

## Results

### Participation

In order to recruit one secondary and one primary school in each area, a number of schools had to be approached.

For secondary schools, the first school approached in South Western Sydney agreed to participate; in Western Sydney the third school approached agreed to participate; in Northern Sydney none of the three schools approached agreed to participate and in South Western NSW the third school approached agreed to participate.

For primary schools, a total of eight schools across the four sites were approached, to give three participating schools. In Northern Sydney, none of the three schools approached agreed to participate.

One staff member from each participating school (that is, one primary and one secondary school in each area) was interviewed. The interviewees included one Principal, two Assistants and one Deputy Principal, one Year Coordinator/PE teacher, and one primary classroom teacher, and included both male and female staff members.

A total of 31 female and 27 male students from three secondary schools participated in the study. The groups ranged in size from four to nine students. Table 2 shows the number of boys and girls in each Year group who participated in each area.

**Table 2. Number of secondary school students participating in each geographic area**

Geographic area	Participating students	No.
South Western Sydney	Year 7 girls	7
	Year 9 boys	9
	Year 11 girls	7
Western Sydney	Year 7 & 8 girls	4
	Year 9 & 10 boys	6
	Year 11 girls	7
South Western NSW	Year 7 boys	5
	Year 9 girls	6
	Year 11 boys	7
<b>Total</b>		<b>58</b>

### Summary of teacher/principal interviews

#### **Recognition of overweight and obesity as an important issue**

All teachers interviewed believed that overweight and obesity is an issue for some children, and that this means that it is an issue for their school. The primary teachers thought that while some students were overweight, they did not constitute a significant proportion of the students at their school.

*I'd classify maybe one or two, or even three children at each stage who would be obese and then maybe a bigger cohort who are overweight....I don't know that there is 30 percent, I would say maybe 10 to 15 percent overweight and inactive.*

What was noticeably different in secondary school teachers' responses (compared with primary school teachers) was the mention of underweight/eating disorders. High school teachers were also more likely than primary school teachers to discuss weight as a significant issue in relation to poor self-esteem and student welfare. They did not in general express concern about potential health problems related to overweight or obesity.

*If the kids feel confident about themselves and about their body image, they project a different image to teachers and their peers, and usually that helps them be successful in the academic sphere as well.*

*I think it's parents and I think we can only back up what's happening at home, the food comes from home, so we can only try and assist parents in getting kids to eat nutritionally.*

### **Criteria to judge overweight and obesity among students**

The criteria used by teachers to judge children's weight status were similar to those reported by parents and students, and comprised a mix of appearance and behaviour. Teachers referred to children and young people who "look big", and have bigger tummies, chests, thighs or arms, or clothes that are ill fitting. Some teachers also noted weight as it related to height - "*just generally looking like they're bigger than everybody else without the actual height to carry it*".

Primary school teachers in particular mentioned observations of students' eating behaviours and stamina during physical activity. Primary school teachers are more likely to have detailed knowledge of the habits and abilities of specific children as they have more exposure to specific children compared with secondary school teachers.

*They have trouble running – if you do some sort of physical activity they are puffing because they are carrying that little extra weight.*

### **The role of schools**

Both primary and secondary school teachers agreed that schools should play a significant role in the prevention of overweight and obesity among children and adolescents. Primary schools were more likely to discuss a whole-of-school approach to nutrition and physical activity whereas secondary schools were more likely to cite curriculum in PDHPE (Personal Development, Health and Physical Education) and Food Technology as the role of the school. However, they all identified parents as playing the most significant role.

Secondary school teachers, in particular, expressed frustration and disappointment about what some of the students eat on the way to school or at school. Some felt that by secondary school it was too late for schools to influence students' eating and physical activity.

Primary school teachers' perspective was that the schools' role is to educate children about nutrition, provide opportunities for physical activity, and encourage students to adopt healthy behaviours. They saw parents as partners, and described schools as trying to work with parents, and to encourage them in terms of providing healthy food and getting their children to play sport.

*I see it as educating children as to what a good balance of food is...trying to encourage good habits, because good habits they get at a young age will carry through for the rest of their lives.*

The primary school teachers indicated that their school provided some form of information to parents, but to varying degrees and on varying topics. They distributed information that was provided to them, such as the campaign materials for the '2 & 5 Fruit and Vegetable' campaign. The most common method for information dissemination was through a school newsletter.

*We have a little thing that goes home in our newsletter and it's healthy snack ideas and 'remember this sort of food is good for teeth and bones', or 'remember physical activity, these are some of the suggestions that you can do'.*

Secondary schools were less involved in providing information to parents, except where information was provided to them. However, the NSW Healthy School Canteen Strategy was noted as an example of where information was provided to parents. Teachers did not necessarily think they were providing information to parents as well as they could, but generally saw that they were doing something, at a level that was consistent with the school's responsibility.

Overall, teachers and schools seem to accept a considerable level of responsibility, without blaming parents.

*We used to be reading, writing, arithmetic, but now schools are responsible for academic education and social education and emotional education and physical well-being and all this kind of thing – so it's a really holistic approach to children and what they do and their families.*

### **Communicating with parents on children's weight**

None of the teachers interviewed had raised the issue of weight with a student or parent. They stated that they would only do so in extreme circumstances, where they believed the child's health or emotional wellbeing was being compromised or the student's academic performance was affected. In parallel, none of the teachers interviewed had ever been approached by a parent to discuss their child's weight.

All teachers acknowledged the sensitive nature of the weight issue and how delicately they would need to approach it. Some considered that raising this issue with a parent could do more harm than good. One teacher involved in PE teaching was able to give clear examples of how he could build on sports the children may already be involved in, as a leverage point for communicating with parents, rather than talking about weight.

*I'm visualising a couple of kids I do know who are quite severely overweight and I wouldn't be ringing up their parents and saying 'I think your child is overweight'.... not unless I felt that they couldn't move, that they were maybe having pains, or that they were out of breath an awful lot...I would just say 'your child is having problems with this activity, what do you think, maybe he should go and see a GP and see if there are any particular stress' or something like that.*

Secondary school teachers were aware of the risk of upsetting or offending a student, and causing harm. They noted that they might approach students about being underweight as a priority ahead of a problem of overweight. If a student approached them, they said that they would obviously follow up on this; and noted that this might arise where a student was being bullied due to their weight. Two of the teachers thought that there would have to be a severe impact on the child's education or welfare before the school would initiate discussion with the parents or the child.

*You don't want to upset kids and as it is the kids who are overweight, probably have low self-esteem. I don't think as a teacher you should be saying 'you are overweight'.*

### **Current school initiatives and policies**

All schools are involved in implementing the PDHPE key learning area. All teachers reported that they promote participation in physical activity, and actively seek to motivate sedentary students. Primary school teachers were aware of their role in modeling involvement in physical activity, and actively participate themselves. Primary school teachers described using a whole-of-class approach, and made efforts to avoid drawing attention to less active or overweight students.

*It has been one of our targets this year that we are really going to push nutrition and we taught nutrition units in each one of the classrooms, so every child has gone through learning about that – and every class has one of those healthy eating pyramids up on the wall that we refer to during that fruit break time.*

One teacher talked about being in a transition phase regarding nutrition and having to gradually change staff behaviours where sweet food had been used as a reward.

*I still have to go around to classrooms, and say ‘you are not supposed to have the lolly jar on the desk – take them home’... We have used food as a reward for so long...we always celebrate with food...*

*So it’s difficult to get out of that habit of saying ‘you have done really really well, here have something to eat’ – so every celebration comes with either morning tea, afternoon tea or something there.*

Secondary school teachers noted that students make excuses to avoid PE, such as not bringing uniforms or bringing notes from parents. Teachers were also aware that self-esteem and body image affected students’ participation in PE. Teachers reported offering different options for less sporty students, such as bowling, weights, a school beautification program (bush land regeneration), bush walking and aqua golf.

While secondary school teachers did not identify many additional initiatives beyond the PDHPE curriculum, and noted their resource constraints, the three primary schools all described additional initiatives. One primary school was implementing a substantial range of initiatives, and was able to do so due to funding from Nutrition Australia. Table 3 presents examples of initiatives being implemented in these

### Issues in implementation of programs and policies

Teachers were aware of the limits of what could be implemented and achieved through PDHPE activities, and had differing responses about the scope for further changes to address increasing prevalence of overweight and obesity among students. Teachers felt that they have a full curriculum to get through already and any new initiatives have to fit within this framework.

They agreed on the importance of opportunities for participation in physical activity for all students, but felt that special programs run a risk of alienating or stigmatising students. One primary school teacher expressed concern that children should not be pushed beyond their limits or too hard, that all children should not be expected to be as capable as more athletic classmates and that they would not want to draw attention to less active or more overweight children.

Gender differences were raised by some of the teachers in relation to perceptions of overweight and in implementing curriculum. One teacher thought that “*the boys don’t seem to worry about their weight at all, but definitely the girls are concerned about that*”. A PE teacher described her experience:

*When I started teaching, the classes here were integrated for PE, but they are not now, they are all single sex. I always had the lowest class and a lot of the girls were overweight and were reluctant to be involved in any PE, so I had to change and adapt the whole teaching side of things in terms of the practical to make it fun orientated, and not to make it too physical but challenging so they could achieve something... I had these girls three years in a row from year 8 to 10.... In the end I really got on well with the girls, they became active, they weren’t worried about other people....and some of the kids actually started playing sport from the fact that they really enjoyed the PE classes.*

Table 3. Examples of primary school initiatives to promote physical activity and healthy eating

Physical activity initiatives	Description
Additional fitness programs	Fitness program that runs 3 days a week for 20 minutes. Morning fitness for 15 minutes every morning.
Lunch time activities	Sports shed is open every lunch time so children have access to equipment for games.
Activity as reward	Physical activity is often used as a reward for classes who finish class work.
Healthy eating initiatives	
Healthy Thursday	Students are encouraged to bring healthy food on that day and a competition is run based on the canteen guidelines where every food they have is given points based on the red, green, amber system. The class with the most points gets an award.
Stop Work It's Fruit Time (SWIFT)	Fruit break just before recess where students take out their piece of fruit to eat while the teacher does some kind of activity with them. (Introduced as part of a new nutrition policy.)
Poster promotion	Poster competition where students were required to design posters to promote healthy foods at the canteen.
Nutrition workshop	Workshop for parents (about 12 participated) run by a nutritionist at the school.
Kindergarten orientation	Nutritionist will attend to give information to prospective parents.
Supervised eating	The first ten minutes of eating time is supervised, either in the playground or classroom.
Drinking more water	Students are encouraged to drink water by having a bottle of water at their desks during class
Apple Slinkies	Parer/corer equipment (bought with Healthy School Community funding) which makes an apple into a slinky shape. "The kids absolutely love it, and the class who wins the award get to use the Apple Slinky the following week."
No food rewards	Sweets and ice-creams are no longer used as rewards for classroom activities.

Barriers to new initiatives included lack of time, staff and funding to be able to implement and sustain additional programs.

Secondary school teachers commented on how their schools were proceeding with the implementation of the NSW Healthy School Canteen Strategy. Most mentioned that gradual change toward healthier food had been occurring and that it could be expected to continue. There had been some student opposition to the Strategy, but on the whole students were still buying food from the canteen. One secondary school noted that the NSW Health School Canteen Strategy was not going well, as the canteen relies on profits and this was being undermined by students going across the road to the fast food outlets in the shopping centre. However one secondary school with a healthy school canteen policy described an unplanned change in the food buying practice of the students:

*...a year ago we had a fence put up on the outside of the school. The purpose of the fence was to prevent vandalism in the school [at the weekend] but because you have only one gate open, the kids couldn't leave the school at lunchtime as much as they used to do, and profits [at the canteen] went up enormously. So kids would go to the local shops and were very good at getting away with it, without us detecting it. They just got a lot of junk food basically.*

### **Information, support and resources**

All teachers would like more support for existing structures (e.g. school canteens, PDHPE) and strategies, in terms of funding, staffing and training. Two teachers specifically noted the potential benefits of breakfast programs in their school, but recognised that such programs took significant funding and on-going commitment.

Primary school teachers specifically mentioned the potential value of:

- Specialist sport coaches or support officers
- Staff with expertise in certain sports (and the importance of supporting teachers to get formally qualified to provide instruction/coaching)
- Ongoing funding for sports equipment.

*One reason we cut down on the amount of sport we went to do was because of the lack of staff and to participate in PSSA sport where that is not done at school, you actually have to leave the school ... someone who could come in and just be a sport support specialist, because we have support teachers for literacy, and we have support teachers for numeracy, so it would be good to have some sort of support in that area.*

*Funding is always a little bit of a problem, because sport equipment if it is used, really has quite a short use-by date – so you are constantly buying new equipment all of the time and you are always scraping for funds to be able to do that.*

Secondary school teachers were explicit about the range of competing priorities within the area of student health and welfare, and that bullying, mental health or alcohol and other drugs may be more urgent issues. Teachers thought that a focus on obesity prevention might detract from other areas, or dissipate efforts.

Secondary school teachers specifically mentioned the potential support that could come from:

- Resources for teachers themselves
- Up-to-date facts and “up-to-date ways of getting kids to think about health issues”
- Further training for PDHPE and home economics staff

- Resources for students, including current statistics, case studies with positive outcomes, good news stories, “things that are visual”, recent videos or DVDs, interactive DVDs or CD ROMs, and pamphlets that teachers can use with students in class. The RTA interactive resource *Shifting Gears* was noted as a good model.

*We've got a lot (of resources) in terms of PE but a lot of the nutrition education videos are quite old...we've been getting a lot of resources recently (but) they are all related to road safety and before that Drug Ed...nutrition hasn't been pushed through the Department for a fair few years.*

*and those fruit roll-ups that look like slabs of plastic – they're just sugar. How can they market them as healthy? But they do, they get away with it. A lot of sporting clubs have been forced to raise fees, or maybe stop some of the things they've been doing, because insurance is so high now....so maybe offer some sort of subsidy for that sort of thing – because I know a lot of kids are not involved... because they can't afford it.*

*Destroy all X-Boxes! But that's not practical, is it? I think you just have to soldier on and encourage and educate.*

### **Broader contextual changes**

All teachers were aware of the range of causes of overweight and obesity and believed that it is important to address physical activity and nutrition issues from an early age, in early childhood services and primary school. They made a variety of suggestions about actions that would contribute to prevention, including to:

#### Support parents

- Promote positive role models in the wider community (sports personalities, teachers, parents)
- Run community education
- Make changes to advertising and marketing of unhealthy foods
- Decrease the costs of healthy food
- Decrease costs associated with sports (e.g. uniforms, registrations)
- Provide after-school sporting programs that are non-competitive
- Improve physical activity environments (e.g. more sporting fields).

*I think some of the marketing and advertising could be changed, because a lot of things like muesli bars*

Compared with primary school teachers, secondary school teachers seemed perplexed or at a loss to suggest strategies or recommend changes with confidence. They acknowledged the difficulties parents have (such as both parents working, and the fast food environment), and questioned how to target those who really need to be targeted. They felt that “secondary schools can only do so much”, and that young people themselves don't worry about weight and their health because they don't perceive an immediate threat and will eat food because it tastes good (not because it is healthy). They recognised the need to take account of student motivation levels and choice.

*I think it's got to start at an early age. I look at the fact parents are working, they come home, kids crying, don't want to eat their meals, and they eat chips. As a child if you went out for lunch, you had a sandwich. These days, you go into a restaurant, [the children] have a plate of chips... At the moment, it's routine to eat takeaway foods. We [a senior class] have watched recently Super Size Me, and we talked about that and options and what were healthy alternatives.....There are healthy alternatives, but they are hard to find.*

### Rural-urban differences

There were no substantial differences between the experiences and opinions of teachers from rural and metropolitan schools, beyond the greater proximity to resources for the latter.

However, the rural primary school principal did consider that the area was one with a high level of community involvement in sport. *“I would take a rough guess that 75 percent of girls in this area play netball...on Saturdays (the netball courts) are chock-a-block from 9am to 3pm.”* She also thought that:

*the majority of kids here are fit because they live on a farm, they're eating fresh produce I guess, and they move....a lot of the older boys are physically strong. That's probably the difference between here and the metro centres – just room to move – no apartment buildings here, there's room to move.*

The rural secondary school teacher thought that the issues were similar to urban areas *“because we've got just as many fast food outlets and just as many people where there are two parents working.... but maybe the income is not spread quite as evenly – we have a lot of people on lower incomes.”*



### Summary of student focus group discussions

The findings from the student focus group discussions have been integrated for males and females, and age groups, as the comments and themes were strongly consistent. Where there were also differences, they are noted in the text. The results also cover discussions from urban and rural participants, as there were more similarities than differences.

#### Overweight and obesity as an important issue

On the whole, the secondary school students acknowledged that overweight and obesity among young people was an important issue in NSW. They discussed the increasing prevalence and visibility of overweight and obesity: *“You can see it when you're out in public, like when you're at the shops or at the pool or something, you can see it.”* However, they primarily focused on the short and long-term negative consequences for the young people who were overweight or obese. The consequences described were:

- Teasing and bullying: *“Yes, because people get teased about it heaps, even if they try to make a difference or try to lose weight they think it's really hard, because they've spent all these years being overweight and everything...”*
- Social exclusion: *“Social factors, like they might be excluded if they're overweight, by the other kids...”*  
*“Not only that, but other friends make fun of you if you are overweight, people will think differently of you and won't invite you to join in to good activities, tease you.”*
- Inability to participate in as many activities as their peers: *“because (obese) people don't fit in as much as the people who aren't obese, and they just get more out of life, because their active life is more fun.”*  
*“During sport or PE, they walk during the runs and stuff.”*

- Long-term health consequences: *“If you are overweight then it’s a bad way to start your life, then you get older and much bigger, yeh...you should change and be healthy” “Health issues like diabetes and stuff.. .it’s harder...”*

Participants were careful not to say it was an issue for themselves, and wanted it to be known that it did not bother them if other students were overweight, that they still regarded students who carried excess weight in the same way as anyone else.

*You can’t just look at someone because they are fat and say ‘Oh you are fat, I don’t like you, go away, you can’t do that – you look at them, you get to know them and meet them..’*

*I’m a bit big, but all my friends have accepted me for it and just left it at that.....*

When asked whether it was an issue for their school, the students acknowledged that it was and some participants discussed the role of the school in trying to prevent overweight and obesity through direct education and through canteen choices.

### **Criteria to judge “healthy weight”**

Students were asked to describe what it means to be a healthy weight. For the participants, a healthy weight was not solely defined as the number of kilograms that someone weighed, it also had to do with how they felt about themselves, their energy levels, and their overall well-being, although physical appearance did factor in as well.

Students cited the following as indicators that someone is a healthy weight:

- Energy levels: *“It doesn’t affect them how they live or what they do at all. They can go about their day without feeling exhausted at the end of it”*
- Participation in and enjoyment of physical activity: *“If you feel active all the time and you like running around and everything..” “You can sort of tell if someone says ‘can we do running?’ or they want to get active or move around lots.”*
- Eating habits: *“They’re healthy, they eat healthy foods, they watch what they eat.”*
- Self-esteem: *“I reckon you’re more like a healthy weight if you’re happy with the way you are.”*
- Assessment using a measure: *“Normally you are given, there’s a healthy weight range for your age and height”*
- Appearance: *“Just by looking” “Not really skinny and anorexic, that isn’t healthy either”*

Students’ comments on how they might identify overweight among their peers reflected the same themes:

- Energy levels/lethargy: *“(There are) steps everywhere – if they get puffed walking to the class at the top.”*
- Self-definitions: *“You can always tell by the way they speak, like if they say ‘I’m too lazy to do this, or ‘no, I’m not doing that.”*

Students often used a combination of criteria, rather than just a single defining factor.

*You can kind of see like by their kind of personality and stuff, and the way they look. I think they don't look so tired all the time, and they are always running around and stuff.*

There was limited mention of body shape and size (appearance) with more focus on behavioural and even psychological aspects, which may be related to the fact that they were being asked to define healthy weight rather than overweight and obesity.

The students displayed a substantial amount of knowledge about overweight and obesity and combined pieces of information to form their opinions.

### **Difficulty/ease of being a healthy weight**

Most students believed that it was a challenge for people their age to be a healthy weight, while some recognised that certain factors made it harder or easier to maintain a healthy weight.

Students found it hard to be a healthy weight for a variety of reasons related to both healthy eating and physical activity. Beyond school, it was difficult, due to *“accessibility to takeaway, and unhealthy food”* at home or in the community. The abundance of fatty/unhealthy foods at school was also described:

*So there's not much healthy in our school, so our year, our type of people, it's very hard to keep weight conscious, because there are so many fatty foods.*

It also appeared that for many students lunch-time pursuits at school were primarily sedentary. A key factor in this was access to sporting fields which was limited either by teachers

or fellow students: *“We can't really move around because we are not allowed on the field and sometimes the older years hog the field.”* In addition, female students in particular experienced teasing and interruption of active games by boys. Some students felt that PDHPE options were more suited to primary/middle school years than to senior students and that there were limited opportunities for older students to be active.

Parenting practices, tensions, and challenges around food and eating were also mentioned when discussing the difficulties of maintaining a healthy weight.

*It might be hard if you as a child, your parents bought all fatty foods and stuff, but if your parents have kept you healthy when you were young, you might be alright.*

Students also thought it was difficult for adults themselves to maintain a healthy weight due to time pressures and work. Other factors that made it difficult for students included peer pressure to conform or be thin and ready access to technology such as play station.

Other students believed there were things that made it easy to be a healthy weight and that simply by attending school you were given the opportunity to be active during PDHPE and sport. Older students felt that opportunities were there, but they didn't necessarily take them up due to time constraints or their own decision to do something sedentary.

Parents were again viewed as playing an important role, in this case in supporting students to be a healthy weight, with one student noting *“Some parents like you to always be doing sport”*. Students also identified peer-related factors that were helpful:

*Activities, like if your whole group goes out and does sporting activities all together and encourages each other it's fine and also you are losing weight*

*but you don't even realise.*

Additionally, compliments from friends – “Like – ‘oh, you’ve lost weight’ – stuff like that” were described as being of benefit.

### **Concern about weight**

Participants were asked whether people their age worried about being a healthy weight and if so, what they worried about. It was thought that most young people do worry about their weight, with their concerns centering on appearance, acceptance by peers, and being considered attractive by the opposite sex. Participants believed people their age were concerned about being slim rather than (what they perceive to be) a healthy weight.

*I don't think they're worried about whether or not they're healthy, I think they're worried about whether or not they're skinny and fit in, whether or not they're the right size.*

This ‘right size’ was different to a healthy weight. “Yeah, not healthy at all because I mean if you’re going to be skinny you’re not healthy, but people don’t want to be healthy, they want to be skinny.”

Both male and female students acknowledged the need to be considered attractive by the opposite sex. Peer pressure, media influences, fear of being considered unattractive or teased were acknowledged and appeared to be more significant for girls than boys. Some female participants believed: “Girls think like ‘oh no, if I’m fat I’m not going to get a date with a boy’ while others thought “Like if your friends, if they’re skinny, you want to be exactly how they are”.

Focus group discussions suggested adolescents’ primary concern was not about healthy weight as such: “Not necessarily healthy weight, but everyone worries about weight”. Students believed that adolescents’ concerns were

about appearance first and foremost, with concerns about health secondary: “It doesn’t matter how much you drink or smoke or whatever, as long as you look good, that’s about the attitude”. There was some mention of health concerns: “I worry about my weight because I don’t want to get health problems and all that, but I’m not obsessively worried” and there were worries about “sugar and diabetes”. Students believed that as they became older, they worried less about weight, partly due to peers becoming more understanding and mature about the issue.

### **Sources of help and information**

Students said they would be able to access information or assistance from a variety of sources if they were concerned about their weight. There was no single clear path students would take to find help or information, and methods that were appropriate for some were dismissed by others as unsuitable. Some students found it difficult to imagine what they would do as they didn’t have an issue, so were encouraged to think about what they might recommend to a friend if there was a concern. Students mentioned medical and allied health professionals such as doctors, dietitians, nutritionists and counsellors, but some students said that they would not see a counsellor.

Family members such as parents and siblings, as well as friends and mentors, were all mentioned as possible sources of assistance, although some students said that they would not go to their parents. Other less frequently mentioned sources included sports centres, the gym or personal trainers, or accessing information via the school curriculum, the internet, and newspapers.

Some students believed that ultimately, it was really up to the individual to seek help and make changes in their life, and made the clear distinction between having the help and actually making use of it.

*Friends help a lot, but there's only so much they can do. It's more of a personal thing. Even if you have information and all that in front of you, whether you take the information and use it is something totally different to whether it's available to you.*

Overall, students would be most likely to seek help from people they trusted and who were knowledgeable in the area.

### **Responsibility of schools**

Students believed that schools have an important role to play in helping adolescents maintain a healthy weight. To understand this role, participants were asked about their school's current structures and practices affecting healthy eating and physical activity. Participants were then asked about their ideas on possible changes to the school environment that might make healthy eating and physical activity easier for students. Students were asked about their school canteen, common eating practices at school and healthy eating information received at school.

Students discussed their canteens at length, and sometimes disagreed with each other, which presented a confusing picture. Some believed that their canteen had made a shift to healthy foods: *"Do you know what they've done at our school? They've taken away all the chocolate and all the junk food, taken it all out, all the junk food, and especially no chips, no hot chips"* while another student at the same school held a very different view:

*The canteen has a wide selection, but it's a wide selection of the wrong foods...cause they could probably only make about ten salad rolls for each thing and have like a million pies, sausage rolls and all that.*

As demonstrated by these accounts, even students from within the same school had different opinions on whether the

food at their canteen was healthy or not. However, students were highly consistent in their belief that healthy food at the canteen was too expensive.

*Sometimes you see fruit, like at my old school, fruit and apples were like 50 cents or 75 cents. Here they're \$1. I'm not paying a dollar for an apple. They should lower prices to motivate people to go and buy healthy food.*

Students also commented on the quality and presentation of foods: *"They had fresh fruit and the apples were all bruised and awful"*.

Students were asked whether or not they thought the canteen influenced what they ate at school. Some students believed they would make their food choices regardless of what the canteen sold; while others acknowledged the strong influence the canteen had on what students eat. There was a mix between students who brought their own lunch and those who bought food at the canteen, however, discussions suggested that all students would access the canteen at one time or another.

Participants were also mixed in their views on whether students gave much thought to what others brought, purchased, or ate for lunch. Although many said they didn't care what others ate, others acknowledged that peer pressure still widely affected what students ate. Some of the younger students reported that they would be less likely to bring food that other students would view in a negative manner, but this may have been felt only in the lower grade levels.

Participants reported that information on healthy eating was only received at school via the PDHPE curriculum. As this subject is elective in senior school, it was acknowledged that this may limit its on-going impact.

Students were also asked if their school provided enough ways to be active that they enjoyed. Some students thought they had a sufficient number of opportunities for PE at school which they liked: *"It's a good thing the sport, like it changes every couple of weeks; we are not doing the same sport for every term for PDHPE."* Some female students felt that there was too much emphasis on boys' sports; that they had to learn boys' sports, but that boys did not have to learn girls' sports.

Older students, in particular, thought that ways to be active at school were limited. Some students thought there weren't enough opportunities to participate in sport or that the range of choices was too narrow. Students also believed a focus on competition overrode the focus on participation and enjoyment, and this attitude put them off:

*They're bringing in a rugby program, but that's the only program they've really got and it's a bit hard with rugby because it's quite a hard sport and the teachers are only picking like 20 people, the good people.*

Some students described how easy it was to avoid PE: *".. 'cause like in PE and sport everyone makes up excuses, you know, 'can't do it', I know I do."* *"Our teacher doesn't make us play. It's only the people who want to play that play"*. As they got older, the opportunities to engage in PE were fewer: *"Year 11 do sport once a fortnight or twice a fortnight, or once a week, that's it, and now because we are starting Year 12, we do nothing, no sport available"*. Students acknowledged that this was largely due to a focus on academic work at this time, but wanted more opportunities. Participants reported that unstructured opportunities to be active, (i.e. during recess and lunch), were somewhat limited due to conflict between students in different year groups or between genders as mentioned previously.

### **Suggested changes for the school environment:**

#### **Healthy eating**

Participants' suggestions for changes at the school level which would encourage healthy eating primarily centred on the canteen, and to a lesser extent on resources. Students were unanimous that healthy foods at the canteen were too expensive. They suggested that healthy options should be more affordable and more attractively presented. They thought that if this was the case, then more students would choose healthy options:

*I wouldn't buy an apple or anything, I would buy fruit salad and yoghurt, like fat free yoghurt with something in it, but I wouldn't like buy an apple by itself, because it's too boring.*

Students were aware of the impact of unhealthy food on student eating habits/overweight and had a range of ideas on what food should be available at the canteen. Some students believed that to promote healthy eating, unhealthy options should be taken out completely: *"I agree, if they have no other option they will. I work in the canteen and everyone is like 'can I have a salad' and there's nothing else"*. Other students thought canteens should play a role in helping students by allowing students to store food brought from home in the fridge or by providing a more balanced choice.

*Maybe fix the canteen up like half/half, like half healthy and half junk, instead of having like heaps of junk food, because then they'd have a variety of what they want to eat and what they don't want to eat, because like at school you don't have very many healthy things, whereas students who want to lose weight have to bring their own lunch instead of buying it from the canteen."*

However many students believed in their "right to choose" and individual responsibility.

*Other people shouldn't have to take away, like take away the food they are selling, just to help you – other people have got to decide will I eat the salad roll or have a packet of chips and they've got to go with the right decision.*

When discussing information on healthy eating, students requested replacement of old health education videos used in class, suggesting newer, more adolescent-friendly DVDs (e.g. featuring cooking skills) are clearly needed.

### **Suggested changes for the school environment:**

#### **Physical activity**

Students had a number of practical suggestions for ways to promote physical activity at school, including ideas for structured and unstructured times as well as broader level approaches. All students thought emphasis should be placed on encouragement and participation rather than on competition and exclusion.

Participants believed that to promote physical activity, schools should increase the amount of structured PE offered to students. Many students reported that they would like more PE lessons and some felt that they spent half of their PE lessons taking notes instead of being physically active. Some students suggested that for the older years, PE should be provided as an option during their free periods as many of them didn't go home and study during this time. They watched TV and ate instead. Students could also see the value in having more sport available for those students who needed it the most.

*You could do more (sport) programs like that because then you'd cover more kids, but one or two programs like that doesn't really do much, because then you're only picking like the healthy kids so it doesn't really do anything anyway.*

Students also thought there should be more consequences for those who tried to avoid PE as currently they believed

some (including themselves) took advantage of this situation. Other students wanted more after-school sport as well.

Students were unanimous in their belief that schools should expand the variety of choices available in PE. Students wanted a wider variety of activities to choose from: *"I think the choices that we have, like if we have more choices we're going to be able to do it more because we have a wider range"*. Male students suggested hockey, badminton, circuit training, weights, Aussie rules, tennis, golf, and swimming. Girls said they would enjoy alternatives to non-traditional sports and suggested *"yoga or pilates, like stretching, something cool like that."* Other *"girls' sports"* included tennis, netball, dancing, aerobics, swimming, softball and hockey. They also thought single sex sports with more appropriate uniforms would be beneficial.

Students could see the value in encouraging younger years to start early.

*I think they should encourage kids to get into group sports, like netball or softball or soccer when they're younger because when the schools don't have it for Year 11 and 12 they're still going to do that because they're part of a team, but if they're not, they're just going to go and watch TV and stuff, because I know that if I didn't play netball when I was younger there's no way I'd be doing it now sort of thing.*

Students also discussed ways to increase physical activity during unstructured times such as recess and lunch. They would like to see more sports areas.

*I reckon in our school they could have more sporting areas, because we only have the back oval and a basketball court. We don't really have anywhere else to play other sports. There's a cricket net but normally kids hang around there and just like sit and*

*talk. I think we need other places to play.*

Better use of existing sports areas was also mentioned: *“there should be certain sections like for year groups, so you feel more comfortable”*; and more access to sports equipment during lunch and recess: *“Like in our primary school they had a sport shed and you could borrow something, write your name and borrow something, they should have that here, but they don’t”*.

### **Promoting healthy eating and physical activity at school**

Students acknowledged the benefits of broader approaches to encouraging physical activity and healthy eating at school. They recognised a need to incorporate promotion across the curriculum/school life, not just in a subject-specific way. Students suggested promoting healthy behaviours during roll call (a time when other health issues were addressed), and having programs similar to those in place to combat bullying which addressed the whole student population.

*Yes, so instead of singling people out and being like ‘oh you’re fat’ sort of thing, be more broad about it and just like it shouldn’t matter around you but for your health. Not so much a social thing but more a health thing.*

Students could also see the importance of the school environment for students who were less likely to participate in sport outside of school: *“The only time they choose to play and to be active is at school, not at home, because people would rather do other things than get healthy and fit”*.

### **Community and broader changes**

Students were asked what they thought needed to happen outside the school environment to make it easier for young people to eat healthy foods and be more active. Their responses demonstrated their understanding of the complexity of the causes behind the increases in overweight and obesity and recognition of the range of responsibilities involved in addressing the issue.

Their suggestions ranged from family level to local government and community level, as well as industry. They were clear that any changes implemented should start early i.e. during primary or early childhood years for maximum impact: *“Get them into sport young”*; *“When you’re younger it (sport) becomes habit as well, like it’s just a normal thing to be involved in”*.

In the family context, several students noted the importance of parental encouragement and participation in physical activity with and for their children.

*They could take you to sport and stuff. Some people want to play sport, but their Mums and Dads won’t take them because they are too busy and working. If our Dad wants to go and kick the footy, we will both go, and me and my brother will go, but if only we want to, then we won’t go.*

Students also acknowledged the effects of having too much junk food in the home and suggested parents limit the amount they buy:

*You find it in the cupboard, and I’ll eat that, if it’s there so if they stop buying most of it, and get more healthy food, then you would just eat that, because it’s there and easier.*

Students had extensive suggestions for changes at the local community and industry level. They wanted more local resources e.g. more places to play sport, access to gyms and improvements to existing facilities such as maintenance for local parks and ovals. They acknowledged the competitive nature of sports in the community and wanted more opportunities for fun sport:

*More divisions in sports, because if someone is like really bad at football, fourth division would still be pretty hard for them. Just recreational stuff, like if they just want to come and play.*

In relation to industry and products, the students noted that unhealthy take away food places outnumbered healthy options. They thought that convenience retail outlets such as petrol stations that sold junk food could sell healthy food instead. Combining their ideas, students suggested that having healthy options at sporting areas or events would promote healthy eating and physical activity:

*I'd personally say something like a skate park, where it attracts a lot of people, like set up a stall around there, offering fruits, things that are healthy, even bottles of water, and kids would buy some after skating then wouldn't have to go all the way down to some shops that have Coke, it's right there and it's healthy.*

Students also had suggestions for change at the national level. They proposed controls on fast food advertising, and TV advertising campaigns for healthy options using celebrities and humour. They also thought radio and magazines were suitable media to use for young people. Students wanted a reduction of pressure on young people and an emphasis on balance, commonsense and fun. They wanted to decrease the cost of healthy food options by implementing a tax so that high fat foods cost more or through financial incentives such as discounts on healthy foods. Students recommended national physical activity awareness days at schools with healthy food included, as well as making sport and gyms more financially accessible to young people and their families.

### **Motivators for change**

Students were asked what would motivate young people to eat healthy foods and be more active. Their responses

reflected their answers to previous questions but will be summarised briefly here.

Participants believed visual depictions of change (e.g. “before and after” pictures of people who had lost weight) and explanation of consequences (e.g. if you eat Y it will take X time to work it off) would encourage change in adolescent behaviours. They believed using humour, vibrant colours, and celebrities in campaigns, and reward-based incentives when buying (healthy) foods would all be effective ways to reach adolescents. There was some mention of scare tactics and suggestions such as warnings on food labels similar to those on cigarette packets, but this was not the majority view.

Students wanted to see an emphasis on fun, friends, participation and inclusion in PE as opposed to an emphasis on competition and elitism. They wanted a bigger range of sport at school and in the community and would like to see alternatives to mainstream sports included in their options. They thought healthy food options at school canteens and in the community should be more affordable, attractive and available. Popular food chains such as Boost Juice and Subway were consistently mentioned as examples of healthy items, suggesting the marketing strategies used by these companies work well with young people.

### **Rural-urban differences**

As noted above, the themes between all three secondary schools, regardless of location, were similar. The main difference between the rural area and the two urban areas was the definition of the rural area as a “sporting town” and the impact that this had on the students. While it gave them numerous opportunities for organised physical activity, and a high level of community support for that activity, there was also an increased emphasis on competition and a notion that by the time students reached secondary school, only the “best” athletes were encouraged to play sport in the community.

## Discussion

### **Teachers/principals**

Staff in our study acknowledged that overweight and obesity were issues for some students but made no mention of any specific psychosocial impacts such as bullying or teasing of overweight individuals. This is in contrast to other studies and our data from the student focus groups. Work by Bauer et al (2006) with faculty and staff members of five urban schools in Boston investigated their experiences of implementing nutrition and physical activity initiatives to reduce overweight amongst school children. In this study faculty and staff members identified weight-related teasing and bullying as one of two major challenges to the promotion of healthy nutrition and physical activity within the school environment. Teachers were expected to manage weight related teasing and harassment on their own, whereas sexual harassment incidents received immediate attention from administration.

Teachers perceive that schools have a role to play in preventing obesity and promoting nutrition and physical activity, but that parents have the most significant role. Teachers were aware of the sensitivity of the issue, and felt that raising the issue of weight with a parent or student could risk causing more harm than good.

Secondary (but not primary) school teachers in our study made mention of underweight or eating disorders amongst some students as part of the broader discussion on the recognition of overweight/obesity as an issue. This is consistent with the faculty and staff in Bauer's work, with middle school girls of particular concern because of poor body image, peer pressure to diet and unhealthy weight control behaviours. Primary school teachers described a broad range of school-based initiatives that had the potential to complement and enhance the implementation of the PDHPE key learning area. Secondary school teachers

were more acutely aware of competing student welfare priorities, and the limited opportunities for additional initiatives. All interviewees agreed that it is important to address healthy eating and physical activity at an early stage in students' development and education, and that this should occur through a broad range of strategies, including efforts inside and outside schools.

It is very clear from the data that both primary and secondary school staff want help and support to address this issue in schools. This is particularly the case for secondary teachers who may experience some level of uncertainty regarding strategic approaches. Suggestions such as resource co-ordinators or support teachers make good sense but are costly when initiated across individual schools. The former Children's Health Development Foundation, 1983-2004 (now the Centre for Health Promotion), established in South Australia, provides a good illustration of a mechanism for providing support to teachers, parents and the community on nutrition and physical activity issues. This was achieved by training and resourcing of teachers, working with schools to develop environments supportive of health and encouraging schools to work closely with parents and community (<http://www.chdf.org.au>). It is noted that in early 2006, NSW Department of Education and Training and NSW Department of Health launched the 'Healthy Kids' portal and a series of ten workshops across NSW to inform and promote local action, including school-based action, to support childhood obesity prevention (<http://www.healthykids.nsw.gov.au>).

There is a paucity of qualitative data in the literature in which to locate our findings, and much of it is specific to the USA. As such, this work makes a valuable contribution to building the Australian literature base. Schools have been identified in the best practice literature as one environment where gains can be made in terms of addressing and preventing overweight and obesity. It is therefore imperative to understand overweight and obesity from the perspectives of the major players in schools (teachers and students). In

particular more qualitative work with secondary teachers and secondary students may be useful.

### Secondary students

Previous Australian qualitative research on the perspectives of young people about overweight and obesity is sparse and has tended to focus on primary school age children (Hesketh et al, 2005; Hardus et al, 2003). This study's focus on secondary school age students and the inclusion of their views on both weight and how to make it easier for young people to eat healthy foods and get adequate levels of physical activity make it an important contribution to the literature and to policy discussions. Our results demonstrated that the students who participated in this study were cognisant of both the causes and consequences of overweight and obesity for young people in general, and for the students in their schools specifically.

Students had an excellent understanding of the emotional, psychological, and health consequences of adolescents being overweight. The participants believed that overweight or obese students were often the focus of teasing from fellow students, and many had witnessed parents and other family members struggle with weight issues.

They also showed a sophisticated understanding of what a "healthy weight" means, using a combination of factors to define it, including eating habits, physical activity levels, and general wellbeing. Most students believed it was difficult to be a healthy weight, and concern about weight was common. Those without weight issues, particularly girls, were still worried about the possibility of becoming overweight or obese, and were fearful of the potential for teasing. This awareness of the consequences of overweight and obesity also stimulated a fear of becoming overweight and possibly more focus on dieting amongst some students.

The participants differentiated between being a healthy

weight and being "the right weight", acknowledging that thin was seen as ideal and linked to being attractive to the opposite sex. Some students believed that worry about weight lessened with age, partly due to peers becoming more understanding and mature about the issue. They also identified a variety of sources of assistance in dealing with weight issues, primarily from trusted and knowledgeable individuals in the family, school, medical/allied health field, and the broader community (e.g. gym trainers).

Student-identified strategies to address the issue were broad and encompassed local government, advertising and media and marketing shifts in the food industry. Not surprisingly, schools were identified by most participants as having a salient role and students consistently identified many practical and thoughtful suggestions for schools. Student suggestions emphasised the role of the School Canteen. The students' ideas on changes that would support them being physically active included:

- increasing the types of physical activities on offer, particularly those which would be appealing to and engage girls (yoga or pilates)
- arrangements to ensure shared access to sporting equipment/fields by both genders during lunch-times, after school etc.
- shifting the focus of school physical activity from one of competitiveness to one of fun and participation.

These ideas are similar to the findings from a US study of adolescents and children (O'Dea, 2003) which emphasised the preference for doing sport with friends and in teams, prioritising it as fun and increasing variety and excitement.

The results of this study indicate that secondary school students have a sophisticated understanding of the issues related to overweight and obesity. Students' level of understanding of the causes, experiences, consequences, potential solutions and complexities of high levels of

overweight and obesity in the community should not be underestimated, and should be taken into account when designing age-appropriate interventions.

### **Teachers and students**

The overall approach suggested by students and teachers was consistent: for schools to implement incremental changes that build upon existing structures. Both teachers and students perceived that schools can play a significant role, but that schools do not have sole responsibility, and perceive that there are significant individual and family responsibilities as well. This is consistent with US accounts on the perceptions of secondary school staff (Neumark-Sztainer et al, 1999).

### **Limitations and further research**

While this study makes an important contribution, it is important to consider the limitations of the study design. Firstly, the study involved students from only three secondary schools, and no secondary school from a high SES area was included. While this lack of a high SES secondary school is unfortunate, saturation was quickly achieved in the themes across the other three secondary schools, which were from diverse areas.

Secondly, the responsibility for selecting students was left to the liaison teacher, who was asked to invite a cross-section of students. The main requirement was that they be comfortable talking about these issues in a group situation. Again, the extent to which the selected students were representative of students at that school is unknown. The students did come from a wide range of backgrounds with diverse interests, however, and were all comfortable discussing the issues. They appeared to be open and honest in their discussions, and shared opinions that diverged from one another. As the purpose of the study was to get an initial overview of student opinions and perceptions, rather than a representative view, the data indicates that this goal was achieved.

## **Implications**

- Efforts by schools to provide support for healthy weight strategies may also be complemented by consultation with and inclusion of secondary school students in the process.
- In particular, given the acknowledged importance of the school canteen, and the differing perspectives students held on recent changes following the implementation of the NSW Healthy School Canteen Strategy, consultations about what is on offer and pricing should be held with students.
- School initiatives should be complemented by strategies directed to families, parents and early childhood organisations.
- Dissemination of resources and implementation of professional development opportunities that support teachers' knowledge and schools' capacity to implement initiatives that complement the PDHPE learning area needs to continue.
- Schools should continue to emphasise healthy eating and physical activity topics in the implementation of the PDHPE key learning area with all age groups, particularly in the early educational stages, and reinforce this learning through school policies and practices that promote healthy eating and physical activity.



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