environmental changes (Egger & Swinburn, 1997; Kickbusch 1989; McLeroy et al 1988; Bronfenbrenner, 1977).

Population level approaches with a focus on children and young people are key characteristics of the overall *ewba* model. More particularly the model incorporates a number of strategies for action across a spectrum of health promotion settings (Poland, Green & Rootman 2000). The key messages are promoted through the *ewba* strategies which in turn are implemented across the range of settings of change, as illustrated in Figure 2. This *ewba* intervention model was developed through a synthesis of the best available evidence and comprehensive community mapping and consultation data.

**Figure 2: eat well be active Community Programs Intervention Portfolio**



The *ewba* model of intervention is based on 'best available evidence' (Swinburn and Egger 2002; McNeil and Flynn 2006: 404) as to the effectiveness of population level strategies to reduce both the total burden of diseases and the prevalence of chronic diseases associated with overweight and obesity. Under a rubric of 'population health' various types of strategies have been identified to address overweight and obesity: legislative or regulatory approaches, mass media campaigns, health education and behavioural therapy, peer support groups and organisations, modifications to food supply, modifications to the physical environment, strategies aimed at professionals, and multi-strategy interventions (Gill, Bauman et al. 2004). Community wide interventions have broad reach, and the program logic underpinning such approaches is that a small decrease in weight levels across the population is more likely to have an impact on population health status than larger decreases in a small number of people.

In addition interventions targeting 0-18 year olds are considered the most likely to produce long-term effects, for several reasons. Prevention and treatment interventions in adults have shown very limited long-term effectiveness, while some interventions aimed at

children and adolescents have shown at least short-term effectiveness. With the correlation between childhood and adult obesity established (Viner and Cole 2005), it is possible that reducing childhood obesity may reduce adult obesity in the longer term. Consequently, there is potential for both immediate and long term benefits. Interventions are potentially easier and more cost efficient than treatment strategies or interventions aimed specifically at adults. A focus on children, young people and their families is also consistent with the *eat well be active* Healthy Weight Strategy for South Australia 2006-2010 (SA Dept of Health, 2004).

Community engagement, a further factor in the *ewba* approach, is widely held to be a key to successful public health programs (Department of Health 2005; NHS Modernisation Agency 2004; Summerbell et al. 2005). Mindful that there is no universally agreed definition of 'community engagement', *ewba* adopts a perspective wherein strategies for engagement include meaningful participation in planning and evaluation, participatory decision-making, and the establishment and maintenance of respectful partnerships.

Community participation is critical to ensuring that the perspectives, understandings, issues and needs of target communities are communicated and understood and that this knowledge informs actions developed to address the issues. Participatory decision-making increases both relevance of the decision and actions to the target group and in turn their commitment to the decision and actions. That commitment is a key factor in generating further active participation, community level leadership and support, and in the longer term, behaviour change (Gill, King et al. 2005); US Department of Health and Human Services 2002). Effective and respectful partnerships require an understanding of the resources and capabilities of partners, realistic expectations, identification and balancing of power structures, trust, multiple pathways for community participation, inclusive environments that allow for cultural, values and viewpoint differences, and in some cases, reorganisation of health care systems to encourage community participation (Zukoski et al 2004). It is important to ensure that target groups, including children and young people, and people of diverse cultural backgrounds, are engaged at all levels.

## 2.0 Methods

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### 2.1 Evaluation Design

The evaluation aims to determine the impact of the *ewba* Community Programs on children and families using mixed quantitative and qualitative approaches. The interventions are community based and the design will compare one rural and one urban community that receive the intervention with one rural and one urban community that do not receive the *ewba* intervention. The design is a cross-sectional pre post design with comparison groups which is cited as a commonly used interpretable model of quasi experimental designs (Cook and Campbell 1979).

A cross-sectional approach has been adopted because there are high mobility rates in the areas under study and the most useful measure for this type of community based project is on changes in the geographic based community over time including the effect of migration.

Outcomes from the first quantitative data collection period (end 2006) are reported in Part 1 and Part 2 of the Baseline Reports. Part 1 of the Baseline Reports reported the outcomes from the first quantitative data collection period focusing on the students' surveys and anthropometric data. This report, Part 2, reports on the findings from the outcomes of the surveys of:

- ☉ Pre-school Directors
- ☉ Long Day Care (LDC) Directors
- ☉ Family Day Care (FDC) Providers
- ☉ Primary School Principals
- ☉ Canteen Managers
- ☉ Primary School Teachers
- ☉ Out of School Hours Care (OSHC) Directors
- ☉ Parents of Primary School aged children
- ☉ High School Principals
- ☉ High School Canteen Managers

Questionnaires returned from Primary School teachers and parents were analysed using SPSS. All other questionnaires (n <100) were analysed descriptively.

Data will be collected from intervention and comparison sites at the second quantitative data collection period at the end of 2009 and the findings will be presented in the Final Report in conjunction with qualitative data .

### 2.2 Ethics and Informed Consent

Ethics approvals were granted by the relevant human research ethics committees: the SA Health Human Research Ethics Committee (HREC) and the Department of Education and Children's Services (DECS) research committee as well as the Aboriginal Health Research Ethics Committee.

Trial Registration: ACTRN12607000414415

### 2.3 Selection of Intervention and Comparison Sites

Several factors were considered in making decisions about the location of the intervention and comparison sites. Norton (2003) recommended that the following variables be considered: area(s) most in need – socio-demographics, community acceptance and possible involvement, areas most likely to show successful change, issues of distance, population and size. Magarey (2003) also recommended that an 'urban community of

moderate size to achieve sufficient reach of interventions in multiple settings within the budget' and 'a community with the capacity in all sectors to undertake the work required'.

An urban and a rural geographic or place-based community have been selected as the two demonstration communities, and the key differences and similarities between such areas will be discussed. The *ewba* Community Programs are not intended as supplementary funding for areas with high levels of need and poor resources, they are however intended to focus on areas of disadvantage which have been shown to experience high levels of obesity. As mentioned previously the two sites selected for *ewba* are:

- ① Morphett Vale, Southern Metropolitan Adelaide
- ① Rural City of Murray Bridge, Hills Mallee Southern Country Region.

Southern Adelaide Health Service and Murray Mallee Community Health Service, that service the two communities respectively, were selected as sites that have the infrastructure and experience needed to support the demonstration project.

The comparison sites were chosen using the following criteria: a similar rural-urban mix, number and age distribution of children, socio-economic status, educational levels, occupational and income distributions, family sizes and similar ethnic mix. The comparison communities selected are the Sea and Vines Education District (metropolitan suburbs), a geographically separate area of the Onkaparinga Local Government Area, and the rural municipality of Port Pirie.

## **2.4 Description of Intervention and Comparison Sites**

The evaluation has a 'non equivalent control group' design. This means that the comparison communities will not exactly match the intervention communities. While every care has been taken to identify communities that match as closely as possible, there are important differences between intervention and comparison communities in ethnic mix and the public – private school mix.

### **Intervention Sites**

#### ***Morphett Vale***

Morphett Vale is a metropolitan suburb, south of Adelaide (see Figure 3). Morphett Vale is one of the older areas of white settlement within the City of Onkaparinga (1840's). Its geographic boundaries are Main South Road to the west, Pimpala Road to the north, Panalatinga Road to the east and Doctor's Road to the south. Morphett Vale primary and high schools fall within the SA Department of Education and Children's Services (DECS) 'Wallara' schools district.

The total population of Morphett Vale in 2006 was 33,812 (ABS 2006). The Kaurna people are recognised as the Indigenous people of this region and in 2006 formed 1.1 per cent of the population of Morphett Vale.

In 2006:

- ① 20.7% of the population (approx 7,000) of Morphett Vale was aged 0-14 years.
- ① the median age was 36 years, one year below the Australian average of 37 years.
- ① 20.2% of the population of Morphett Vale was born overseas. Besides Australia the three most frequently cited countries of birth include: 9.9% from England, 1.4% from Scotland and 1.0% from New Zealand.
- ① the median family income in Morphett Vale was A\$1070 per week, one hundred dollars below the Australian average.
- ① 19.1% of the families in Morphett Vale were single parent families, above the Australian average of 15.8 per cent (ABS 2006).

The index of relative social disadvantage (IRSD) is a measure of socio-economic status, the higher the score the less disadvantaged. The 2001 IRSD for Morphett Vale was 950-999, this compares with a higher IRSD of 1006 for Adelaide and an average IRSD for South Australia of 1000. The unemployment status in Morphett Vale in 2001 was 8.9 per cent, slightly higher than the 8.0 per cent average for City of Onkaparinga (Social Health Atlas 2006).

Morphett Vale is a discrete geographic community with existing infrastructure including shopping complexes, recreational spaces, primary and high schools and childcare/kindergartens, neighbourhood house and food retail outlets. There are a variety of recreational facilities available for use by local residents of Morphett Vale including: ovals, netball and tennis courts, skate park, equestrian facilities, archery and BMX track. Many of these are located within the Wilfred Taylor Reserve.

**Figure 3: Map showing location of Morphett Vale in relation to Adelaide**



### **Murray Bridge**

The rural intervention site is the Rural City of Murray Bridge including Murray Bridge and its outer towns (postcodes 5253/4 & 5259). Murray Bridge is a rural city located 80km east of Adelaide (see Figure 4) and incorporates the regional fringe towns of Callington, Jervois and Mypolonga. Murray Bridge was established when a road bridge over the Murray River (which is how the city got its name) was completed in 1879.

The population of this region in 2006 was 18,725 (ABS 2006). About 6.3 per cent of the population is of Aboriginal background and the Ngarrindjeri Aboriginal people are the traditional land owners of this region. The Aboriginal population of Murray Bridge is well above the Australian average of 2.3 per cent.

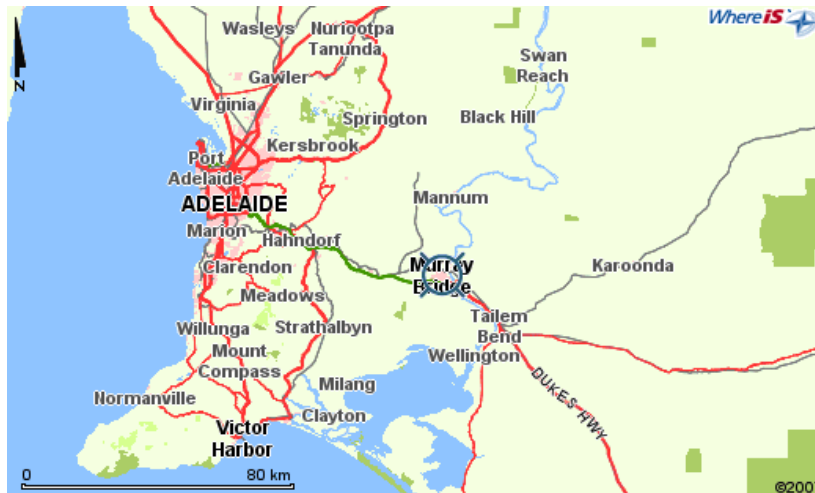
In 2006:

- ☉ about 21% of the population were aged 0-14 years and the median age was 39 years, one and a half years above the Australian average
- ☉ 10.4% of the population were born overseas. In the city of Murray Bridge 2.9% were born in England, 1.4% born in China and 0.9% born in New Zealand. This highlights a significant Chinese born population in Murray Bridge. The people from the outer regions of Murray Bridge were predominantly born in England, but were also born in Italy, Netherlands, NZ and Germany
- ☉ the median family income in Murray Bridge was A\$860 per week and in the outer regions (postcodes 5254 and 5259) was A\$975 and A\$926 respectively, all below the Australian average
- ☉ 18.9% of families in Murray Bridge were single parent families and 10.9% and 9.5% in the outer towns were single parent families (ABS 2006).

In 2001 the IRSD for Murray Bridge was below 925 and in 2003 they had an unemployment rate of 8.0-9.9 per cent (Social Health Atlas 2006).

The Rural City of Murray Bridge reports to be experiencing solid growth and is increasingly adopting the dual role of regional centre and the location of intensive activity serving the metropolitan regions (Social Health Atlas 2006). Recent developments that have been announced within the region include the re-development of the Correctional Services sector with the building of two new prisons by 2011. An urban growth plan (2007) has predicted that Murray Bridge could 'double in population to 30,000 in the next 20 years' (City of Murray Bridge 2007).

**Figure 4: Map showing location of Murray Bridge in relation to Adelaide**



(Source: [www.whereis.com](http://www.whereis.com) accessed June 2007)

## Comparison Sites

### Sea & Vines

Sea and Vines community is a DECS district which includes the Southern Fleurieu Peninsula and Kangaroo Island. The DECS district encompasses both outer metropolitan and rural regions. For the purposes of the evaluation only the outer southern metropolitan schools and related suburbs are included as part of the comparison group. Our notion of Sea & Vines refers to the suburbs from within this region including: Hackham, Christies Downs, Christies Beach, O'Sullivan's Beach, Noarlunga, Noarlunga Downs, Moana and Seaford, plus the suburb of Aberfoyle Park (see Figure 5). These suburbs are also located within the Onkaparinga Southern Health Region. Whilst it is a defined geographic community (made up of several suburbs) for our purposes, this community would not be recognised as such by members of these suburbs. They would identify as members of discrete suburbs, not as part of a 'Sea and Vines' community. In the following descriptions of this community the postcode (5163-5169) related ABS data have been combined. The Sea and Vines region is also recognised as a tourist destination however this concept of it refers to the McLaren Vale wine region which is not included in our comparison group.

The population of Sea & Vines is 45,548 people of whom 1.9% identifies as Aboriginal (ABS 2006). The Kurna people are the traditional Aboriginal people of this area.

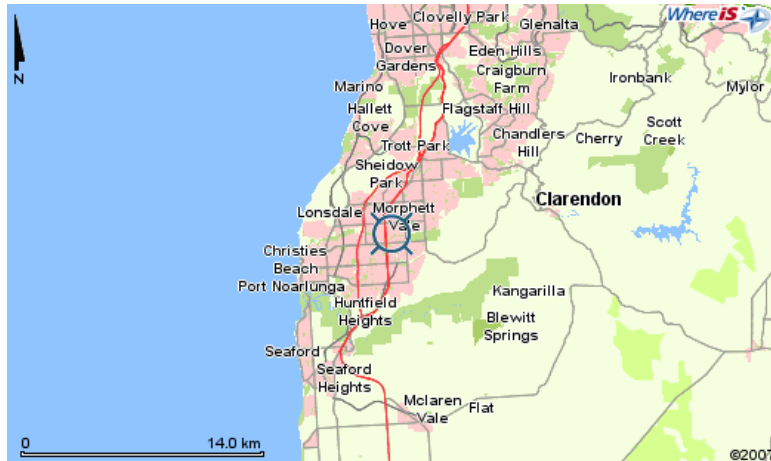
In 2006:

- ☉ about 19% of the population were aged between 0-14 years
- ☉ the median age was 38 years, one year above the Australian average
- ☉ about 25% were born overseas and the most frequently cited countries of birth apart from Australia include England, Scotland and Germany

- ⌚ the average family income across these suburbs was A\$882 per week – below the Australian average
- ⌚ about 22% of families were single parent families, above the Australian average of 15.8% (ABS 2006).

**Figure 5: Location of suburbs in Sea and Vines in relation to Morphett Vale**

(Source: [www.whereis.com](http://www.whereis.com) accessed June 2007)



### **Port Pirie**

Port Pirie is situated on the upper reaches of the Spencer Gulf in the Southern Flinders Ranges of South Australia (see Figure 6). The Council area includes the city of Port Pirie (postcode: 5540), a historically significant city and busy commercial regional centre, as well as the rural towns of Crystal Brook (postcode: 5523), Napperby and Port Germein (postcode: 5495). It is a diverse region encompassing agricultural and industrial activities, with a history as a major manufacturing and export centre, where industry, century old buildings and attractive parks and gardens sit side by side.

In 2006 the total population of Port Pirie was 17,480 (ABS 2006). The Nukunu Aboriginal people are the traditional people of the area and the population of Aboriginal people in Port Pirie in 2006 was 2.5 per cent, in Crystal Brook 1.4 per cent and in Port Germein 3.9 per cent.

In 2006:

- ⌚ 21.3% of the population of Port Pirie was aged 0-14 years (approximately 3,200) and the median age is 40 years.
- ⌚ 7.5% of the population of Port Pirie were born overseas. Of those born overseas most are born in England, then Italy and Scotland (2.5%, 0.9% and 0.5% respectively).
- ⌚ the median family income in Port Pirie was A\$878 per week, below the Australian average. In Crystal Brook the median family income was A\$1015 and in Port Germein it was A\$680.
- ⌚ there were 18.6% of single parent families residing in Port Pirie. The per cent of single parent families in Crystal Brook and Port Germein was 11.2% and 10.6% respectively (ABS 2006).

**Figure 6: Location of Port Pirie in relation to Adelaide**



(Source: [www.whereis.com](http://www.whereis.com) accessed June 2007)

## **2.5 Measures**

### **Development of Surveys**

An extensive literature search was undertaken to locate appropriate surveys for use in the *ewba* evaluation, so as not to replicate work that had already been conducted. It was hoped that the surveys would capture the behaviour, knowledge, attitudes and environments for healthy eating and physical activity of students. It was decided that several data sources were to be targeted including:

- 🕒 Early childhood settings including long day care centres, pre-school and family day care environments
- 🕒 Primary school settings including school-age children, parents, principals, teachers, out of school-hours care directors, canteens managers
- 🕒 High school settings including principals and canteen managers.

Surveys which addressed both the breadth of inquiry as well as the project goals were unavailable in the published literature. Hence the *ewba* suite of surveys was developed through extensive consultation and an academic review process. Reliability and validity testing is currently being undertaken on the teacher and parent surveys.

### **Distribution of Surveys**

#### **Early Childhood**

Questionnaires (with reply paid envelopes) were mailed to Directors of Long Day Care and Pre-schools (n=47) in the *ewba* intervention and comparison sites by the *ewba* team. Due to confidentiality, FDC surveys were mailed directly to Providers (n=74) by FDC regional offices.

#### **Primary Schools**

Principal (n=40), teacher (n=667), OSHC (n=19) and Canteen Manager (n=29) questionnaires were sent to the intervention and comparison schools prior to students' data collection. The completed questionnaires were collected on the measurement day and if they had not been completed, extra copies were provided with a request to be completed and returned as soon as possible. The five schools with the highest return rate of teacher and student questionnaires (with 75% weighting being given to student and 25% weighting to teacher questionnaires) received a A\$100 voucher for sports equipment, water coolers or fruit and vegetables.

## Parents of Primary School Students

Parent (n=1519) questionnaires were distributed by the *ewba* team. On the consent form for child measurements, parents were asked to indicate if they were happy to complete a parent questionnaire. If so, they were asked to provide their home address. Questionnaires were then sent home to parents who returned them directly to *ewba* via reply paid envelopes. For those parents that did not return a completed questionnaire within 6-8 weeks, a reminder letter was sent including a copy of the questionnaire. Parents who returned a completed questionnaire went into the draw to win one of twenty A\$25 supermarket vouchers.

## High School

Questionnaires for the Principal and Canteen Manager (with reply paid envelopes) were mailed to High School Principals (n=14) by the *ewba* team.

## Analysis of Surveys

Data entry from the surveys was completed by an external data entry company. Ten per cent of the sample for each survey was checked for errors in data entry. Percentage data entry error rate was calculated by dividing the total number of errors by the total number of questionnaire items, multiplied by 100.

Based on sample size and number of errors in a single questionnaire, data entry error rates were not meaningful when the sample size was less than fifty. Where the sample sizes were over 100 and a data entry error check provided meaningful outcomes the results have been reported (see Table 1).

**Table 1: Data Entry Error Rates in Questionnaires (n>100)**

Respondent	Number Returned (n)	Number Checked	Percentage Data Entry Error Rate (%)
Teachers	286	29	0.17
Parents of Years 5-7 students	983	121	0.69

Surveys were analysed in one of two ways. Those surveys with a sample size greater than 100 were analysed statistically using SPSS 15.0. Those surveys with a sample size of less than 100 were analysed descriptively. The outcomes of both have been reported.

## 3.0 Data Collection Outcomes

### 3.1 Response Rates

The reported response rate includes all respondents who returned a completed survey. Separate consent forms were not administered for the surveys (other than student and parent surveys) and so completion and return of the survey assumed consent.

Parents were asked to complete their name and address details on the student consent forms if they consented to being posted a survey.

Response rates for the questionnaires are presented in Table 2.

**Table 2: Response Rates from Settings**

Setting	Respondent	Number Sent	Number Returned (n)	Response Rate (%)
Early Childhood	Long Day Care Directors	15	9	60
	Pre-school Directors	32	19	59
	Family Day Care Providers	74	16	22
	Sub-total	121	44	36
Primary Schools	Principals	40	36	90
	Teachers	667	286	43
	Canteens*	29	26	90
	Out of School Hours Care (OSHC)*	19	13	68
	Sub-total	755	361	48
Youth	Parents of Years 5-7 students	1519	983	65
	High School Principals	14	9	64
	High School Canteens	14	7	50
	Sub-total	28	16	57

\* Not all schools participating in the evaluation had canteens or OSHC.

### 3.2 Reporting

Respondents received the surveys between October to December 2006 and were asked to complete the surveys retrospectively for what occurred in their site in the calendar year 2005. This was requested so that survey data best reflected each setting as it was prior to *ewba* intervention commencing in February 2006. This created some confusion for sites and on occasion *ewba* staff assisted intervention sites in the completion of their surveys. On the whole, the responses in this report reflect the situation in 2005. The exception to this method of recall was for parent and student questionnaires. Parents and students were asked to respond to the questionnaires for the 2006 calendar year.

In this report, in the first instance the most frequent response will be reported, on some occasions the next most frequent response will also be reported. Most questions are a five point Likert scale (strongly agree, agree, not sure, disagree, strongly disagree) and on occasion this is condensed to a three point scale (strongly agree/agree, not sure, disagree/strongly disagree) for ease of reporting. In some tables throughout this report, where the number of responses does not equal 'n', the difference is the number of cases that did not respond to that item on the questionnaire.

## 4.0 Early Childhood

### 4.1 Breastfeeding Data

Data for the breastfeeding analysis were obtained for infants in the *ewba* intervention and comparison sites from Child Youth and Women's Health Service (CYWHS). The information was collected and recorded by Child and Youth Health nurses when undertaking health visits with mothers in 2006. The information provided by CYWHS was de-identified and included gender, date of birth, service date, type of check (1-4 week, 6-8 week and 6 months), postcode, suburb, infant nutrition description and infant nutrition description at three months when asked at six months. Definitions of nutrition types used by the Child and Youth Health nurses are included in Table 3.

**Table 3: Definitions of Breastfeeding**

Nutrition Type	Definition
Artificial Feeding	Infant is fed fully or predominantly with breast milk substitutes, including infant formula.
Exclusive Breastfeeding	Breastfeeding or breast milk fed where infant has had no other liquids or solids with the exception of drops or syrups consisting of vitamins, mineral supplements or medicines.
Predominant Breastfeeding	Exclusive breastfeeding with the addition of water and fruit juice.
Supplementary Breastfeeding	A fully breastfed infant that has been given one or more fluid feeds including breast milk substitutes in place of a breastfeed.
Complementary Breastfeeding	Fully breastfed infant that has been given one or more fluid feeds including breast milk substitutes (infant formula) to complement (top up) a breastfeed.
Breastfeeding	If pre six months, exclusively breastfed infant with early introduction of solids. Six months and over, exclusively breastfed infant with the transition to solid foods from six months until 2 years and beyond.

Source: Child Youth & Women's Health Service (2007) Policy Directive Breastfeeding PD2007\_004, SA Government Australia

#### 4.1.1 Statistical Analyses

The proportion of each type of infant nutrition and percentage of breastfeeding infants was examined according to age and region. The proportion of each type of infant nutrition at 3 months (when asked at 6 months) was also analysed (Table 4). The statistical difference between groups was examined with  $\chi^2$ . Statistical significance was accepted at  $p < 0.05$ . All data were analysed using SPSS version 15.0.

#### 4.1.2 The Sample

A total of 1475 infants from either intervention or comparison sites were identified as having their Child and Youth Health data recorded. This included:

- 726 (49.2%) boys and 748 (50.8%) girls.
- 988 (67.0%) infants from urban areas and 487 (33.0%) from rural areas.

#### 4.1.3 Difference in proportion of breastfed infants according to age and region

Table 5 shows the proportion of breastfeeding infants according to age and region. There was a significant difference ( $p = 0.000$ ) in proportion of breastfed infants according to age with 78.5% of infants breastfed at 1-4 weeks decreasing to 46% breastfed at 6 months. There was no significant difference in the proportion of breastfed infants between urban and rural regions (Table 5).

**Table 4: Proportion of infants' breastfed according to age**

	n	Breastfeeding*		
		Yes %	No %	Unknown/Other %
		(95% CI)	(95% CI)	(95% CI)
<b>1-4 weeks</b>	1163	78.5 (75.8-81.2)	18.7 (13.5-23.9)	2.8 (0-8.5)
<b>6-8 weeks</b>	136	61.0 (50.5-71.5)	27.2 (12.9-41.5)	11.8 (0-27.6)
<b>3 months **</b>	176	55.7 (45.9-65.5)	39.8 (28.3-51.3)	4.6 (0-19.1)
<b>6 months</b>	176	46.0 (35.1-56.9)	48.9 (38.3-59.5)	5.1 (0-19.5)

\* 'Yes' to breastfeeding refers to the combination of the following categories - Exclusive + Predominant + Complimentary + Supplementary + Breastfeeding + Expressed as defined in Table 3, while 'No' refers to Artificial + Non Breastfeeding categories.

\*\*when asked at 6 months

**Table 5: Proportion of infants' breastfed according to age and region**

		n	Breastfeeding*		
			Yes %	No %	Unknown/Other %
			(95% CI)	(95% CI)	(95% CI)
<b>Urban</b>	<b>1-4 weeks</b>	811	79.7 (78.2-81.2)	17.6 (14.4-20.4)	2.7 (0-6.2)
	<b>6-8 weeks</b>	60	53.3 (44.5-62.1)	31.7 (21-42.4)	15.0 (3.1-27.8)
	<b>6 months</b>	117	44.4 (37.5-51.3)	51.3 (44.8-57.8)	4.3 (0-13.4)
<b>Rural</b>	<b>1-4 weeks</b>	352	75.9 (73.3-78.5)	21.3 (16.6-26.0)	2.8 (0-8.0)
	<b>6-8 weeks</b>	76	67.1 (60.5-73.7)	23.7 (13.7-23.7)	9.2 (0-20.1)
	<b>6 months</b>	59	49.2 (40.0-58.4)	44.1 (34.4-53.8)	6.8 (0-19.4)

\* 'Yes' to breastfeeding refers to the combination of the following categories - Exclusive + Predominant + Complimentary + Supplementary + Breastfeeding + Expressed as defined in Table 3, while 'No' refers to Artificial + Non Breastfeeding categories.

## 4.2 Anthropometric Data

### 4.2.1 Analysing data from CYWHS

Data for this analysis were obtained from the Child Youth and Women's Health Service (CYWHS) Pre-school assessments for 4-5 year olds in the intervention and comparison sites of *ewba* Community Programs. The de-identified information for overweight and obesity analysis included gender, height, weight, date of birth, date of measurements taken, postcode and suburb. This information was collected in Child and Youth Health centres and kindergartens by community health nurses. Measurements were carried out using the standard CYH protocols, which involved obtaining weight from scales with children in their underwear and using a fixed measuring tape for height. Height and weight were then converted into metres and kilograms respectively. These data were used to calculate BMI for each child in SPSS using the formula:

$$\frac{\text{weight in kg}}{(\text{height in m})^2}$$

The child's decimal age was also calculated using their birth date and service date. Height, weight and BMI z-scores were calculated using LMS growth software which uses British reference curves.

The prevalence of overweight and obesity in the sample was calculated using age and gender specific cut-points from the International Obesity Taskforce using the LMS software (LMS Growth). These points are defined as passing through BMI of 25 for overweight and 30 for obesity at age 18 and were obtained by averaging data from Brazil, Great Britain, Hong Kong, Netherlands, Singapore, and United States (Cole et al 2000).

### 4.2.2 Statistical Analyses

The physical characteristics investigated (height, weight, BMI, BMI z-scores) were expressed as mean (standard deviation). An independent sample *t* test was used to compare physical characteristics across the whole sample, in boys versus girls and urban versus rural regions. Prevalence of overweight and obesity was also examined according to gender and region. The statistical differences in overweight and obesity between groups was examined with  $\chi^2$ . Statistical significance was accepted at  $p < 0.05$ . All data were analysed using SPSS version 15.0.

### 4.2.3 The Sample

A total of 1012 children from either the intervention or comparison sites were identified as having their CYH Pre-school data recorded. However seven cases were excluded due to an absence of weight data (in 1 case) and unspecified gender (in 6 cases), providing a final sample size of 1005.

This included:

- 504 (50.1%) boys and 501 (49.9%) girls.
- 640 (63.5%) Pre-school children from urban areas and 365 (26.5%) from rural areas.
- 464 (46.0%) Pre-school children from intervention sites and 541 (54.0%) from comparison sites.
- 308 (30.6%) from Morphett Vale, 331 (32.9%) from Sea and Vines, 155 (15.4%) from Murray Bridge, 209 (20.8%) from Port Pirie
- The children ranged between 3-5 years with a mean age of 4.8 years (standard deviation 0.23).

### ***Difference in physical characteristics of the ewba sample***

Table 6 shows the physical characteristics height, weight, BMI and BMI z-score of the *ewba* sample according to sex and region.

BMI z-score was significantly greater in boys compared with girls ( $P=0.027$ ).

There was no significant difference in BMI z-scores between urban and rural regions as a whole or when separated by sex.

**Table 6:** Mean [SD] height, Weight, BMI and BMI z-scores of the *ewba* Pre-school (4-5 year old) sample by gender and region.

	<b>N</b>	<b>Height (m)</b>	<b>Weight (kg)</b>	<b>BMI (kg/m<sup>2</sup>)</b>	<b>BMI z-score</b>
<b>All</b>	1005	1.079 [0.047]	19.31 [2.89]	16.52 [1.69]	0.576 [1.132]
<b>Boys</b>	504	1.081 [0.047]	19.39 [2.80]	16.53 [1.59]	0.599 [1.063]*
<b>Girls</b>	501	1.078 [0.046]	19.24 [2.97]	16.51 [1.79]	0.553 [1.197]
Urban Boys	327	1.076 [0.045]	19.25 [2.57]	16.57 [1.53]	0.640 [1.032]
Rural Boys	177	1.090 [0.050]	19.65 [3.17]	16.44 [1.68]	0.522 [1.118]
Urban Girls	313	1.076 [0.046]	19.24 [3.01]	16.54 [1.82]	0.575 [1.182]
Rural Girls	188	1.080 [0.046]	19.25 [2.91]	16.45 [1.75]	0.515 [1.224]
<b>Total Urban</b>	640	1.076 [0.046]	19.24 [2.79]	16.56 [1.68]	0.609 [1.108]
<b>Total Rural</b>	365	1.085 [0.048]	19.44 [3.04]	16.45 [1.71]	0.518 [1.172]

\*  $P=0.027$  for difference between boys and girls

Table 7 shows the differences in prevalence of overweight and obesity by sex, and region using the IOTF cut-points (Cole, Bellizzi et al 2000). Overall 18.4% of children were overweight and 7.0% were obese making the combined prevalence of overweight and obesity 25.4%. There was a significant difference between boys and girls, when comparing proportions of combined overweight and obesity. A significantly greater proportion of girls were overweight (overweight and obese combined) compared with boys ( $P=0.04$ ). No significant differences were found between boys and girls within each region or between urban and rural regions.

**Table 7:** Prevalence of Overweight and Obesity of the *ewba* Pre-school sample by gender and region using IOTF cut-points (Cole, Bellizzi et al 2000).

	<b>n</b>	<b>Overweight % (95% CI)</b>	<b>Obese % (95% CI)</b>	<b>Overweight and Obese % (95% CI)</b>
<b>Total Sample</b>	1005	18.4 (16.0-20.8)	7.0 (5.4-8.6)	25.4 (20.1-30.7)
<b>Total Boys</b>	504	16.5 (13.2-19.7)	6.2 (4.1-8.3)	22.6 (14.9-30.3) **
<b>Total Girls</b>	501	20.4 (16.8-23.9)	7.7 (5.5-10.2)	28.1 (20.7-35.5)
Urban Boys	327	17.7 (13.6-21.9)	5.5 (3.0-8.0)	23.2 (13.7-32.7)
Rural Boys	177	14.1 (9.0-19.3)	7.3 (3.5-11.1)	21.5 (8.4-34.6)
Urban Girls	313	20.8 (16.3-25.3)	7.0 (4.2-9.8)	27.8 (18.4-37.2)
Rural Girls	188	19.7 (14.0-25.4)	9.0 (4.9-13.1)	28.7 (16.6-40.8)
<b>Urban Total</b>	640	19.2 (16.2-22.3)	6.3 (4.4-8.2)	25.5 (18.8-32.2)
<b>Rural Total</b>	365	17.0 (12.5-21.5)	8.2 (4.9-11.5)	25.2 (16.3-34.1)

\*\*  $P= 0.04$  for difference between boys and girls

### 4.3 Survey Data

This section presents the responses from surveys received from the following three early childhood personnel:

- Long Day Care Directors (n=9);
- Pre-school Directors (n=19);
- Family Day Care Providers (n=16).

The respondents were asked to complete the questionnaire as it refers to the 2005 calendar year. The surveys were context specific and not all questions were relevant to each early childhood setting. When the same or similar questions were asked of multiple settings the responses have been combined.

#### 4.3.1 Demographics

##### Location

**Table 8: Frequency of survey responses from early childhood setting by geographic community**

	Long Day Care	Pre-school	Family Day Care	Total
Morphett Vale	4	7	5	16
Murray Bridge	3	3	4	10
Sea & Vines	1	7	4	12
Port Pirie	1	2	3	6
<b>Total</b>	<b>9</b>	<b>19</b>	<b>16</b>	<b>44</b>

##### Enrolments

**Table 9: Enrolments reported by early childhood settings (n=44) in 2005**

2005	Long Day Care	Pre-school	Family Day Care
Total number of children	785	875	135
% Indigenous	10	10	1
Total number of Staff	155	86	16
FTE staff	69	43	n/a

## **Long Day Care**

Five of the nine LDC centres were community based and the other four were privately owned and operated.

## **Family Day Care Providers**

All the FDC Providers were female. Their mean age was 48 years (range 32-63 years). Eleven of the sixteen FDC Providers had been working in the role for more than five years. Only one had been a FDC provider for less than one year. One third of the FDC Providers had completed a diploma/certificate or degree while half had completed to year 10, 11 or 12 of secondary schooling.

### ***4.3.2 Policy Environment***

#### **Healthy Eating Policy**

Seven of the nine LDC and 17 of the 19 Pre-school Directors reported having a written policy on healthy eating at their centre. Of those, the majority (23 of the 24) believed that the policy was completely communicated to *staff*. Twenty-two of the 24 respondents reported that these policies were completely communicated to *parents* and actively implemented.

The centres which had a healthy eating policy were asked about the content of the policy in terms of: consistency with Australian Dietary Guidelines, recommended daily intakes (RDI), availability of healthy/unhealthy food and drinks, teaching the importance of healthy food and the provision of supportive environments and these data are reported below.

#### ***Long Day Care***

Table 10 includes the LDC Directors' interpretation of how adequately their healthy eating policy covered the sixteen specific areas.

**Table 10: Content of healthy eating policy in Long Day Care as reported by Directors (n=7)**

Healthy Eating Policy Areas	Completely	To some extent	Not at all	Does Not Apply	No Response
The menu is consistent with Australian Dietary Guidelines for children	6	0	0	1	0
The menu will meet 50% of children's Recommended Daily Intake (RDI) for nutrients	7	0	0	0	0
The menu limits the availability of soft drinks	6	0	0	0	1
The menu limits the availability of cordial	6	0	0	0	1
The menu limits the availability of fruit juice	6	1	0	0	0
The menu limits the availability of packaged snacks such as crisps and lollies	6	0	0	1	0
Guidelines to parents limiting unhealthy foods/drinks allowed to be brought to LDC	7	0	0	0	0
Limiting unhealthy foods/drinks used for LDC fundraisers (eg chocolate drives, sausage sizzles)	4	1	2	0	0
Encouraging children's water consumption eg individual cups/bottles	6	1	0	0	0
Availability of drinking water for children eg easily accessible jug, fountain, filter tap	7	0	0	0	0
Not using food (eg confectionary) as a reward	7	0	0	0	0
Teaching the importance of healthy food	7	0	0	0	0
Providing an environment that is supportive of breastfeeding for all eg staff and parents	7	0	0	0	0
Staff acting as role models for healthy eating	7	0	0	0	0
Communicating with and involving parents in LDC healthy eating decisions and opportunities	5	2	0	0	0
Linking with relevant outside organisations eg Community Health, local food producers	4	3	0	0	0

Policies at two centres *completely* covered all healthy eating policy areas while there was more limited coverage for:

- limiting unhealthy foods/drinks used for LDC fundraisers and
- linking with relevant outside organisations.

## Pre-school

Table 11 includes the Pre-school Directors' interpretation of how adequately their healthy eating policy covered twelve healthy eating policy areas.

**Table 11: Content of healthy eating policy in Pre-schools as reported by Directors (n=17)**

Healthy Eating Policy Areas	Pre-school			
	Completely	To some extent	Not at all	No Response
Guidelines to parents limiting unhealthy foods/drinks allowed to be brought to LDC/Pre-school	13	4	0	0
Availability of healthy foods/drinks at LDC/Pre-school events	6	7	4	0
Limiting unhealthy foods/drinks used for Pre-school fundraisers (eg chocolate drives, sausage sizzles)	3	2	12	0
Availability of drinking water for children	13	2	2	0
Encouraging children's water consumption eg individual water bottles	12	3	2	0
Having set times during sessions for water, fruit&/or vegetable breaks	11	1	5	0
Not using food (eg confectionary) as a reward	8	0	9	0
Teaching food and nutrition in the planned curriculum	6	6	5	0
Providing an environment that is supportive of breastfeeding for all eg staff, parents	4	1	12	0
Staff acting as role models for healthy eating	5	5	7	0
Communicating with and involving parents in Pre-school healthy eating decisions and opportunities	5	7	5	0
Linking with relevant outside organisations eg Community Health, local food producers	5	1	11	0

Policies in two of the seventeen pre-schools *completely* covered all 12 of the healthy eating policy areas. Three policy areas received more limited coverage:

- limiting unhealthy foods/drinks used for Pre-school fundraisers
- providing an environment that is supportive of breastfeeding for all eg staff and parents
- linking with relevant outside organisations.

## Family Day Care

FDC has a checklist titled 'Assessment of Healthy Food Choice in FDC Policy Implementation' that FDC Providers complete with their field worker. This complements the 'Nutrition in Family Day Care policy' that was introduced in 2003. Ten of the 16 FDC Providers had undertaken this checklist with their field worker. Seven FDC Providers had provided parents with written guidelines about FDC healthy eating policy.

## Physical Activity Policy

While some respondents reported a commitment to physical activity within their site learning plans no LDC or Pre-school Director reported having a formal physical activity policy.

In 2005 there was no overall physical activity policy in FDC.

## Summary of Early Childhood Policy Environments

While the majority of the LDC centres and Pre-schools had some form of healthy eating policy, only a small number of early childhood settings had healthy eating policies which completely covered all of the identified healthy eating policy areas.

None of the LDC centres, Pre-schools or FDC had a physical activity policy.

### 4.3.3 Links with Parents and Outside Organisations

#### Parents

Early childhood respondents were asked to provide information about the frequency of their use of strategies to communicate with parents about healthy eating and physical activity.

**Table 12: The three most frequently used strategies to engage parents in descending order in early childhood settings**

	Long Day Care (n=9)	Pre-school (n=19)	Family Day Care (n=16)
1.	Newsletter	Newsletter	Conversation at beginning/end session
2.	Bulletin boards/displays	Conversation at beginning/end session	Photos of child
3.	Brochures/tip sheets	Bulletin boards/displays	Bulletin boards/displays

LDC Directors were also asked to report how well healthy eating and physical activity were supported by parents. Six of the nine LDC Directors reported that parents supported healthy eating and physical activity either well or very well.

#### Other Organisations

In LDC, the most frequently (3 of 9) accessed group for support in healthy eating and/or physical activity was Community Health Services. Six of the nine LDC reported having no contact at all with recreation or sporting providers. Three of the nine LDC reported making contact with local food producers or retailers once or more than once per term.

In Pre-schools nine of the 19 made contact with Community Health Services at least once per year, while eight had no contact at all. Nine made contact with recreation/sporting providers at least once per year while only three made at least one contact per year with local food producers or retailers.

## 4.3.4 Facilities and Environments

### Healthy Eating

#### ***Long Day Care (LDC), Pre-school and Family Day Care (FDC) food practices and environment***

LDC, Pre-school Directors and FDC Providers were asked a series of questions about the healthy eating environment provided to children in their care. Some questions were suitable to be asked across all settings while other questions were specific to the nature of care provided in that setting. Settings that were not asked a particular question are marked in the table as 'non-applicable' (n/a). The responses to these questions are presented in Table 13.

**Table 13: Frequency of responses about healthy eating environments in early childhood settings**

In 2005	Long Day Care (n=9)			Pre-school (n=19)			Family Day Care (n=16)				
	Yes	To some extent	No	Yes	To some extent	No	Always	Often	Some-times	Rarely	Never
Did the LDC/Pre-school/FDC provide easy access to clean drinking water facilities for children (eg water jugs, fountains, filter taps)?	9	0	0	16	1	1	15	1	0	0	0
Were children allowed to drink water throughout the day?	9	0	0	18	0	0	16	0	0	0	0
The Long Day Care menu supported healthy eating?	9	0	0		n/a				n/a		
Were children encouraged to eat fruit & vegetables?	9	0	0	18	0	0			n/a		
Were children involved in food preparation activities?	7	2	0	15	3	0	4	6	3	3	0
Were children allowed to eat fruit and/or vegetables during sessions at set times?		n/a		16	1	1			n/a		
Were children allowed to be rewarded with food/drink eg confectionery or fast food vouchers?	0	0	9	0	1	16	0	1	2	2	11
Did the LDC/Pre-school provide environments that were breastfeeding friendly for all eg staff, parents, community?	6	2	0	9	6	3	10	3	1	0	1

Five of the nine LDC Centres and seven of the 19 Pre-school Directors reported that they provided a 'positive healthy eating environment' to the children in their care. A centre was said to have a 'positive healthy eating environment' if they answered 'yes' (or 'no' in the case of questions enquiring about negative practices) to all healthy eating environment questions asked in the questionnaire. Two environment items were addressed to some extent in several centres including the provision of a breastfeeding friendly environment for all and the involvement of children in food preparation activities.

### **Supply of Food at Long Day Care**

The majority (8 of 9) LDC Directors reported that the LDC provided meals and/or snacks to children in care and seven of the eight had a written menu in 2005. Three of the nine LDC Directors reported that the parents supplied some or all of the food/drinks that children ate while at LDC. All these centres provided written guidelines to parents. All LDC Directors reported that the LDC menus support healthy eating.

### **Start Right Eat Right**

The Start Right Eat Right (SRER) Award recognises Long Day Care centres which have:

- a nutritionally adequate menu that provides at least 50% of children’s daily nutrition requirements
- all staff trained in food hygiene and food hygiene practices in place
- a supportive eating environment for children.

The SRER project promotes healthy eating and good nutrition for young children in South Australian child care centres. This State-wide project assists in achieving the goals of South Australia’s nutrition and healthy weight strategies as part of Eat Well South Australia and Eat Well Be Active

(<http://www.health.sa.gov.au/pehs/startrighteatright.htm>).

In 2005 five of the nine LDC centres were SRER trained and accredited. Three of the nine were working toward gaining SRER accreditation. One of the nine LDC centres was neither accredited nor working toward accreditation.

### **Family Day Care healthy eating behaviours**

FDC Providers (n=16) were asked additional questions about the healthy eating environment provided to the children within their homes:

- 14 always encouraged children to eat fruit
- 11 always encouraged children to eat vegetables
- 12 never allowed the consumption of soft drinks
- 7 rarely allowed packaged snacks such as crisps
- 11 always sat with children during meal times
- 7 always encouraged children to try new foods
- 12 never set up meals in front of the television
- 11 always let children decide when they have had enough to eat
- 11 always spoke with children about healthy eating.

### **Fundraising in Long Day Care and Pre-school**

LDC and Pre-schools may rely on fundraising for the purchase of new equipment or upgrading facilities. The survey requested details about the most frequently used fundraising strategies. The top three most used strategies are presented in Table 14.

**Table 14: Top three fundraising strategies in early childhood settings**

	Long Day Care (n=9)	Pre-school (n=19)
1.	Items other than food or drink	Items other than food or drink
2.	Confectionary	Sausage sizzle
3.	Biscuits/cakes Sausage sizzle Fruit or vegetables	Biscuits/cakes Confectionary

Three of the nine LDC Centres used one of the following fundraising strategies up to four times per year: biscuits and cakes, sausage sizzle or fruits and vegetables. In Pre-school the second most popular form of fundraising was the sausage sizzle which 11 of the 19 Pre-schools used up to four times per year. Seven of the 19 Pre-schools used confectionary and biscuits and cakes for fundraising up to four times per year.

### ***Breastfeeding***

The Australian Bureau of Statistics estimates that 118,000 Australian women return to paid work when their child is aged six months or younger. The National Health and Medical Research Council recommend exclusive breastfeeding for the first six months (NHMRC 2003) and the World Health Organisation recommends ongoing breastfeeding to two years and beyond (<http://www.breastfeeding.asn.au> accessed 29 July 2008).

Early childhood workers were asked to comment on whether they provided an environment that was supportive of breastfeeding for all, including staff and parents. The following responses were identified:

- 15 of the 28 LDC & Pre-school Directors reported that their centres provided policy environments that were supportive of breastfeeding for all eg parents and staff. A further 8 of the 28 centres had facilities and environments that were supportive of breastfeeding to some extent.
- 10 of the 16 FDC Providers reported that they provided facilities and environments that were supportive of breastfeeding for all eg, parents and staff.

## **Physical Activity**

### ***Outside and inside space and equipment***

A total of 17 of the 28 LDC and Pre-school Directors described their *outside space* and ten described their *outside equipment* as very adequate for promoting active play.

Nine of the 28 LDC and Pre-school Directors described their *inside space* and *inside equipment* as very adequate for promoting active play.

Six of the 16 FDC Providers felt their *outside space* and four thought their *outside equipment* was very adequate for promoting active play.

Two of the 16 FDC Providers thought their *inside space* and five thought their *inside equipment* was very adequate for promoting active play.

### ***Set minimum amount of play***

The proposed Australian Early Childhood Physical Activity and Sedentary Behaviour Guidelines recommend that:

All children aged 1 to 5 years should participate in at least two hours of physical activity every day, accumulated over many sessions and as part of play, games, transportation and recreation (Okely, Salmon, Trost & Hinkley 2008).

LDC and Pre-school Directors reported a set amount of time that was allocated daily for organised active play and outside play. A lack of definition of 'organised active play' and 'outside play' in this question may have made this question difficult to answer as only one LDC Director responded with an estimated time

period. The average amount of time for 'active' and 'outside' play reported by LDC and Pre-school Directors' is reported below.

- A total of 13 of the 28 LDC and Pre-school Directors reported having a set minimum amount of time for *organised active play*. Only one LDC provider reported a specific amount of time (120 minutes). The average minimum amount of time allocated in Pre-schools was 19 minutes (range 8-30 minutes).
- Sixteen of the 28 LDC and Pre-school Directors reported having a set minimum amount of time each day for *outside play*. Only one LDC provider reported their average allocated time for outside play (120 minutes). The average minimum amount of time allocated to outside play in Pre-school was 77 minutes (range 45-90 minutes).

### ***Approaches used to promote physical activity***

LDC and Pre-school Directors were asked to comment on the extent that they used each approach (from a list) to promote physical activity among the children in their care. Overall few approaches were used all the time and a number were only used some of the time by a majority of LDC and Pre-schools. Limiting TV/video viewing and electronic games and including activities to develop fundamental movement skills in children were the most frequently reported strategies.

**Table 15: Frequency that LDC and Pre-schools (PS) used the eight approaches in the questionnaire to promote physical activity in children in their care**

	Never/rarely		Some of the time		Most of the time		Always		Don't know		No response	
	LDC	PS	LDC	PS	LDC	PS	LDC	PS	LDC	PS	LDC	PS
Encouraging children and parents to walk/cycle to LDC/Pre-school	4	6	3	7	0	1	0	1	1	2	1	2
Initiatives to make it safer for children to walk/cycle to LDC/Pre-school	5	8	0	4	0	1	1	1	1	4	1	1
Having regular programmed physical activity during the day	0	2	2	3	1	7	5	6	0	0	1	1
Including activities to develop fundamental movement skills in children	0	1	0	2	1	5	7	10	0	0	1	1
Encouraging staff to be involved in physical activity (ie role model)	0	1	1	5	4	6	3	6	0	0	1	1
Involving children in decision making regarding physical activity opportunities, equipment & facilities	0	0	2	5	3	6	3	7	0	0	1	1
Limiting TV/video viewing and electronic games	0	0	0	1	0	2	8	13	0	2	1	1
Permitting community members to use the LDC/Pre-school's outdoor facilities for physical activity outside LDC/preschool hours	4	11	2	0	0	1	1	3	1	3	1	1

FDC Providers (n=16) used the following approaches to promote physical activity:

- 6 always walked with children to shops or park.
- 8 always took children to play at the local park playground or recreation facilities.

- 7 always had regular times during the day to encourage organised active play such as dance and games.
- 7 always included activities to develop fundamental movement skills eg jumping and catching) for children.
- 7 were always active play role models by getting involved in physical activity with the children.
- 10 always involved children in decision making regarding the physical activity opportunities or equipment they used.
- 13 always limited the amount of time children spent playing TV/video and electronic games while in their care.

### **Public liability**

During the ewba consultation process in 2005 public liability insurance and related issues (ie risk management) were raised as a barrier to the provision of physical activity opportunities, particularly in the rural site of Murray Bridge. This was consistent with the evidence collected in SA for the financial year 2003/4 which revealed the pressure of insurance and risk management, especially for small organisations (Verity 2005). To further explore these impacts a survey question asked 'if public liability concerns limited the provision of physical activity opportunities in early childhood settings'.

As shown in Table 16, a total of 16 respondents (n=44) agreed/strongly agreed that public liability concerns limited the uptake and provision of physical activities in their early childhood setting. These were more likely to be the FDC Providers. A slightly smaller number (n=13) were unsure and half of these were Pre-school Directors, and a further 13 respondents either disagreed (n=6) / strongly disagreed (n=7).

**Table 16: Concerns that public liability limit the provision of physical activity opportunities in early childhood settings**

	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree	No Response
Long Day Care (n=9)	0	3	2	2	1	1
Pre-school (n=19)	1	1	7	4	5	1
Family Day Care (n=16)	4	7	4	1	0	0
<b>Total Early Childhood Settings (n=44)</b>	<b>5</b>	<b>11</b>	<b>13</b>	<b>7</b>	<b>6</b>	<b>2</b>

### 4.3.5 Attitudes to Healthy Eating and Physical Activity

Staff from early childhood settings were asked about their attitudes to six statements concerning healthy eating and nine statements about physical activity, as related to their facility and children in their care. These statements investigated the carers' feelings of confidence and skills in promoting these behaviours to the children in their care. Results are shown in Table 17 and Table 18.

**Table 17: Attitudes of LDC Directors (L), Pre-school Directors (P) and FDC Providers (F) to healthy eating (n=44)**

	Strongly Agree			Agree			Not Sure			Disagree			Strongly Disagree		
	L	P	F	L	P	F	L	P	F	L	P	F	L	P	F
I'm motivated to promote fruit and vegetables to children	5	18	8	4	0	7	0	0	0	0	0	0	0	0	1
I'm unsure of my ability to promote fruit and vegetables to children	0	2	0	1	0	1	0	0	1	4	8	5	3	8	8
In 2005 our LDC/Pre-school had little support from external health professionals to promote fruit and vegetables to children	0	2	n/a	2	9	n/a	2	3	n/a	3	4	n/a	1	0	n/a
It is important for LDC/Pre-school/FDC staff to role model healthy eating behaviours for children	8	17	9	1	1	5	0	0	0	0	0	0	0	0	2
Healthy eating for children is a priority in this LDC/Pre-school/my care	9	16	6	0	2	7	0	0	1	0	0	0	0	0	1
In 2005 the support offered from FDC to promote fruit and vegetables to children was adequate	n/a	n/a	3	n/a	n/a	12	n/a	n/a	1	n/a	n/a	0	n/a	n/a	0

While presented in more detail in Table 17, early childhood workers attitudes toward *healthy eating* are further summarised below. Of the 44 LDC, Pre-school Directors and FDC Providers:

- 42 agreed/strongly agreed to being motivated to promote fruit and vegetables to children.
- 36 disagreed/strongly disagreed that they were unsure of their ability to promote fruit and vegetables to children. This means that the majority were sure of their ability to promote fruit and vegetables to children.
- 41 agreed/strongly agreed that it was important for them and centre staff to role model healthy eating behaviours for children.
- 40 agreed/strongly agreed that healthy eating for children was a priority.
- 13 of the 28 LDC, Pre-school Directors agreed or strongly agreed that their centre had little support from health professionals to promote fruit and vegetables to children. While 15 of the 16 FDC Providers felt adequately supported by FDC to promote fruit and vegetables to children.

**Table 18: Attitudes of LDC Directors (L), Pre-school Directors (P) and FDC Providers (F) to physical activity**

	Strongly Agree			Agree			Not Sure			Disagree			Strongly Disagree		
	L	P	F	L	P	F	L	P	F	L	P	F	L	P	F
It is <u>not</u> important for LDC/Pre-school/FDC staff to role model being physically active for children	0	0	1	0	0	2	0	0	1	2	7	6	6	11	6
Active play is important for children	9	18	12	0	0	3	0	0	0	0	0	0	0	0	1
There are enough facilities and equipment in our Pre-school to encourage physical activity among children	3	6	4	3	7	9	1	3	1	1	1	1	0	0	1
Our LDC/Pre-school offers a range of physical activity options to suit children with different interests and skills	3	9	n/a	5	9	n/a	0	0	n/a	0	0	n/a	0	0	n/a
In 2005 our LDC/Pre-school had little support from external professionals to promote physical activity to children	1	2	n/a	3	7	n/a	2	3	n/a	2	6	n/a	0	0	n/a
I'm motivated to run structured activities for developing children's movement skills eg running, jumping	5	10	5	2	6	9	1	1	1	0	1	0	0	0	1
I'm confident in my ability to include physical activity opportunities for the children	4	12	7	4	6	7	0	0	0	0	0	0	0	0	1
Physical activity for children is a priority in this LDC/Pre-school/FDC	5	16	6	1	2	7	2	0	1	0	0	0	0	0	1
In 2005 the support offered from FDC to promote physical activity to children was adequate	n/a	n/a	1	n/a	n/a	9	n/a	n/a	3	n/a	n/a	3	n/a	n/a	0

While presented in more detail in Table 18 early childhood workers attitudes toward *physical activity* are further summarised below. Of the 44 LDC, Pre-school Directors and FDC Providers:

- 38 disagreed/strongly disagreed that it was not important for their centre staff to role model physical activity to children. This means that the majority of LDC &

Pre-school Directors & FDC Providers believe that role modelling physical activity in early childhood settings was important.

- 42 agreed/strongly agreed that active play was important for children.
- 32 agreed/strongly agreed that there were enough facilities and equipment to encourage physical activity among children.
- 37 agreed/strongly agreed that they were motivated to run structured activities for developing children's fundamental movement skills.
- 40 agreed/strongly agreed that they were confident in their ability to include physical activity opportunities for children.
- 37 strongly agreed that physical activity for children was a priority in their Centre.
- 26 of the 28 LDC and Pre-school Directors agreed/strongly agreed that their centre offered a range of physical activity options to suit children with different interests and needs.
- 13 of the 28 LDC and Pre-school Directors agreed or strongly agreed that their centre had little support from professionals to promote physical activity to children, while 10 of the 16 FDC Providers felt adequately supported to promote physical activity to children.

### ***4.3.6 Staff Professional Development***

#### **Healthy Eating**

Twenty-five of the 44 LDC, Pre-school Directors & FDC Providers reported that all (or some) of the staff had attended professional development or specific training in 2004-5 about food and nutrition for children, while 15 reported they/their staff had not attended any training in this area.

#### **Physical Activity and Movement Skills**

Twenty-two of the 44 LDC, Pre-school Directors & FDC Providers reported that all (or some) of the staff had attended professional development or specific training in 2004-5 about physical activity or movement skills for children, while 18 reported their staff had not attended any training in this area.

## 5.0 Primary Schools

This section of the report presents outcomes from the following questionnaires:

- Primary School Principal (n=36)
  - Primary School Teacher (n=286)
  - Primary School Canteen\* (n=26)
  - Out of School Hours Care\* (n=13)
- \* NB Service not provided at all schools.

There are 39 primary schools involved in the *eat well be active* Community Programs evaluation. These are shown in Table 19 and listed according to intervention and comparison site and geographic community. Table 20 shows the frequency of responses to each questionnaire by geographic community and Table 21 shows the total enrolments in primary schools and OSHC in *ewba* intervention and comparison sites in 2005.

**Table 19: Primary Schools participating in the *eat well be active* evaluation**

Intervention		Comparison	
Morphett Vale (n=12)	Murray Bridge (n=9)	Sea & Vines (n=10)	Port Pirie (n=8)
Coorara Primary School	MB Christian College	Moana Primary School	Airdale Primary School
John Morphett Primary School	St Joseph's School	St John the Apostle Catholic Parish School	Crystal Brook Primary School
Morphett Vale West Primary School	Callington Primary School	Christies Beach Primary School	Napperby Primary School
Morphett Vale East Primary School	Fraser Park Primary School	Hackham South Primary School	Port Pirie West Primary School
Pimpala Primary School	Jervois Primary School	Hackham West Primary School	Risdon Park Primary School
Antonio Catholic School	Murray Bridge Primary School	Seaford Rise Primary School	St Mark's College
Calvary Lutheran School	Murray Bridge Southern Primary School	Port Noarlunga Primary School	Mid North Christian College
Southern Vales Christian Community School	Mypolonga Primary School	Noarlunga Downs Primary School	Port Germein Primary School
Sunrise Christian School	Unity College	Noarlunga Primary School	
Prescott Primary		Pilgrim School Aberfoyle Park*	
Southern			
Woodcroft College			
Flaxmill Primary School			

\* This school is located within the Wallara school district (not Sea & Vines) and was invited to participate as a comparison school to provide a greater balance in the number of private and public schools participating in the *ewba* evaluation.

## 5.1 Demographics

### Location

**Table 20: Frequency of survey responses for each questionnaire from primary school settings by geographic community**

	Principal	Teacher	Canteen	OSHC
Morphett Vale	12	77	6	7
Murray Bridge	10	69	7	2
Sea & Vines	6	57	8	3
Port Pirie	8	83	5	1
<b>Total</b>	<b>36</b>	<b>286</b>	<b>26</b>	<b>13</b>

### Enrolments

**Table 21: Total number of enrolments in ewba intervention and comparison Primary School and OSHC facilities in 2005**

	No. Students Enrolled	No. Indigenous Students Enrolled	No. School Card Holders <sup>#</sup>	No. staff
<i>Primary School</i>	8618	418	3171	713
<i>Out of School Hours Care</i>	1845	34	N/A	86

<sup>#</sup> The School Card Scheme provides financial assistance towards the educational expenses incurred by families who meet the eligibility criteria. Eligibility for the School Card is generally dependent on the parent or guardian being able to produce to the enrolling school relevant documentation attesting to their income level.

### Teachers

Of the teachers, 84% were female and 16% were male and the median length of time worked at the school was 4.75 years (range: 1 month to 27 years).

## 5.2 Policy Environment

Principals were asked to report on the commitment in their Site Learning Plan to healthy eating and physical activity, the existence of policies that promoted healthy eating and physical activity and the content of these policies.

### Healthy Eating Policy

Of the 36 Primary Schools, 21 had a specific commitment to healthy eating in their Site Learning Plan. Only 10 of 36 Primary Schools had a written policy on promoting healthy eating at school at the beginning of 2005.

Nine of the 13 OSHC had a written policy around promoting healthy eating at OSHC.

### **Content of policy**

A series of questions were asked of those Primary Schools (n=10) and OSHC (n=9) which had healthy eating policies regarding the content of the policy (Table 22) and its communication.

Only two primary schools' healthy eating policies covered all identified policy areas 'completely' or 'to some extent'. No OSHC healthy eating policy completely covered all identified policy areas.

**Table 22: Content of healthy eating policies in Primary Schools (n=10) and OSHC (n=9)**

	Completely		To some extent		Not at all	
	PS	OSHC	PS	OSHC	PS	OSHC
Availability of healthy food/drinks through school food services (eg canteens and vending machines)/OSHC	3	5	4	3	1	1
Availability of healthy foods/drinks through school events	3	n/a	6	n/a	1	n/a
Limiting unhealthy foods/drinks used for school fundraisers (eg chocolate drives, sausage sizzles)	1	n/a	8	n/a	1	n/a
Availability of drinking water for students	10	8	0	1	0	0
Encouraging students to have water bottles	10	4	0	3	0	2
Having set times during class for water, fruit&/or vegetable breaks	8	n/a	2	n/a	0	n/a
Not using food as a reward (eg confectionery)	5	4	3	3	2	2
Teaching food and nutrition knowledge & skills in the planned curriculum, including integration across the curriculum where possible	7	n/a	2	n/a	1	n/a
Providing an environment that is supportive of breastfeeding for all eg staff, parents	3	0	2	1	5	6
Staff acting as role models for healthy	4	6	6	2	0	1

eating						
Communicating with and involving parents in school healthy eating decisions and opportunities	5	n/a	3	n/a	2	n/a
Linking with relevant outside organisations eg community health, local food producers	2	3	7	4	1	1

### **Communication of policy**

Communication of Primary School healthy eating policies (n=10):

- 8 Principals reported that the healthy eating policy was completely communicated to *staff* and *students* and was completely *actively implemented*.
- 7 Principals reported that it was completely communicated to *parents*.

Communication of OSHC healthy eating policy (n=9)

- 7 Directors reported that they were completely communicated to *staff*.
- 4 reported that they were completely communicated to *parents and students*.
- 6 reported that they were completely *actively implemented*.

### **Policy on leaving school grounds to purchase food and drinks**

All of the Principals that responded (34 of 36), reported that year 5-7 students were not allowed off the school grounds to purchase food and drinks during school hours and breaks in 2005.

## **Physical Activity Policy**

Of the 36 Primary Schools, 29 had a specific commitment to physical activity in their site learning plan. Only eight Primary Schools had a written policy on promoting physical activity at school at the beginning of 2005.

Six of the 13 OSHC had a written policy around promoting physical activity at OSHC.

### **Content of policy**

A series of questions were asked of those Primary Schools (n=8) and OSHC (n=6) which had policies to promote physical activity regarding the content of the policy (Table 23) and its communication.

Only one school's physical activity policy covered all of the policy areas identified 'completely' or 'to some extent'. Two OSHC's physical activity policies covered all of the policy areas identified completely or to some extent. Not all policy areas were relevant to OSHC (indicated by n/a).

**Table 23: Content of physical activity policies in Primary Schools (n=8) and OSHC (n=6)**

	Completely		To some extent		Not at all		No Response	
	PS	OSHC	PS	OSHC	PS	OSHC	PS	OSHC
Having regularly scheduled physical activity times during non-PE classes/OSHC	3	3	4	3	0	0	1	0
Encouraging students to walk/cycle to school	1	n/a	5	n/a	2	n/a	0	n/a
Improving the safety for students walking/cycling to school	2	n/a	4	n/a	1	n/a	1	n/a
Teaching the health benefits of physical activity in the planned curriculum	7	n/a	1	n/a	0	n/a	0	n/a
Using the active curriculum (ie teaching other subjects eg mathematics) through movement	2	n/a	5	n/a	1	n/a	0	n/a
Including a focus on fundamental movement skills in curriculum	5	n/a	1	n/a	1	n/a	1	n/a
Including TV/video and computer/electronic games guidelines for home in the curriculum	1	2	3	4	4	0	0	0
Availability of a variety of active play equipment and opportunities in addition to formal Physical Education or sports/OSHC	5	3	2	2	1	1	0	0
Making best use of available school/OSHC play space to maximise physical activity opportunities for students	4	3	3	2	1	1	0	0
Supporting the use of school indoor facilities out of school hours	3	n/a	0	n/a	4	n/a	1	n/a
Supporting the use of school outdoor facilities out of school hours.	3	n/a	2	n/a	2	n/a	1	n/a
Staff acting as role models for physical activity	3	3	4	3	0	0	1	0
Communicating with and involving parents in school physical activity decisions and opportunities	4	n/a	3	n/a	1	n/a	0	n/a
Linking with relevant outside organisations eg community health, local recreation clubs	6	0	1	4	1	1	0	1

### **Communication of policy**

Communication of Primary School physical activity policies (n=8) as reported by Principals:

- 6 were completely communicated to *staff* and were completely *actively implemented*.
- 4 were completely communicated to *parents* and *students*.

Communication of OSHC physical activity policies (n=6) as reported by OSHC Directors:

- 3 were completely communicated to *staff and completely actively implemented*.
- 1 was completely communicated to *parents*.
- 2 were completely communicated to *students*.

## **Summary of Policy Environments**

Primary Schools and OSHC were more likely to have a healthy eating or nutrition policy than a physical activity policy.

- 6 Primary Schools had both a healthy eating and physical activity policy.
- 6 OSHC had both a healthy eating and physical activity policy.

## **5.3 Links with Parents and Outside Organisations**

### **Parents**

Nineteen of 36 Principals reported that parent groups focusing on healthy eating met within the school. Twelve reported that parent groups focusing on physical activity met within the school.

Twenty Principals reported that in 2005 the school gave information to parents about healthy eating once a term and 17 reported the school gave information to parents about physical activity once a term. The most frequently cited strategies to inform parents about healthy eating and or physical activity ideas were through newsletters, notes home, homework assignments and school events/activities.

Principals reported that physical activity was very well or well supported by parents during (27 of the 36) and outside (25 of the 36) school hours. Parents were less supportive of walking or cycling to school (16 of the 36) and healthy eating (20 of the 36).

### **Other Organisations**

#### **Primary Schools (n=36)**

- 14 had contact with Community Health Services to promote healthy eating or physical activity at least once per year.
- 21 had contact with recreation or sporting providers to promote healthy eating or physical activity at least once per term or more frequently.
- 9 had contact with local food producers or retailers at least once per term or more frequently.

### ***Out of School Hours Care (n=13)***

- 7 linked with Community Health Services to promote healthy eating or physical activity once per year.
- 6 linked with a recreation or sporting provider to promote physical activity more frequently than once a term.
- 5 linked with local food producers/retailers more frequently than once per term while another 5 did not link with them at all.
- 6 linked with other health organisations to promote healthy eating or physical activity once, while another 6 did not link with them at all.
- 6 linked with other training providers to promote healthy eating or physical activity once per year, while another 5 did not link with them at all.

## **5.4 Facilities and Environments**

### **Healthy Eating**

#### ***Canteen operation***

Of the 39 Primary Schools in the *ewba* evaluation, 29 reported having canteens. Only these 29 schools received the Canteen questionnaire and 26 returned it completed - a response rate of 90%.

Most Primary School canteens (22 of 26) were operated directly by the school while two canteens were operated by an outsourced contractor and one canteen was operated jointly by school and outsourced contractor (one canteen did not respond).

Seventeen of the 26 canteens were open every weekday while the remaining canteens were only open some days. Slightly fewer canteens were open at recess (21 of 26) compared with lunch times (25 of 26) and four were open before school.

Half (13 of 26) the canteens made a profit in 2005 while eight broke even, two ran at a loss and two did not know.

Twenty-one canteens had a School Canteen Committee. The Canteen Committees were most likely to be comprised of representatives from canteen managers, parents, principals and staff.

#### ***Canteen Policy***

Of those Primary Schools with a canteen policy (n=15):

- 10 included guidelines or criteria about nutrition – types of food that can/cannot be sold
- 2 included guidelines or criteria about foods and drinks in vending machines
- 13 included guidelines or criteria about food safety and hygiene
- 5 included guidelines or criteria about promotions
- 11 included guidelines or criteria about canteen committee members and roles
- 8 included a pricing policy.

Canteen priorities as reported by the canteen manager (n=26):

- 23 believed that providing food service is very important
- 10 believed that it was important to make a profit for the canteen and a further 10 believed that it was somewhat important, to make a profit for the canteen

- 10 reported that it was important that they make a profit for the school and a further seven reported that it was somewhat important, to make a profit for the school
- 21 reported that it was either important or very important to support classroom nutrition education activities
- 23 reported that it was either important or very important for them to provide and promote healthy food to students.

### ***Factors affecting food sold in Canteens***

The Canteen Manager (22 of 26) was the most likely person making decisions about what was stocked in the canteen. This was often in conjunction with the Canteen Committee.

Eighteen canteens conducted promotions of healthier food products. Table 24 summarises the methods of promotion most frequently used by canteens.

**Table 24: Top three methods of Canteen (n=26) promotions**

Method of Promotion (n)	
1	Newsletter (12)
2	Price Specials (10)
3	Day/week specials (9)

To provide healthier food choices, schools mainly used strategies including: special deals on healthier food products (n=10), canteen news (n=10) and networking (n=8).

Lack of demand from students (n=16) and lack of volunteers (n=16) were most frequently cited by canteen staff as those which limited the provision of more healthy food choices. Other frequently cited factors included: poor shelf life of fresh food (n=14), healthy food is too expensive to buy in the canteen (n=13) and the lack of time to prepare as healthy food choices are more labour intensive (n=12).

Nine of 26 Canteens did not implement any strategies to increase the availability of fruits and vegetables. Of those schools that did, promotional days for fruits/fruit based food (n=8) or increased range of fruit/fruit based foods (n=8) were strategies used.

### ***Top selling food and drink items in Canteens***

Managers were asked to report their four and three biggest selling food and drink items respectively for both summer and winter. This information was then categorised using the SA Health Right Bite food and drink spectrum and in consultation with Dietitians

([www.decs.sa.gov.au/eatwellsa/files/links/RightBiteReadyReckoner.pdf](http://www.decs.sa.gov.au/eatwellsa/files/links/RightBiteReadyReckoner.pdf)).

No nutritional food content was collected on these products and the categorisation was based on the crude description provided by the respondent. Without detailed nutritional information, misclassification is possible. For example some items that may be defined as green based on their nutritional composition were amber for the purposes of this evaluation because information regarding the portion size or use of low fat ingredients was not provided. When considering combined or mixed foods, the same strategy as the Right Bite Ready Reckoner was used. For example fruit and jelly, where fruit is green category and jelly is red category, was categorised as red.

The following provides a sample listing of common food categorisations:

**GREEN:** sandwiches, wraps, salad packs, salad rolls, fruit salad, vegetable bake, soup.

**AMBER:** lasagne, spaghetti bolognese, hot potato, savoury slice, macaroni cheese and chicken lettuce and mayonnaise roll.

**RED:** hot dogs, sausage rolls, pasties, pies, chicken nuggets, donuts, pastries, hamburgers, noodles and fruit & jelly.

As shown in Table 25, the top selling food items in summer and winter were most likely to be red food items. That is, for 16 of 26 Canteens in summer and 17 in winter, the top selling food item was a 'red' food item.

In relation to drinks, once again, nutritional information was not collected and the following provides an example of how common items were categorised:

**GREEN:** Water, plain milk

**AMBER:** All juices and flavoured milks (excluding iced coffee)

**RED:** Artificially sweetened drink (including artificially sweetened water), soft drinks, flavoured mineral waters, energy drinks, cordials, and caffeinated drinks.

As can be seen in the Table 25 the top selling drink items in summer and winter were most likely to be amber drink items. That is, at 15 of the 26 Canteens in summer and 22 in winter, the top selling drink was a drink classified as amber.

**Table 25: Top selling food and drink items in the 26 canteens in summer and winter of 2005 as categorised using the SA Health Right Bite food and drink spectrum**

Popularity of items	Summer Foods	Winter Foods	Summer Drinks	Winter Drinks
Top selling items	<b>Green:</b> 9 <b>Amber:</b> 1 <b>Red:</b> 16	<b>Green:</b> 2 <b>Amber:</b> 6 <b>Red:</b> 17	<b>Green:</b> 5 <b>Amber:</b> 15 <b>Red:</b> 6	<b>Green:</b> 0 <b>Amber:</b> 22 <b>Red:</b> 4
2 <sup>nd</sup>	<b>Green:</b> 8 <b>Amber:</b> 3 <b>Red:</b> 15	<b>Green:</b> 1 <b>Amber:</b> 4 <b>Red:</b> 21	<b>Green:</b> 1 <b>Amber:</b> 14 <b>Red:</b> 10	<b>Green:</b> 0 <b>Amber:</b> 20 <b>Red:</b> 6
3 <sup>rd</sup>	<b>Green:</b> 5 <b>Amber:</b> 4 <b>Red:</b> 16	<b>Green:</b> 2 <b>Amber:</b> 5 <b>Red:</b> 19	<b>Green:</b> 3 <b>Amber:</b> 18 <b>Red:</b> 4	<b>Green:</b> 4 <b>Amber:</b> 15 <b>Red:</b> 6
4 <sup>th</sup>	<b>Green:</b> 5 <b>Amber:</b> 6 <b>Red:</b> 15	<b>Green:</b> 4 <b>Amber:</b> 3 <b>Red:</b> 17	n/a	n/a
<b>Total</b>	<b>Green:</b> 27 <b>Amber:</b> 14 <b>Red:</b> 62	<b>Green:</b> 9 <b>Amber:</b> 18 <b>Red:</b> 74	<b>Green:</b> 9 <b>Amber:</b> 47 <b>Red:</b> 20	<b>Green:</b> 4 <b>Amber:</b> 57 <b>Red:</b> 16

### **Availability of specific items in Canteens (n=26)**

Canteen Managers were asked how often they sold a number of food and drink products and the results are listed in Table 26.

**Table 26: Frequency of food and drink products sold in Primary School Canteens in 2005 (n=26)**

	Items	Every day	3-4 times /week	1-2 times /week	Several times / term	Occasionally	Never
<b>Food Products</b>	Vegetable based meals	9	1	4	2	3	6
	Cut-up vegetables	10	1	1	2	4	7
	Fruit	12	2	3	1	5	1
	Fruit salad	6	3	0	2	6	5
	Lollies, chocolates etc	16	1	1	1	1	5
	Potato crisps, twisties etc	17	2	0	1	1	5
	Hot chips	0	1	1	0	3	20
	Muesli bars	4	1	0	0	1	19
	Fruit straps or roll-ups	4	0	0	0	2	20
<b>Drink Products</b>	Bottled water	15	2	3	0	2	4
	Soft drinks	6	1	0	1	1	16
	Fruit juice and fruit juice drinks	22	2	0	1	0	1

Twelve canteens stopped selling certain foods during 2005. The most commonly cited reason for removal of items from the menu was that they 'no longer met healthy eating guidelines' (n=9) followed by 'no reason given' (n=7) and then 'no demand' (n=3).

Nineteen canteens had introduced food and drink items that they perceived to be healthier during 2005, including: chicken salads, low fat cheese, mountain bread for wraps, healthier sausage rolls and fruit kebabs.

### **Wider school environment**

#### *Primary Schools (n=36)*

Principals were asked to report on a number of elements of their school's healthy eating environment and results are as follows:

- 32 provided easy access to clean drinking water for students
- 33 allowed the students to drink water during class
- 26 allowed the junior primary students to eat fruit and/or vegetables during class at set times
- 12 did not allow students to be rewarded with food/drink.

#### *Out of School Hours Care (n=13)*

OSHC Directors were asked to report on a number of elements of the centre's healthy eating environment and:

- all provided easy to access clean drinking water facilities for children and encouraged the children in their care to eat fruit and vegetables
- all involved children in food preparation to some extent
- 7 did not reward children in their care with food or drink
- all believed they acted as healthy eating role models to some extent.

## ***Fundraising***

The sausage sizzle was the most used fundraising activity in primary schools with 28 of 39 schools using it up to or more than 4 times per year. The second most used fundraising strategy was confectionary (18 of 36) such as chocolates and lollies and third was items other than food or drink (17 of 36).

Some other key points about fundraising in schools in 2005 include:

- 19 Principals reported that the school never used biscuits/cakes as a fundraiser.
- 17 Principals reported that they never used sweet drinks as a fundraiser while 14 Principals reported that the school used sweet drinks up to 4 times per year as a fundraiser.
- 21 Principals reported that the school had never used fruit and vegetables as a fundraiser.
- 14 Principals reported that the school used other food and/or drink fundraisers up to 4 times, or more than 4 times per year. These included: special lunch orders, pies/pasties/cakes sales, plain milk; Friday canteen; healthier fast food outlet, special lunch days, milk drinks, sandwiches/rolls; pasty drive; walkathon; fun run; lollies/chips etc

Thirty-four Principals reported that the school did not operate vending machines for food and drinks.

## ***Breastfeeding***

In 2005:

- 6 Primary Schools provided environments that were breastfeeding friendly; 15 reported that this does not apply.
- 12 of the 13 OSHC replied that providing a breastfeeding friendly site for OSHC did not apply, while the other one did to some extent.

## **Physical Activity**

Primary School Principals (n=36) were asked to report on a number of elements of the school's physical activity environment, and their responses are summarised in Table 27. Highlights include:

- all schools provided play or sporting equipment for use during break times
- 20 reported that the play or sporting equipment was regularly used by students all of the time
- 22 agreed or strongly agreed that they provided a variety of non-competitive physical activity options that reflected the interests of the school population.

**Table 27: Approaches used by Primary Schools (n=36) to promote physical activity (PA)**

	Never/ rarely	Some of the time	Most of the time	Always	Don't know	No response
Encouraging walking or cycling to school	11	15	7	2	1	0
Initiatives to make it safer for students to walk/cycle to school	7	16	3	7	1	2
Encouraging students to be more active outside of school hours	2	17	10	7	0	0
Encouraging the use of equipment and facilities by students during school hours	0	0	12	24	0	0
Permitting students to use indoor facilities for PA outside school hours	13	9	4	5	1	4
Permitting students to use outdoor facilities for PA outside school hours	7	6	8	13	0	2
Permitting community members and organisations to use indoor facilities for PA outside school hours	9	10	5	7	1	4
Permitting community members and organisations to use outdoor facilities for PA outside school hours	5	8	8	13	0	2
Encouraging staff to be involved in lunchtime activity programs	6	19	5	4	1	1
Supporting fundamental movement skills (programs or teaching) for students	4	8	9	15	0	0
Student peer support programs in PA	4	23	6	3	0	0
Involving students in decision-making regarding PA opportunities, equipment and facilities	1	20	9	6	0	0
Having regularly scheduled PA times during non-PE classes	5	9	12	10	0	0

### **Organised physical activity**

Primary School Principals (n=36) were asked to report on their school's provision of organised physical activity:

- 28 schools never or rarely offered organised physical activities to students *before* school.
- 5 schools offered organised physical activities once per week *during break times*.
- 7 schools offered organised physical activities more than 4 days per week *during* school.
- 17 schools offered *after* school organised physical activity 2-3 days per week.

The most commonly offered organised physical activities outside of school hours at Primary Schools were Australian Rules equal with netball (n=20), cricket (n=19) and soccer (n=18).

OSHC Directors (n=13) were asked to report on their centre's provision of physical activity:

- all have permission to use the School's *outdoor* facilities for physical activity
- 12 had permission to use the School's *indoor* facilities for physical activity

- 11 always encouraged staff to be involved in physical activity with children
- 8 always involved children in decision making regarding physical activity opportunities
- 12 always had physical activity regularly scheduled during OSHC
- 12 provided a variety of non-competitive physical activity options that reflected the interests of the children
- 6 had linked with 'Active After Schools Communities Programs' to provide structured physical activity options for children, while 7 had not.

### ***Federal Government Recommendation***

From 2005, the Australian Government mandated that all students (up to and including Year 10) undertake at least 2 hours of physical activity in the curriculum each school week. The commitment is subject to common-sense exemptions for children who are unable to undertake any form of physical activity (Australian Government, 2007).

This policy has been legislated in Parliament and tied to Federal Grants to State education authorities from 1st Jan 2005. This policy does not solely refer to Physical Education lessons and includes other incidental physical activity in other curriculum areas. Twenty-six principals reported that their school met the Federal Government's recommendation of at least 2 hours of physical activity each week for primary school students and the remaining schools met it to some extent.

### ***Public liability***

#### *Primary Schools (n=36)*

Eight Principals agreed or strongly agreed that public liability concerns limited the physical activity opportunities or facilities the school provided to *students*. Six were not sure.

Ten Principals agreed or strongly agreed that public liability concerns limited the physical activity opportunities or facilities the school provided to the *general community*. Ten were not sure.

#### *Out of School Hours Care (n=13)*

Four OSHC Directors agreed or strongly agreed that public liability concerns limited the range of physical activity opportunities or facilities OSHC provided to *children*.

## **5.5 Curriculum**

Primary School Teachers (n=286) were asked to reflect on the place of healthy eating and physical activity within their curriculum in 2005. As the sample size of teachers was >100, percentages will be reported here for ease of interpreting the data.

### **Healthy Eating in the Curriculum**

In 2005 less than half (41%) of teachers reported that in they embedded healthy eating into the key curriculum areas a little bit, while 13% reported doing it a lot.

#### ***Resources***

More than two-thirds (68%) of teachers did not identify any specific resources or programs to help integrate healthy eating into key curriculum areas. Of those teachers that did, specific resources or programs used were: Life Van (Life Education) (n=18), Go for 2&5<sup>®</sup> Fruit and Vegetables (n=7) and Heart Foundation Resources (n=6).

### **Activities**

Teachers reported a range of activities they utilised to promote healthy eating and these are reported in Table 28. As can be seen, the most popular strategies included: allowing water bottles in class, having fruit and vegetables breaks and classroom lessons on healthy eating.

**Table 28: Frequency of activities used by teachers (n=286) to promote healthy eating to children [n (%)]**

	Not used	Less than once a term	Once a term	Weekly	Daily
Classroom lessons about healthy eating	22 (8)	44 (16)	122 (44)	73 (27)	13 (5)
Homework about health eating	129 (47)	51 (19)	70 (26)	18 (7)	2 (1)
Fruit and vegetable cooking sessions	108(40)	61 (23)	82 (31)	17 (6)	1 (0)
Fruit and vegetable tastings	86 (31)	59 (22)	73 (26)	29 (11)	26 (10)
Growing fruit and/or vegetables	187(69)	42 (15)	26 (10)	12 (4)	4 (2)
Visits to fruit and vegetable growers, markets or supermarkets	213 (79)	49 (18)	5 (2)	3 (1)	0 (0)
Having fruit and/or vegetable breaks in class	74 (27)	11 (4)	14 (5)	17 (6)	155 (58)
Encouraging water bottles in class	11 (4)	9 (3)	2 (1)	25 (9)	230 (83)

### **Physical Activity in the Curriculum**

Less than half (40%) the teachers reported that they included developmentally appropriate physical activities into their curriculum a lot, while 41% reported doing it to some extent.

Further, 33% of teachers reported that they used physical activity to teach other key areas of learning in the curriculum to some extent, while 41% reported doing it a little bit.

### **Resources**

The majority (69%) of teachers reported that they *did not* use one or more specific resources or programs to help integrate physical activity into other key curriculum areas (excluding Physical Education). Of the 31% that did, the most frequently quoted resources/ subjects or programs into which physical activity was integrated were: mathematics (n=7), 'Jump Rope' (n=7), dance (n=5), 'Sport It' (n=5) and 'Pick-up and Run' (n=5).

### **Activities**

Those strategies reported in Table 29 were used by teachers to promote physical activity to children.

**Table 29: Strategies used by teachers to promote physical activity to children [n (%)]**

	Not used	Less than once a term	Once a term	Weekly	Daily	Total
Teaching basic fundamental movement skills eg. Jumping, throwing	16 (6)	6 (2)	14 (5)	151 (56)	84 (31)	271
Scheduled times for physical activity during class (excluding PE lessons)	23 (8)	2 (1)	11 (4)	68 (25)	170(62)	274
Homework based on physical activity	164 (61)	39 (14)	31 (12)	28 (11)	5 (2)	267

## 5.6 Attitudes to Healthy Eating and Physical Activity

### Teachers (n=286)

Teachers were asked to what extent they agreed or disagreed with 19 statements about healthy eating (Table 30) and physical activity (Table 31).

#### Healthy Eating Attitudes

**Table 30: Teachers [n =286] attitudes towards healthy eating (n (%))**

	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
I'm motivated to teach students the importance of eating fruit and vegetables everyday	136 (48)	132 (47)	9 (3)	5 (2)	0 (0)
I'm unsure of my ability to teach students the importance of eating fruit and vegetables	11 (4)	20 (7)	18 (6)	149(53)	86 (30)
Encouraging students to eat fruit and vegetables is a family, not a school, responsibility	12 (4)	40 (14)	42 (15)	150 (55)	33 (12)
In 2005 I had little support from external health professionals to promote fruit and vegetables to students	48 (18)	117 (43)	45 (16)	53 (19)	12 (4)
Students who eat fruit and vegetables regularly tend to behave better in the classroom	58 (20)	105(37)	108(38)	12 (4)	2 (1)
It is important for primary school teachers to role model healthy eating behaviours for students	130 (46)	148(52)	4 (1)	2 (1)	1 (0)
Healthy eating for students is a priority in this school	73 (26)	133 (46)	37 (13)	39 (14)	3 (1)
There is too much emphasis on healthy eating and physical activity at our school <sup>#</sup>	0 (0)	1(0)	5 (2)	169(60)	109 (38)

<sup>#</sup> Response to this statement is also included in the section about physical activity as it covers both areas

In summary teachers reported the following attitudes toward healthy eating:

- the vast majority strongly agreed/agreed that they were motivated to teach students the importance of eating fruit and vegetables everyday and recognised

the importance of primary school teachers' role modelling healthy eating behaviours for students.

- most have confidence in their ability to teach students the importance of eating fruit and vegetables.
- most believed they had little support from external health professionals to promote fruit and vegetables to students.
- nearly three quarters believed that healthy eating for students was a priority in their school.

### ***Physical Activity Attitudes***

**Table 31: Teachers (n=286) attitudes toward physical activity [n (%)]**

	<b>Strongly agree</b>	<b>Agree</b>	<b>Not sure</b>	<b>Disagree</b>	<b>Strongly disagree</b>
Active lunch time play is important	205 (73)	75 (26)	1(0)	1(0)	2 (1)
It is not important for primary school teachers to role model being physically active for students	4 (1)	9 (3)	13 (5)	143(50)	116(41)
Where possible it is better for students to walk or cycle to school	103(36)	149(53)	26 (9)	5 (2)	1(0)
There are enough facilities & equipment in our school at break times to encourage PA among students	84 (30)	138(48)	20 (7)	34 (12)	8 (3)
In 2005 I had little support from external professionals to promote PA to children	25 (9)	99 (36)	30 (10)	99 (36)	24 (9)
I'm confident in my ability to include PA opportunities for the students in the classroom	74 (26)	161 (57)	22 (8)	18 (6)	7 (3)
The school offers a wide range of non-competitive PA to suit students with different interests and skills	43 (15)	152(53)	45 (16)	41 (15)	2 (1)
The school encourages the use of its facilities for PA by the wider community	21 (7)	113 (40)	80 (29)	55 (19)	15 (5)
Physical activity for students is a priority in this school	91 (32)	156 (55)	23 (8)	14 (5)	0 (0)
There is too much emphasis on healthy eating and PA at our school <sup>#</sup>	0 (0)	1 (0)	5 (2)	169 (60)	109 (38)

<sup>#</sup> Response to this statement is also included in the section about healthy eating as it covers both areas

In summary teachers' reported the following attitudes toward physical activity:

- almost all (99%) strongly agreed/agreed that active lunch time play was important.
- most saw value in teachers role modelling being physically active to students.
- just under half thought that the school encouraged the use of its facilities for PA by the wider community and that they had little support from external professionals to promote PA to students.
- just over three-quarters (78%) thought that there were enough facilities & equipment in their school at break times to encourage PA among students.
- most (83%) were confident in their ability to include PA opportunities for the students in the classroom.
- most (87%) thought that physical activity for students was a priority in their school.

## OSHC

OSHC Directors were asked to what extent they agreed or disagreed with the following statements relating to healthy eating (Table 32) and physical activity (Table 33).

### *Healthy Eating Attitudes*

**Table 32: OSHC Directors' attitude toward healthy eating (n=13)**

	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	No response
I'm motivated to promote fruit and vegetables.	11	2	0	0	0	0
I'm unsure of my ability to promote fruit and vegetables to children.	0	0	0	6	6	1
In 2005 our OSHC had little support from external health professionals to promote fruit and vegetables to children	1	2	2	6	2	0
It is important for OSHC staff to role model healthy eating behaviours for children	11	1	0	0	1	0
Healthy eating for children is a priority in this OSHC	9	4	0	0	0	0

In summary, OSHC Directors reported the following attitudes toward healthy eating (Table 32):

- all were motivated to promote fruit and vegetables and sure of their ability to promote fruit and vegetables to students.
- most thought they had support from external health professionals and that it was important for OSHC staff to role model healthy eating behaviours for children.

## Physical Activity Attitudes

Table 33: OSHC Directors' attitudes toward physical activity (n=13)

	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	No response
It is <u>not</u> important for OSHC staff to role model being physically active for children	0	0	0	5	8	0
Active play is important for children	11	1	0	0	1	0
There are enough facilities and equipment in our OSHC to encourage physical activity among children	9	4	0	0	0	0
Our OSHC offers a range of physical activity options to suit children with different interests and skills	7	5	1	0	0	0
In 2005 our OSHC had little support from external professionals to promote physical activity to children	0	2	1	8	1	0
I'm confident in my ability to include physical activity opportunities for the children	10	1	1	1	0	0
Physical activity for children is a priority in this OSHC	7	6	0	0	0	0

In summary, OSHC Directors reported the following attitudes toward physical activity (Table 33):

- all thought that physical activity for children was a priority in their OSHC, supported the importance of OSHC staff role modelling physical activity behaviours and thought there were enough facilities and equipment in their OSHC to encourage physical activity amongst children
- all but one thought that active play was important and that OSHC offered a range of non-competitive physical activity options to suit children with different interests and skills
- most believed that OSHC staff had support from external professionals to promote physical activity to children and that they were confident in their ability to include physical activity opportunities for children.

## 5.7 Knowledge of Healthy Eating and Physical Activity

### Healthy Eating

The Australian Guide to Healthy Eating (Kellest et al, 1998) recommends the consumption of at least one serve of fruit (fresh/ canned/ dried/ juice) per day for 8-11 year olds and two to three serves for 12-18 year olds and the consumption of a minimum of three serves of vegetables per day for 8-11 year olds and four for 12-18 year-olds.

Teachers and OSHC Directors were asked to indicate their understanding of the recommended daily intake of fruit and vegetables for a student of primary school age (Table 34).

**Table 34: Teacher and OSHC Directors' knowledge of fruit and vegetable intake required for good health in children**

	Respondents	Response consistent with recommendation n (%)	Response inconsistent with recommendation n (%)	Unsure
How many serves of fruit do you think a primary school child should eat each day for good health?	Teachers (n=285)	159 (56)	126 (44)	0 (0)
	OSHC Directors (n=13)	7	6	0
How many serves of vegetables do you think a primary school child should eat each day for good health?	Teachers (n=285)	220 (77)	65 (23)	0 (0)
	OSHC (n=13)	11	2	0

In summary:

- just over half (56%) of Teachers and OSHC Directors (n=7) correctly recalled the number of serves of fruit that are recommended for daily consumption by a primary school aged child for good health. Most incorrect answers were above the recommendations
- more than three-quarters of Teachers (77%) and OSHC Directors (n=11) correctly recalled the number of serves of vegetables that are recommended for daily consumptions by a primary school aged child for good health.

## Physical Activity

The Australian Government (Dept Health and Ageing 2004) recommends that children and young people (5-18 years) should participate in at least 60 minutes (and up to several hours) of moderate-to-vigorous intensity physical activity (MVPA) everyday, while the recommended daily recreational electronic screen time (television/DVDs/video & playing computer/electronic games) for primary school aged children is no more than 2 hours (Dept Health and Ageing 2004).

Teachers and OSHC Directors were asked to indicate their understanding of the recommended daily minimum amount of physical activity and maximum amount of screen time for good health for a student of primary school age.

**Table 35: Teacher and OSHC Director's knowledge of levels of physical activity and screen time required for good health in children**

	Respondent	Response consistent with recommendation n (%)	Response inconsistent with recommendation n (%)	Unsure
How many minutes per day do you think a primary school aged child should be physically active for good health?	Teachers (n=285)	129 (45)	155 (55)	1 (0)
	OSHC (n=13)	6	7	0
What do you think is the maximum time each day that primary school children should watch television/DVDs/videos and play computer/electronic games?	Teachers (n=284)	83 (29)	192(68)	9 (3)
	OSHC (n=13)	4	8	1

In summary:

- less than half the teachers and OSHC Directors correctly recalled the minimum minutes per day of physical activity for a primary school aged child for good health. Most incorrect answers suggested less time than the recommendations
- less than a third of teachers and OSHC Directors correctly recalled the *maximum* time each day that primary school aged children should watch television/DVDs/videos and play computer/electronic games. Most incorrect answers suggested that the maximum was less than the recommendations.

## 5.8 Staff Professional Development

Teachers and OSHC Directors were asked to report their previous training or expertise as well as professional development undertaken in 2004-5 in the areas of healthy eating and physical activity.

### Teachers (n=286)

**Table 36: Teachers training and experience in healthy eating and physical activity [n (%)]**

		None	A little	Some	A lot
<b>Healthy Eating</b>	Training or Expertise	99 (35)	83 (29)	82 (29)	19 (7)
	Professional Development in 2004-5	185 (65)	47 (17)	48 (17)	3 (1)
<b>Physical Activity</b>	Training or Expertise	83 (29)	60 (21)	97 (34)	44 (16)
	Professional Development in 2004-5	158(56)	55 (19)	57 (20)	15 (5)

In summary:

- about one third of teachers had no previous training or expertise in either healthy eating or physical activity
- most teachers had not received any professional development in healthy eating or physical activity in 2004-5.

### Out of School Hours Care (n=13)

OSHC Directors reported the following:

- 10 centres' staff had received some training in food and nutrition. In three of the ten sites, all of the OSHC staff had received training.
- 7 centres' staff had received physical activity or movement skills training in 2004-5. In one of the seven OSHC sites, all of the staff had received training.

## 6.0 Parents of Primary School Students

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### 6.1 Demographics

Of those parents who returned the survey and responded to the questions about their demographics (n):

- 92% were female and 8% were male (n=975)
- 81% had a spouse/partner currently living with them (n=943)
- 17% had one adult living in the house; 73% two adults; 9% three or more adults (n=976)
- 12% had one child living in the house; 48% two children; 30% three children; 10% had 4 or more children (n=980)
- 71% were married; 8% were de-facto relationships; 14% separated/divorced; 6% single or never married and 1% was widowed (n=980).

#### **Employment**

978 of 983 parents who returned a survey reported their current employment status which was as follows:

- employed or self-employed full time: 27%
- employed or self-employed part time: 42%
- home duties: 20%
- pensioners: 6%
- students: 2%
- unemployed: 1%.

*Number of hours in paid employment (n=870)*

- ≥ 38 hours per week: 24%;
- 16-37 hours per week: 39%
- 1-15 hours per week: 16%
- 0 hours per week: 21%.

#### **Education Level**

Parents' education levels are detailed in Table 37.

**Table 37: Education level of parents (n=972)**

Highest education level attained	Number of responses n (%)	
None	45	(5)
Year 10 or less	114	(12)
Year 11	186	(19)
Year 12	171	(17)
Technical apprenticeship	50	(5)
TAFE certificate courses	106	(11)
Technical diploma	90	(9)
Tertiary degree	144	(15)
Post graduate degree	59	(6)
Other	7	(1)

### **Health Care Card Holders**

- 35% of parents (n=978) held a health care card.

### **Ethnic Origin of Respondents**

65 per cent of parents (n=983) identified with a single ethnic/cultural group while 20 per cent identified with two ethnic /cultural groups and 15 per cent identified with three or more cultural groups. Table 38 shows the ethnic origins of respondents.

**Table 38: Ethnic Origin of Respondents**

<b>Ethnic origin of respondents</b>	<b>Number of responses n (%)</b>	
Australian	415	(42)
Australian + one or more other (European, Asian, Oceania, North African & Middle Eastern)	243	(25)
European	218	(22)
European + one or more other (Asian)	4	(0)
ATSI (Australian Aboriginal & Torres Strait Islander Peoples)	37	(4)
ATSI + one or more other (European, Asian, Oceania)	24	(2)
Oceanian	8	(1)
Oceanian + one or more other (European, Asian)	6	(1)
Asian	8	(1)
North African & Middle Eastern	3	(0)
No Response	17	(2)
<b>Total</b>	<b>983</b>	<b>(100)</b>

## 6.2 Home Environment

### Healthy Eating

#### *Parental attitudes and opinions*

Parents were asked to indicate their level of agreement with several statements to ascertain their attitudes and opinions towards healthy eating (Table 39).

**Table 39: Frequency of responses of parent's level of agreement with eight statements in relation to healthy eating [n (%)]**

	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total n
Fresh fruit and vegetables are too expensive	124 (13)	365(37)	28 (3)	327(34)	127(13)	971
I find it difficult to get my child to eat fruit every day	59 (6)	169 (17)	4 (0)	390(40)	358 (37)	980
I find it easy to get my child to eat vegetables every day	337(34)	408 (42)	11 (1)	164 (17)	59 (6)	979
In the last 12 months there have been times when we ran out of food and I couldn't afford to buy more	39 (4)	71 (7)	10 (1)	230 (24)	628 (64)	978
It is difficult for women in our neighbourhood to breastfeed in public places	51 (5)	135 (14)	380 (39)	265 (27)	146 (15)	977
My child eating fruit and vegetables every day is a high priority for me	512 (53)	394 (40)	20 (2)	30 (3)	23 (2)	979
There are no stores selling fresh fruit and vegetables within 10 minutes walking distance of our home	176 (18)	137 (14)	14 (1)	245 (25)	409 (42)	981
There is enough information about healthy eating for children in our neighbourhood/school	202 (21)	505 (52)	119 (12)	112 (11)	41 (4)	979

The main points that can be drawn from Table 39 are:

- three quarters of parents find it easy to get their children to eat vegetables and not difficult to get children to eat fruit everyday
- 93% agreed/strongly agreed that getting their child to eat fruit and vegetables was a high priority
- 32% agreed/strongly agreed that there are no stores selling fresh fruit and vegetables within 10 minutes walking distance of their home
- half agreed/strongly agreed that fresh fruit and vegetables are too expensive
- 11% reported that in the last 12 months they ran out of food and could not afford to buy more
- the majority (73%) of parents believe that there is enough information about healthy eating for children in their neighbourhood/school.

### ***Behaviours and rules at home***

Parents were asked to recall over the last month the frequency of selected healthy eating behaviours and rules used within their homes (see Table 40).

**Table 40: Parents' report of behaviours and rules at home in relation to healthy eating [n (%)]**

	Never	Rarely	Some-times	Often	Always	Total n
Did the child(ren) watch TV at meal times?	107 (11)	167 (17)	327 (33)	294 (30)	86 (9)	981
Did the child(ren) have a set meal routine?	11(1)	31(3)	90(9)	368(38)	477(49)	977
Were the child(ren) encouraged to eat fruit?	3 (0)	8 (1)	77 (8)	276 (28)	616 (63)	980
Were the child(ren) encouraged to eat vegetables?	1 (0)	7 (1)	39 (4)	240 (25)	685 (70)	972
Were the child(ren) offered dessert as a reward to get them to eat less favourite foods?	501 (51)	266 (27)	163 (17)	32 (3)	17 (2)	979
Were limits set on the types of foods the children can snack on regularly?	27 (3)	43 (4)	223 (23)	371 (38)	317 (32)	981
Were limits set on the types of drinks the children can drink regularly?	33 (3)	40 (4)	138 (14)	318 (33)	450 (46)	979
Were the children reminded to drink water?	27 (3)	51 (5)	106 (11)	252 (26)	541 (55)	977
Did an adult sit down with the children when they ate meals?	4 (0)	11 (1)	76 (8)	246 (25)	640 (66)	977
Did you make something else if the children did not like what was being served?	358 (36)	305 (31)	223 (23)	70 (7)	26 (3)	982

The main points that can be drawn from Table 40 include:

- most parents encouraged their children to eat fruit (91%) and vegetables (95%) often or always
- about three quarters of parents set limits on snack foods (70%) and types of drinks (79%)
- most children had a set meal routine often/ always (87%) and an adult sat with them often/ always (78%)
- a quarter (28%) of children never/ rarely watched television at meal times
- one fifth (22%) offered dessert sometimes or more frequently as a reward for eating less favourite food
- a third (33%) made something different sometimes or more frequently if their child did not like what was being served.

### **Availability of food and drink at home**

Parents were asked to report the frequency that they purchased certain food and drink items for their household (see Table 41).

**Table 41: Frequency of parents' purchasing certain household food/drink items [n(%)]**

	Never	Rarely	Once a month	Once a fortnight	Once or more a week	Total n
<b>Drinks</b>						
Plain water	229 (25)	240 (26)	94 (10)	71 (8)	289 (31)	923
Diet soft drinks	268 (28)	208 (22)	122 (13)	184 (19)	175 (18)	957
Regular soft drinks	110 (11)	321 (33)	179 (19)	205 (21)	151 (16)	966
Fruit juice or fruit drink	26 (3)	100 (10)	113 (12)	252 (26)	484 (49)	975
Cordial	158 (16)	236 (24)	247 (25)	200 (21)	136 (14)	977
<b>Sometimes Food</b>						
Crisps or similar snack (e.g. 'Twisties')	20 (2)	153 (16)	221 (23)	337 (34)	244 (25)	975
Cake / Muffin / Doughnut	55 (6)	332 (34)	234 (24)	242 (25)	110 (11)	973
Savoury biscuits / crackers (e.g. 'Jatz')	10 (1)	75 (8)	200 (20)	408 (42)	285 (29)	978
Sweet biscuits	49 (5)	219 (23)	251 (26)	306 (31)	149 (15)	974
Muesli bars / fruit bars	60 (6)	147 (15)	125 (13)	320 (33)	321 (33)	973
Lollies	46 (5)	350 (35)	231 (24)	227 (23)	125 (13)	979
Chocolate	18 (2)	275 (28)	275 (28)	249 (25)	162 (17)	979
<b>Everyday Food</b>						
Yoghurt / Custard	18 (2)	60 (6)	122 (13)	268 (28)	505 (51)	973
Vegetables (fresh, frozen or canned)	1 (0)	1 (0)	6 (1)	67 (7)	906 (92)	981
Fruit (fresh or canned)	3 (0)	5 (1)	14 (1)	80 (8)	877 (90)	979
Dried fruit (e.g. sultanas)	45 (5)	197 (20)	241 (25)	226 (23)	267 (27)	976

As can be seen in Table 41 parents reported the following purchasing patterns:

- 92% purchased vegetables at least once a week
- 90% purchased fruit at least once a week
- 66% purchased muesli bars or fruit bars at least once a fortnight
- 59% purchased crisps or similar snack at least once a fortnight
- 49% purchased fruit juice or fruit drink at least once a week
- 46% purchased sweet biscuits at least once a fortnight.

### ***Children’s consumption of fruit and vegetables at home***

Parents were asked to estimate the number of serves of fruit and vegetables usually consumed by their oldest year 5, 6 or 7 child in a day (see Table 42). A serve of fruit was defined within the questionnaire as: 1 serve = a medium piece of fruit eg apple, OR two small pieces of fruit eg mandarins or apricots, OR a cup of diced pieces. A serve of vegetables was defined as: 1 serve = 1 cup of salad or raw vegetables, OR ½ a cup of cooked vegetables OR one medium potato.

**Table 42: Parents’ report of usual number of serves of fruit and vegetables per day in oldest year 5, 6 or 7 child [n(%)]**

	1 serve	2 serves	3 serves	4 serves	5 serves or more	Total n
Fruit	340 (36)	392 (41)	172 (18)	42 (4)	9 (1)	955
Vegetables	226 (23)	308 (32)	309 (32)	83 (9)	38 (4)	964

As shown in Table 42 according to their parents:

- 77% of children were consuming 1-2 serves of fruit.
- 45% of children were consuming 3-5 serves of vegetables.

### ***Children’s consumption of beverages at home***

Parents were asked to identify from a list of beverages their child’s most frequent drink when thirsty (Table 43). Water only (and no other drinks) was chosen as the main drink in 659 out of 968 responses (68%).

**Table 43: Parents’ (n=983) report of child’s choice of beverage when thirsty**

Beverage	Number of responses
Water	727
Cordial	126
Milk	89
100% Fruit juice	60
Soft drink	34
Fruit drink	26
Total	1062 <sup>≠</sup>

<sup>≠</sup>Some parents chose more than one type of beverage, total number of responses exceeds n=983.

## Physical Activity

### ***Parental attitudes and opinions***

Parents were asked to indicate their level of agreement with several statements to ascertain their attitudes and opinions toward physical activity and their community environment; these are shown in Table 44.

**Table 44: Attitudes and opinions of parents in relation to physical activity [n(%)]**

	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total n
My child being physically active on most days of the week is <i>not</i> a high priority for me	37 (4)	59 (6)	20 (2)	440 (45)	424 (43)	980
There is enough variety of equipment at home for children to use to be physically active	446 (45)	493(50)	9 (1)	25 (3)	7 (1)	980

In summary:

- 88% strongly disagreed/disagreed that their child being physically active was *not* a high priority; this means that most parents believed that it was a high priority for them.
- 95% strongly agreed/agreed that there was enough variety of equipment at home for children to use to be physically active.

### ***Behaviours and rules at home***

Parents were asked how often the following behaviours and rules occurred within their home over the last month (Table 45).

**Table 45: Behaviours and rules at home in relation to physical activity [n(%)]**

	Never	Rarely	Some-times	Often	Always	Total n
Were the children encouraged to play outdoors?	2 (0)	11 (1)	103 (11)	349 (36)	515 (52)	980
Were limits set on the amount of time the children can watch TV?	47 (5)	121 (12)	308 (31)	281 (29)	223 (23)	980
Did adult family members walk or cycle to get to or from places (e.g. work, shops)?	158 (16)	206 (21)	347(35)	194 (20)	76 (8)	981

In summary:

- 88% of children were always/often encouraged to play outdoors.
- 52% of children always/often had limits set on the amount of television they could watch.
- 28% of adults always/often walked or cycled to get to or from places.

### ***Children's activity during the day***

Parents were asked to report the distance travelled by their children between home and school (Table 46). Fifty-four percent of parents reported that their child travelled less than 2km between home and school.

**Table 46: Parents' (n=954) report of distance travelled by children between home and school**

Distance	Number of responses n (%)	
Up to ½ km	193	(20)
Between ½ and up to 1 km	152	(16)
1 to 2 km	167	(18)
More than 2 km	442	(46)

Parents were asked to report the number of minutes that their child spent playing outdoors between getting home from school and bedtime. Most parents (59%) reported that their children spent between 30 and 60 minutes playing outside after school (Table 47).

**Table 47: Parents' (n=967) report of time children spent playing outdoors between arriving home from school and bedtime**

Time	Number of responses n(%)	
0-15 mins	88	(9)
15-30 mins	218	(23)
30-45 mins	240	(25)
45-60 mins	335	(34)
0+ mins <sup>^</sup>	53	(6)
Not applicable child has sport every day	33	(3)

<sup>^</sup> Typographical error in the questionnaire, '0+mins' was meant to read '60+mins', respondents may have interpreted this differently.

### ***Availability of television at home***

Parents were asked to report the number of televisions within the home (Table 48).

**Table 48: Number of television sets at home (n=981)**

Number of Televisions	Number of responses n (%)	
None	1	(0)
One	67	(7)
Two	317	(32)
Three or more	596	(61)

Parents were also asked to report on the presence of a television in their child's bedroom:

- 46% of parents (n=973) reported that there was a television in their child's bedroom.

### ***Sedentary activity at home***

Parents were asked to report the amount of time in hours that their child spends watching television or other screen media on an average school day.

**Table 49: Parents' (n=969) report of time children spent watching TV or other screen media on an average school day**

Time (hours)	Number of responses n (%)	
0-1 hours	193	(20)
1-2 hours	418	(43)
2-3 hours	268	(27)
3-4 hours	73	(8)
More than 4 hours	17	(2)

In summary:

- 63% of parents reported that their child spent no more than two hours engaged in screen time on an average school day (ie met the recommendations).

## ***6.3 Neighbourhood Environment***

### **Parental attitudes and opinions**

Parents were asked their level of agreement with the following statements about their community, neighbourhood or local environment (Table 50).

**Table 50: Parental attitudes and opinions about the local neighbourhood or environment [n(%)]**

	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total n
It is <i>not</i> safe for primary school aged children to walk or cycle alone in our neighbourhood during the day	155 (16)	280 (28)	68 (7)	382 (39)	93 (10)	978
Our closest park/playground from home is safe for primary school aged children to play in	136 (14)	481 (49)	146 (15)	156 (16)	59 (6)	978
There are enough recreation/sports facilities in our neighbourhood to encourage children to be physically active	133 (14)	386 (39)	46 (5)	307 (31)	105 (11)	977
There are playgrounds, parks and/or ovals within easy walking distance of our home	222 (23)	517 (53)	13 (1)	148 (15)	81 (8)	981
There is enough information about physical activity opportunities for children in our neighbourhood or school	143 (15)	512 (52)	129 (13)	159 (16)	37 (4)	980
In my neighbourhood there is a strong sense of community	87 (9)	330 (34)	277 (28)	233 (24)	53 (5)	980

In summary:

- 44% agreed/ strongly agreed that it is not safe for primary school aged children to walk or cycle alone in our neighbourhood during the day.

- 63% agreed/ strongly agreed that the closest park/playground from home is safe for primary school aged children to play in.
- 53% agreed/ strongly agreed that there are enough recreation/sports facilities in our neighbourhood to encourage children to be physically active.
- 76% agreed/ strongly agreed that there are playgrounds, parks and/or ovals within easy walking distance of home.
- 67% agreed/ strongly agreed that there is enough information about physical activity opportunities for children in our neighbourhood or school.

## Participation in local community events

Parents were asked to report if they had attended a community event such as a school fete, craft exhibition, neighbourhood picnic or similar in the past year (Table 51).

**Table 51: Level of parents' (n=974) participation in local community events in the past year**

	Number of responses n (%)
No, not at all	161 (17)
Yes, once or twice	452 (46)
Yes, several times (at least 3)	348 (36)
Don't know	13 (1)

In summary:

- 82% of parents had participated in a local community event at least once in the last year.

## Transport problems

Parents were asked to report the frequency with which they had problems with transport when they wanted to go somewhere, for example the shops, visiting people, recreational facilities, school appointments etc in the past year (Table 52).

**Table 52: Frequency of parent's (n=977) experience with transport problems in the past year**

	Number of responses n (%)
Never	735 (75)
Sometimes	193 (20)
All of the time	33 (3)
Don't know	16 (2)

In summary:

- Almost one quarter of parents reported that they experienced problems with transport when they wanted to go somewhere sometimes or all of the time.

## 6.4 Knowledge of Healthy Eating and Physical Activity

### Healthy Eating

Parents were asked to indicate their understanding of recommended daily amount of fruit and vegetables for children aged 10-12 years to eat (Table 53).

**Table 53: Parent knowledge of fruit (n=979) and vegetable (n=982) intake for good health in 10-12 year old children [n (%)]**

	Response consistent with recommendation	Response inconsistent with recommendation
Fruit	595 (61)	384 (39)
Vegetables	638 (65)	344 (35)

The majority of incorrect answers for both fruit and vegetables overestimated the recommended amounts.

### Physical Activity

Parents were asked to indicate their understanding of the recommended daily amount of physical activity for children aged 10-12 years (Table 54).

**Table 54: Parent knowledge of level of physical (n=982) and sedentary (n=980) activity for good health in 10-12 year old children [n (%)]**

	Response consistent with recommendation	Response inconsistent with recommendation	Unsure
Number of minutes per day spent on Physical Activity for good health	423 (43)	548 (56)	11 (1)
Maximum time spent watching television and other screen media	427 (43)	506 (52)	47 (5)

The majority of incorrect answers for both physical activity and sedentary activity underestimated the recommendations.

## 7.0 High Schools

### 7.1 Demographics

All High School Principals (n=14) in the *eat well be active* Community Programs' intervention and comparison sites were invited to complete a survey (Table 55). Nine completed and returned a survey.

**Table 55: High Schools in ewba intervention and comparison sites**

Intervention		Comparison	
Morphett Vale	Murray Bridge	Sea & Vines	Port Pirie
Morphett Vale High School	Unity College	Cardjin College	John Pirie Secondary School
Wirreanda High School	Murray Bridge High School	Seaford 6-12 School	Mid North Christian College
Woodcroft College		Reynella East High School	St Mark's College
Southern Vales Christian College		Christies Beach High School	
		Aberfoyle Park High School	

### Location

**Table 56: Frequency of survey responses from High School settings by geographic community**

	Morphett Vale	Murray Bridge	Sea & Vines	Port Pirie
Principal	3	1	4	1
Canteens*	2	0	5	0

\* Not all High Schools had Canteens

### Enrolments

There were a total of 6911 students enrolled in 2005 at the nine high schools returning surveys. Of these students enrolled 3.5% were identified as Indigenous students, while 32% were School Card Holders. There were 565 teachers with 514 full time equivalent teacher positions.

## 7.2 Policy Environment

### Healthy Eating Policy

The Site Learning Plan of five of the nine High Schools' included a specific commitment to healthy eating. Only one of the nine High Schools had a written policy around promoting healthy eating at school at the beginning of 2005.

#### **Content of policy**

For the school with a healthy eating policy the Principal identified that it completely covered the following areas:

- availability of healthy food and drinks through school food services eg canteens & vending machines)
- availability of healthy food/drinks through school events
- limiting unhealthy foods/drinks used for school fundraisers
- encouragement of students to have water bottles

- not using food as a reward
- teaching food and nutrition knowledge and skills in the planned curriculum, including integration across the curriculum where possible
- the provision of an environment that is supportive of breastfeeding for all eg staff and parents
- the issue of staff acting as healthy eating role models
- communication with and involving parents in school healthy eating decisions and opportunities and
- linked with relevant outside organisations eg Community Health, local recreational clubs.

The availability of drinking water for students was only covered to some extent.

### ***Communication of policy***

The Principal from the one school with a policy reported that this policy was completely communicated to staff, parents and students and that it was completely actively implemented.

### ***Policy on leaving school grounds to purchase food and drinks***

Seven of the nine Principals reported that high school students were not allowed off school grounds to purchase food and drinks during school hours in 2005. Students at the other two schools were allowed.

## **Physical Activity Policy**

The Site Learning Plan of seven of the nine High Schools' included a specific commitment to physical activity (PA). Two of the nine High School Principals reported having a written policy around promoting physical activity at school at the beginning of 2005, while the other seven did not.

### ***Content of policy***

Only one Principal identified that the school's policy completely covered the following policy areas (the other Principal did not respond):

- supporting the use of school indoor facilities out of hours
- supporting the use of school outdoor space out of hours
- staff acting as role models for physical activity.

The same policy covered the following areas to some extent:

- having regularly scheduled PA times during non-PE classes
- encouraging students to walk/cycle to school
- improving the safety for students walking/cycling to school
- teaching the health benefits of PA in the planned curriculum
- using the active curriculum thru movement
- availability of variety of active play equipment
- making best use of school play space to maximise PA opportunities
- communicating with & involving parents in school PA decisions and opportunities
- linking with relevant outside organisations eg Community Health, local recreational clubs etc

Improving the safety for students walking/cycling to school was not covered in the physical activity policy at all.

### ***Communication of policy***

The Principal reported that the policy was completely communicated to parents and students, yet communicated to staff only to some extent. The Principal reported that the physical activity policy was completely actively implemented.

## **Summary of Policy Environments**

Only one of the nine High Schools had both a healthy eating and physical activity policy. The healthy eating policy covered more of the recommended policy areas than the physical activity policy.

## **7.3 Links with Parents and Outside Organisations**

### **Parents**

Three Principals reported that in 2005 parent groups focusing on healthy eating met within the school. Only one Principal reported that parent groups focusing on physical activity met within the school.

Four Principals reported that in 2005 the school gave information to parents about healthy eating and physical activity once a term. The most frequently cited strategies to inform parents about healthy eating and or physical activity ideas were newsletters, parent meetings and school events/activities.

Principals described most parents as poor or fair supporters of physical activity during (6 of 9) or outside (8 of 9) school hours. Parents were also reported as being poor or fair supporters of walking or cycling to school (8 of 9) and healthy eating (6 of 9).

### **Other Organisations**

Principals were asked how frequently their school linked with various groups to promote healthy eating or physical activity. In 2005:

- 4 had contact with Community Health Services at least once per year
- 3 had contact with recreation or sporting providers at least once per year
- 3 reported having contact with local food producers or retailers at least once per term or more frequently.

## **7.4 Facilities and Environments**

### **Healthy Eating**

#### ***Canteen operation***

At the end of 2005 four canteens were outsourced to a contractor and three were run directly by the school. Two of the nine schools did not have a canteen.

All of the canteens were open every day of the week and at both recess and lunch. Most (6 of 7) were also open before school.

Canteen Managers (n=7) were asked their opinion of the level of importance of five roles, listed below:

- 6 reported the provision of food service was very important
- 4 reported the provision and promotion of healthy food to students was very important
- 1 reported making a profit for *the canteen* was very important while a further 3 reported that it was somewhat important.

- 1 reported making a profit for *the school* was very important while a further 3 reported that making a profit for the school was somewhat important
- 3 reported that supporting classroom nutrition education activities were very important.

Four schools had a Canteen Committee. Most High School Canteen Committees had canteen managers, parents, and staff representatives.

### ***Canteen Policy***

Four of the seven High Schools had a Canteen Policy in 2005. For three of these, the Canteen Manager was unsure when the policy was first developed, while one reported 1990. All the Canteen Managers were unsure when the Canteen Policy was last reviewed.

Of those Schools with a Canteen Policy (n=4), the policy covered the following areas:

- nutrition – types of food that can and cannot be sold (n=4)
- foods and drinks in vending machines (n=1)
- food safety and hygiene (n=4)
- guidelines or criteria about promotions (n=2)
- Canteen Committee membership and roles (n=2)
- a pricing policy (n=3)
- special activities (n=2).

Two High School Canteens made a profit, two ran at a loss and three reported that they did not know.

### ***Factors affecting food sold in Canteens***

The Canteen Manager was the most likely person (6 of 7 canteens) to make decisions about what was stocked in the canteen.

All but one canteen conducted promotions of healthier food products. The most frequently used method of promotion was day/weekly specials, displays and price specials.

Canteen Managers (n=7) were asked to report on activities that helped them to provide healthier food choices. They were given 15 options to select from and their responses are presented in Table 57.

**Table 57: Number of Canteen Managers who used each specific activity to assist them in providing healthier foods in the school canteen**

<b>Activity</b>	<b>No. Managers</b>	<b>Activity</b>	<b>No. Managers</b>
Meal deals	4	Training for canteen staff	2
Knowledge of child obesity	4	Health Professionals	2
Easy access to healthy food choices	4	Support Teachers	2
Special deals on healthy food	3	Requests from parents	1
Networking	3	More storage space	1
Suitable equipment	3	Information from media/magazines	1
Canteen news	3	Other eg canteen expo	1
		Supermarket	0

The following factors were most frequently cited by Canteen Managers as those which limited the provision of more healthy food choices:

- competition by local shops (n=5)
- lack of student demand (n=3)

- lack of time to prepare (more labour intensive) (n=3) and
- lack of volunteers (n=3).

Three Canteen Managers reported that there were no limiting factors and that they already sold plenty of healthy choices in the school canteen.

### ***Top selling food and drink items in High School Canteens***

Canteen Managers were asked to report their four biggest selling food and three biggest selling drink items respectively for both summer and winter. This information was then categorised using the SA Health Right Bite food and drink spectrum and in consultation with Dietitians

([www.decs.sa.gov.au/eatwellsa/files/links/RightBiteReadyReckoner.pdf](http://www.decs.sa.gov.au/eatwellsa/files/links/RightBiteReadyReckoner.pdf)).

No nutritional food content was collected on these products and the categorisation was based on the crude description provided by the respondent. Without detailed nutritional information, misclassification is possible. For example some items that may be defined as green based on their nutritional composition were amber for the purposes of this evaluation because information regarding the portion size or use of low fat ingredients was not provided. When considering combined or mixed foods, the same strategy as the Right Bite Ready Reckoner was used. For example fruit and jelly, where fruit is green category and jelly is red category, was categorised as red.

The following provides a sample listing of food categorisations:

**GREEN:** sandwiches, wraps, salad packs, salad rolls, fruit salad, vegetable bake, soup.

**AMBER:** lasagne, spaghetti bolognese, hot potato, savoury slice, macaroni cheese and chicken lettuce and mayonnaise roll.

**RED:** hot dogs, sausage rolls, pasties, pies, chicken nuggets, donuts, pastries, hamburgers, noodles and fruit & jelly.

As shown in Table 58 the top selling food items in summer were likely to be green and in winter were most likely to be red food items.

In relation to drinks once again no nutritional information was provided and the following provides an example of how listed items were categorised:

**GREEN:** Water, plain milk

**AMBER:** All juices and flavoured milks (excluding iced coffee)

**RED:** Artificially sweetened drink (including water), soft drinks, flavoured mineral waters, energy drinks, cordials, and caffeinated drinks.

The top selling drink items in summer and winter were most likely to be amber or red drink items (Table 58).

**Table 58: Top selling food and drink items in summer and winter as categorised using the SA Health Right Bite food and drink spectrum**

Popularity of items	Summer Foods	Winter Foods	Summer Drinks	Winter Drinks
Top selling items	Green: 3 Amber: 0 Red: 4	Green: 0 Amber: 3 Red: 4	Green: 0 Amber: 3 Red: 4	Green: 0 Amber: 5 Red: 2
2 <sup>nd</sup>	Green: 4 Amber: 2 Red: 1	Green: 1 Amber: 1 Red: 5	Green: 3 Amber: 2 Red: 2	Green: 0 Amber: 5 Red: 2
3 <sup>rd</sup>	Green: 4 Amber: 0 Red: 3	Green: 2 Amber: 1 Red: 4	Green: 0 Amber: 3 Red: 3	Green: 0 Amber: 2 Red: 4
4 <sup>th</sup>	Green: 2 Amber: 0 Red: 4	Green: 0 Amber: 0 Red: 5	n/a	n/a
Total	Green: 13 Amber: 2 Red: 12	Green: 3 Amber: 5 Red: 18	Green: 3 Amber: 8 Red: 9	Green: 0 Amber: 12 Red: 8

### ***Availability of specific items in Canteens***

Canteen Managers were asked to report how often the following twelve food and drink items were sold in the canteen in 2005 (see Table 59).

**Table 59: Frequency of sale of food and drink products in the High School Canteens in 2005 (n=7)**

Items		Every day	3-4 times /week	1-2 times /week	Several times / term	Occasionally	Never
<b>Food Products</b>	Vegetable based meals	3	0	1	2	1	0
	Cut-up vegetables	2	0	1	2	1	1
	Fruit	5	1	0	0	0	1
	Fruit salad	4	1	1	0	0	1
	Lollies, chocolates etc	6	0	0	0	0	1
	Potato crisps, twisties etc	7	0	0	0	0	0
	Hot chips	2	1	0	0	0	4
	Muesli bars	3	0	0	0	0	4
<b>Drink Products</b>	Fruit straps or roll-ups	3	0	0	0	1	3
	Bottled water	7	0	0	0	0	0
	Soft drinks	4	0	0	0	0	1
	Fruit juice and fruit juice drinks	7	0	0	0	0	0

One Canteen Manager reported that they had stopped selling some foods on a daily basis. These items included: lollies and chocolates, muesli bars, high sugared soft drinks and cheese bread. The most commonly cited reasons for their removal from sale was increased awareness of healthy foods and an increased offering and subsidy of healthy options.

Six Canteen Managers reported introducing healthier food and drink products in 2005. Some of these items were: low fat chips, salad bar, wholemeal and wholegrain rolls, yoghurt, reduced fat cheese & low fat muffins.

### ***Wider school environment***

Principals (n=9) reported on the healthy eating environment of their school:

- 7 provided easy access to clean drinking water for students.
- 8 allowed the students to drink water during class.
- 4 did not allow students to be rewarded with food/drink.

### ***Fundraising***

The sausage sizzle and confectionary were the most used fundraising activities in high schools with eight schools using these activities four or more times per year. The second most used fundraising strategy was items other than food and drink (4) and the third was sweet drinks (3).

Four Principals reported that the school had never used biscuits/cakes as a fundraiser and five reported that their school had never used fruit and vegetables as a fundraiser.

Three High School Principals reported that they operated vending machines for food and drinks. Of the three schools that reported having vending machines, only one reported having more than one in operation.

### ***Breastfeeding***

Two High School Principals reported that they provided environments that were supportive of breastfeeding; four reported that their school environment was supportive of breastfeeding to some extent.

## **Physical Activity**

### ***School environment***

Principals (n= 9) reported on the physical activity environment of their school:

- all high schools provided play or sporting equipment for use during break times
- 5 reported that the play or sporting equipment was regularly used by students all of the time
- 7 agreed/strongly agreed that they provided a variety of non-competitive physical activity options that reflected the interests of the school population.

High School Principals were asked to identify the frequency of use of specific approaches to promote physical activity (Table 60).

**Table 60: Frequency of approaches used by high schools (n=9) to promote physical activity**

	Never/ rarely	Some of the time	Most of the time	Always	Don't know	No response
Encouraging walking or cycling to school	4	4	1	0	0	0
Initiatives to make it safer for students to walk/cycle to school	3	5	1	0	0	0
Encouraging students to be more active outside of school hours	2	4	2	1	0	0
Encouraging the use of equipment and facilities by students during school hours	0	1	5	3	0	0
Permitting students to use indoor facilities for physical activity outside school hours	2	2	4	1	0	0
Permitting students to use outdoor facilities for physical activity outside school hours	3	1	2	3	0	0
Permitting community members and organisations to use indoor facilities for physical activity outside school hours	1	1	1	6	0	0
Permitting community members and organisations to use outdoor facilities for physical activity outside school hours	2	1	1	5	0	0
Encouraging staff to be involved in lunchtime activity programs	1	3	2	3	0	0
Student peer support programs in physical activity	1	3	1	3	0	1
Involving students in decision-making regarding physical activity opportunities, equipment and facilities	1	3	2	3	0	0
Having regularly scheduled physical activity times during non-Physical Education classes	1	5	1	2	0	0

### ***Organised physical activity***

Principals (n=9) were asked to report the frequency that their school offered organised physical activities to students:

- 6 never or rarely offered them before school
- 4 offered them 2-3 days per week during break times
- 2 offered them more than 4 days per week during school
- 4 never or rarely offered after school organised physical activity.

The most commonly offered organised physical activity by schools out of school hours were dance and soccer (offered by 6 schools); Australian Rules (offered by 5 schools); Athletics, Basketball, Cricket and Netball (offered by 4 schools)

### ***Federal Government recommendation***

From 2005, the Australian Government mandated that all students (up to and including Year 10) undertake at least 2 hours of physical activity in the curriculum each school week. The commitment is subject to common-sense exemptions for children who are unable to undertake any form of physical activity (Australian Government, 2007).

This policy has been legislated in Parliament and tied to Federal Grants to State education authorities from 1st Jan 2005. This policy does not solely refer to

Physical Education lessons and includes other incidental physical activity in other curriculum areas.

As reported by Principals, three of the nine high schools met the Federal Government's recommendation of at least 2 hours of physical activity each week for junior secondary school students and five met it to some extent.

### ***Public liability***

Three of the nine Principals agreed that public liability concerns limited the physical activity opportunities or facilities the school provided to students. Four Principals either disagreed/strongly disagreed that public liability concerns limited the physical activity opportunities or facilities the school provided to the general public, three were unsure.

## ***7.5 Attitudes to Healthy Eating and Physical Activity***

Principals (n=9) were asked the extent to which they agreed with the following statements. Seven agreed or strongly agreed that:

- it is important for staff to role model healthy eating behaviours for students
- it is important for staff to role model being physically active for students
- that healthy eating is a priority for their school
- that physical activity is a priority for their school.

## ***7.6 Staff Professional Development***

Six of the Principals reported that 44 staff had received professional development in the area of food and nutrition in 2005.

Six of the Principals reported that 67 staff had received professional development in the area of physical activity and human movement.

## 8.0 Summary

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This report describes the baseline data for 2005 collected at the end of 2006 that will be used to track the progress and efficacy of the *ewba* Community Programs being implemented in Morphett Vale and Murray Bridge, South Australia. More particularly it includes:

- initiation and duration of infant breastfeeding in *ewba* intervention and comparison sites (n=1450)
- prevalence of overweight and obesity in 4-5 year old (n=1050) in *ewba* intervention and comparison sites
- descriptions of the early childhood settings, school and home environments of children within the intervention and comparison sites including rules and policies, availability and access to certain food and drink items and access to sporting and physical activities
- knowledge, behaviours and attitudes toward healthy eating and physical activity of early childhood workers; primary school parents, teachers, canteen managers and OSHC Directors; and high school principals and canteen managers.

This report follows *ewba* Community Programs Evaluation Report Part 1: Baseline Data Collection (Jones et al, 2008) which reported the outcomes from physical activity and healthy eating self-report surveys completed by 1732 girls and boys and the prevalence of overweight and obesity in these same 10-12 year olds (n=1637) in *ewba* Community Programs intervention and comparison sites. Data from intervention and comparative sites at the second quantitative data collection period to be conducted at the end of 2009 will be compared and differences at baseline controlled for. Follow-up data will also be compared with baseline data to determine the degree of change that may have occurred. The findings from these analyses will be presented in the Final Report in conjunction with the qualitative data collection outcomes.

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