A formative evaluation of Zest for Life! a new HENRY behaviour change programme for young people targeting physical activity, healthy eating, and wellbeing

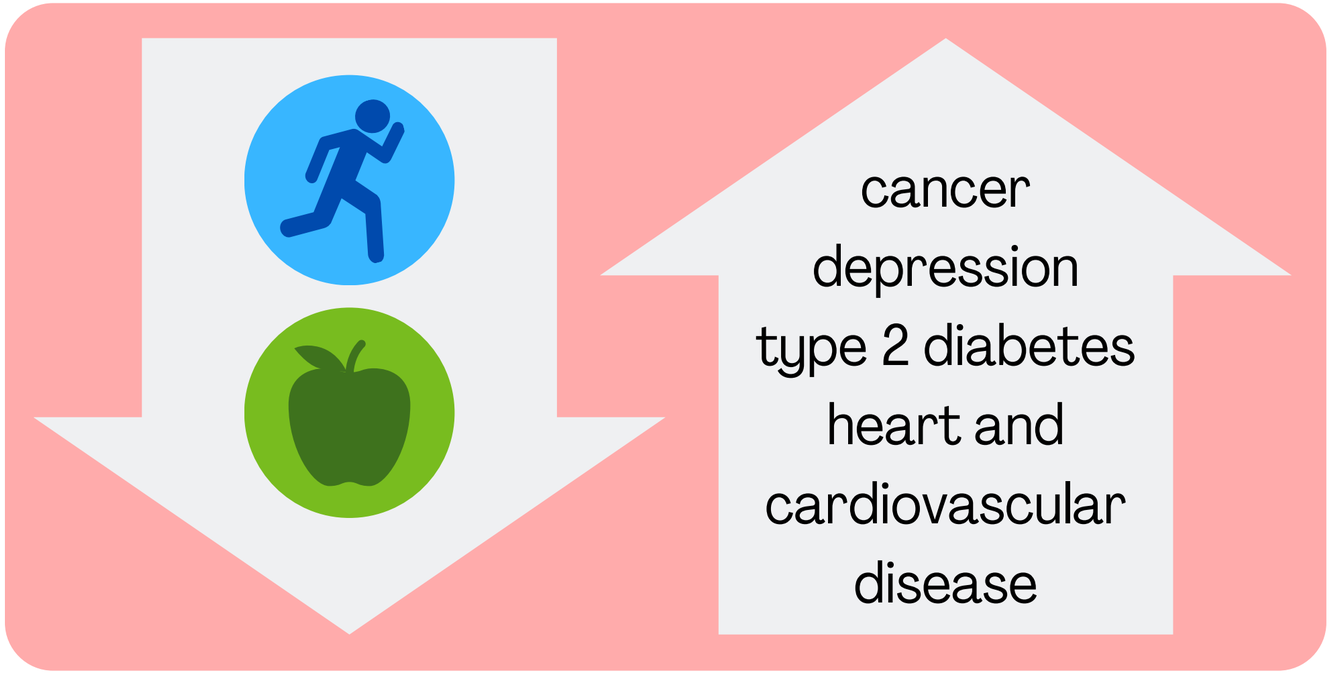
Hannah Allcott-Watson

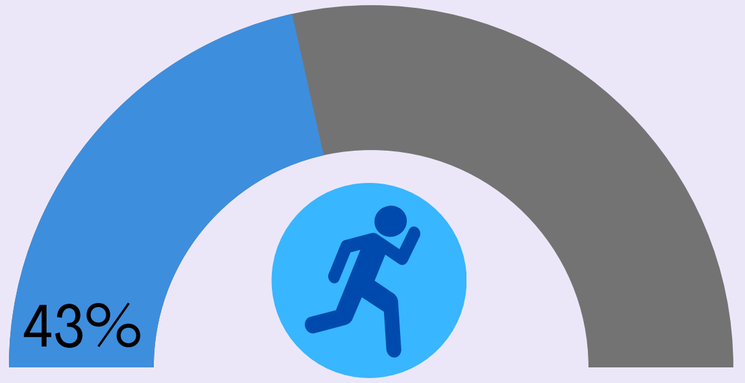
the british psychological society
promoting excellence in psychology

Division of Health Psychology Conference 2024

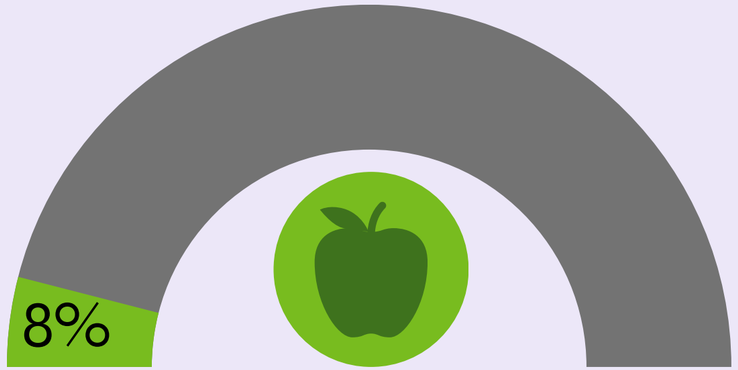
The problem

University of Hertfordshire UH





11-16 year olds meet guideline



11-18 year olds meet guideline

(Brook et al., 2016; Corder et al., 2019; Lytle et al., 2000; Movasagh et al., 2017; Public Health England, 2018; Sport England, 2019)

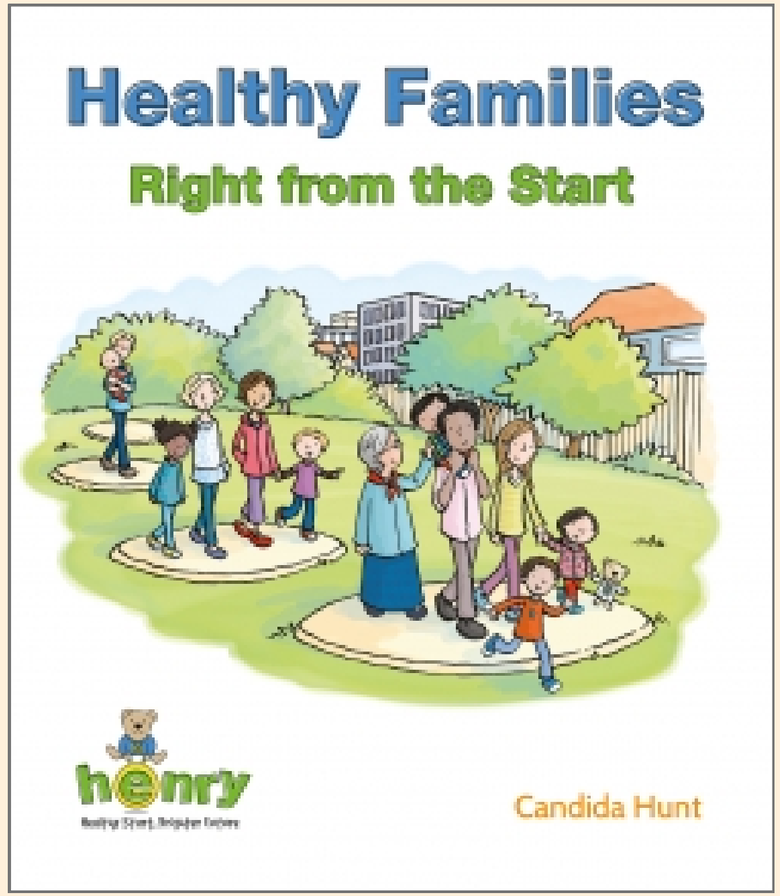
HENRY

University of Hertfordshire UH

- Charity in Oxfordshire
- Deliver UK wide
- Programmes/workshops for parents 0-11 years
- Focus on physical activity, healthy eating, family wellbeing

Remit

- Evidence-informed programme for adolescents



Programme development

University of Hertfordshire UH

1. Systematic review - Behaviour change techniques
   - Physical activity and healthy eating

2. Qualitative interviews - Young people (n = 23), Practitioners (n = 10), Commissioners (n = 7)
   - Reflexive Thematic Analysis and data triangulation

3. Programme development - Behaviour Change Wheel
   - Incorporate steps 1 and 2

(Allcott-Watson et al., 2024; Braun & Clarke, 2006; Michie et al., 2011; Michie et al., 2013; Michie et al., 2014)

Zest for Life!

University of Hertfordshire UH

- 8 group sessions, weekly, 1.5hrs per session
- Young people aged 11-16 and their parents

- Groups: 11-13 years, 14-16 years
- In school during lesson time

- One group
- Online in evening

Topics:

All: Focus on healthy eating, physical activity, and wellbeing

Parents: Strategies to support child, adolescent brain

Welcome to Zest for Life!
the Young Person Health and Wellbeing Programme

Being a young person can be challenging and in today's world where technology and fast food are an everyday part of life. This programme is an opportunity to share ideas with other young people and to think about how to develop healthy habits and attitudes that will stay with you for the rest of your lives. We hope that the sessions will help you to better understand your environment, to build on your strengths, identify what you would like to change and to gain some useful tips, tools and know-how to make it happen. We also hope that you will have fun and enjoy yourself along the way!

The eight sessions of the programme are below. We look forward to accompanying you on a journey to becoming a healthier young person, sharing valuable tools and strategies along the way.

Session Overview

Session 1: What does it mean to be healthy?
Session 2: Why is it important to be healthy?
Session 3: Eating well for health and wellbeing
Session 4: Being active for health and wellbeing
Session 5: Mental health and wellbeing
Session 6: Continuing to eat well
Session 7: Health and wellbeing for flourishing
Session 8: Celebrating progress!

1

Zest for Life!

University of Hertfordshire UH

Managing anxiety

It is perfectly normal for us to experience anxiety at tim
level of anxiety can even be helpful as it can motivate u
for a test or practise a new skill. Anxiety also helps keep
through the fight/flight response. For example, if you ar
the road and car comes speeding along, chances are you
automatically move out the way without thinking about t
options or best course of action. This is because of the figl
response which developed a long time ago.

When we were cave people, the fight/flight response kept us alive and out of danger.
Our brains would constantly scan the environment for things that could be a threat to our survival.
When our brain sensed danger, for example because there w
sabre tooth tiger outside the cave, it would activate the fight/
response so we could either fight off the tiger or run away fror

Nowadays the fight/flight response also includes the 'freeze' option to recognise that sometimes our brain cannot decide whether to fight or run away so we end up frozen in place, like a deer caught in headlights.

This week, why not try...

Idea

side leg lifts!

- start lying on side with hand on floor in front of chest for balance
- raise and lower leg 7 times
- raise leg and hold for a count of 7, then lower
- raise and lower leg 7 times
- swap sides and repeat with the other leg

swapping ice cream for natural yoghurt with fruit!

shoulder roll breathing for a calm mi

- Inhale deeply for a count of 3 as you pull your shoulders up to your ears.
- Breathe out through your mouth and roll your shoulders down and back (as far away from your ears as you can get) as you exhale for a count of 4.
- Repeat slowly in a continuous movement of shoulder rolls while breathing in and out.

This short video explains the wonderful neuroplasticity of the brain. (scan the QR code or go to www.youtube.com/watch?v=ELpfYCZa87g)

The developing brain is also working to gain more control over emotions and behaviour but that process takes a long time. The part of the brain that is responsible for thinking, planning and making good decisions, the prefrontal cortex, is not fully formed until the end of adolescence (mid-twenties) so people don't have the same ability to think, plan and manage their emotions as we adults. Understanding this can help us understand their behaviour which can some rather difficult!

The brain is also going through a period of greater sensitivity to social relationshi friendships can sometimes be a challenge. Friends also become increasingly im young people as they move away from their parents/carers. Supporting them choices and develop healthy habits as they grow in independence is really im

The brain, breathing and responding versus reacting

As we've already mentioned the teenage years are a time of rapid brain d

Location of amygdala

Understanding two areas of the brain can h understand the behaviour not only of our our own.

The amygdala is part of the limbic syster motivations are controlled. It is a very o hasn't evolved as quickly as our enviror when we were cave people this part o our survival. We needed to be on cor scanning the environment for sabre

Fortunately, we are not faced with the same dangers as we were brain still scans the environment in the same way. Unfortunate able to work out the difference between perceived threats and reaction can be triggered for both a dangerous situation and a simple challe test, standing up and talking in front of people.

When the amygdala detects a perceived threat, information cannot be passed through to the prefrontal cortex where rational thinking and decision making takes place. An emotional reaction takes place without us thinking: we don't have the opportunity to think and respond to the situation. We might say or do something we wish we hadn't. Fear, anxiety, anger and stress, all shut down our thinking.

Location of prefrontal cortex

Fruit and vegetable tracker

Use the tracker below to take note of the fruit and vegetables you eat this week. Tick off each portion as you go.

Formative evaluation

University of Hertfordshire UH

Eligibility

- Attended one session
- Opt-out at point of registration

Measures

- 2 item fruit and vegetable intake
- Youth Physical Activity Questionnaire (Y-PAQ)/Short Active Lives Survey (SALS)
- Short Warwick-Edinburgh Mental Wellbeing Scale (SWEMWBS)
- Feedback form
- Interview schedules

(Corder et al., 2009; Huang et al., 2019; Milton et al., 2017; Stewart-Brown et al., 2009)

Formative evaluation

University of Hertfordshire UH

Procedures

- Sign up to programme, evaluation opt-out, parental consent and baseline measures
- YP assent first session and baseline measures
- Receive programme from HENRY
- Post programme measures during last session (paper YP, online P)
- Feedback form during last session (paper YP, online P)
- 1:1 Interview shortly after

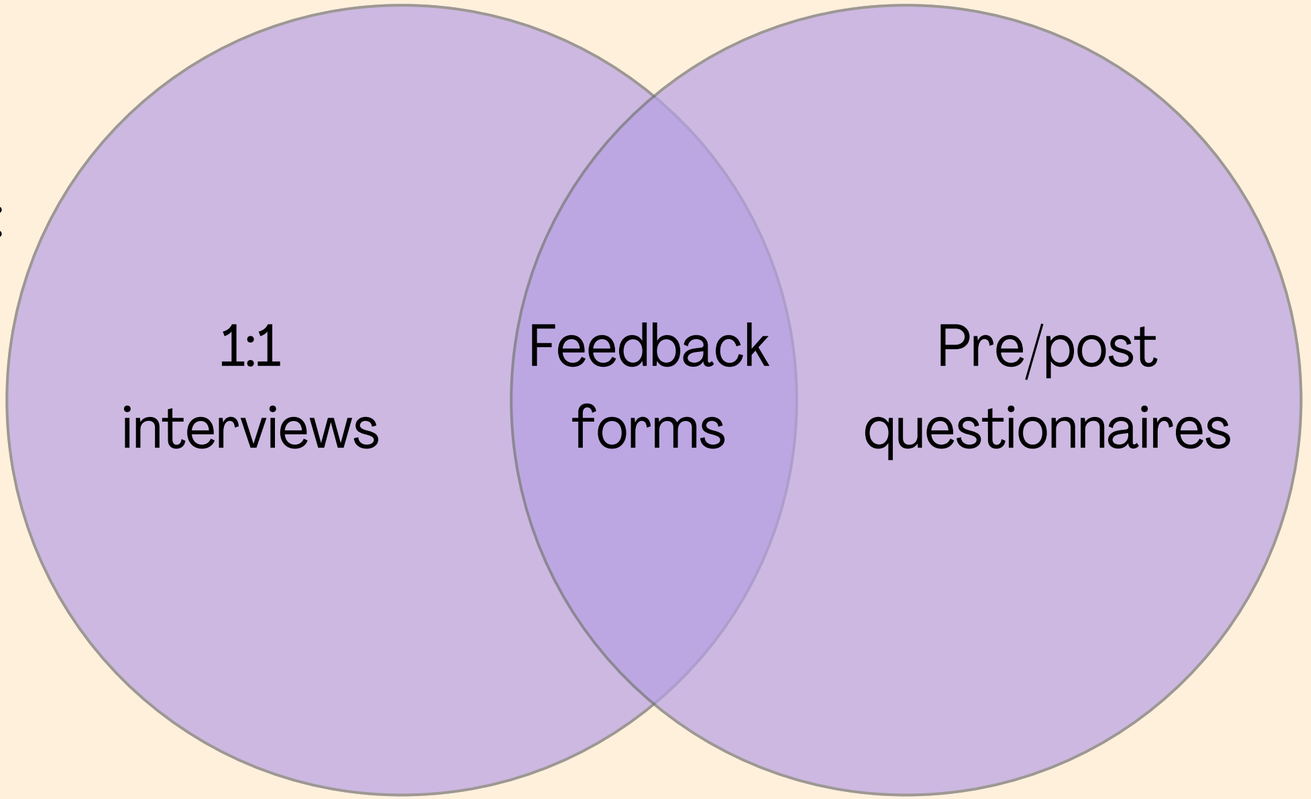
Formative evaluation

University of Hertfordshire UH

Data analysis

Qualitative

All participants:
Data deductively coded to APEASE



Quantitative

Young people:
Exploratory *t*-tests

Parents:
Descriptive statistics

Formative evaluation

University of Hertfordshire UH

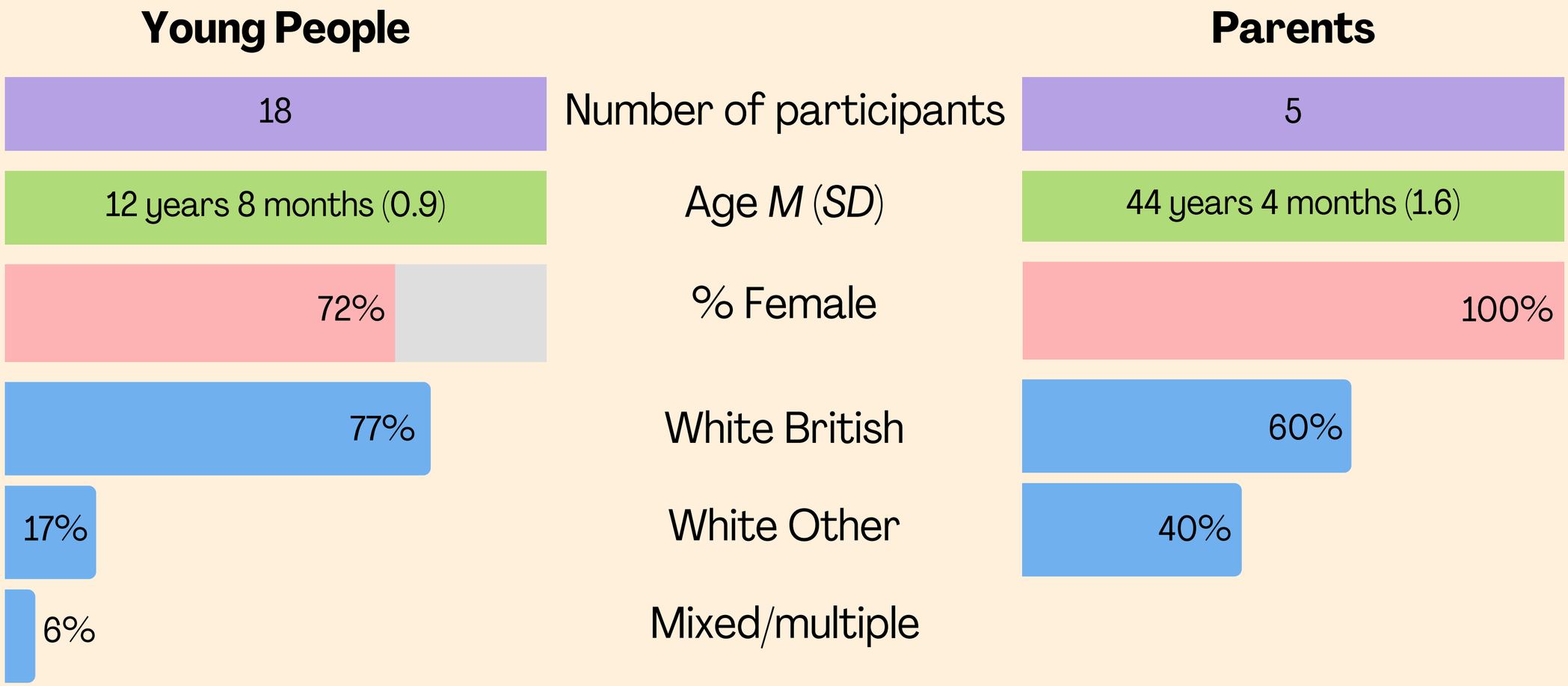
Acceptability	How acceptable is it to stakeholders?
Practicability	Can it be implemented as intended?
Effectiveness	How large an impact will it have on users?
Affordability	How far can it be afforded at the scale intended?
Spill-over effects	What unintentional effects might there be?
Equity	Will it impact groups of people differently?

(Michie et al., 2014; West et al., 2020)

Formative evaluation

University of Hertfordshire UH

Participants



4 Formative evaluation

University of Hertfordshire UH

APEASE

Acceptability

- ✓ Name of programme
- ✓ Sessional activities
- ✓ The HENRY approach
- ✓ Delivery methods
- ✓ Questionnaire completion

> *"I think Zest for Life! kind of does make people go, ooh, I wonder what that is"* (James, 15)

> *"I liked the bike [poster], because I have one in my room now. ... Just so I can remember and see it every morning."* (Monica, 14)

> *"You don't expect it, so I think it was pretty cool that you could do [activity breaks]."* (Miriam, 13)

> *"I completely saw the absolute fantastic value that young people have gained from this ... and parents too, and I've learned lots of things" (Mirabel, 46)*

- Topics ✓
- Resources ✓
- Duration ✓
- Retention ✓
- Parent inclusion ✓

4 Formative evaluation

University of Hertfordshire UH

APEASE

Practicability

- Evening session enabled easy access for parents
- Young people able to attend during school time

Affordability

- Free to use
- Group format acceptable - cost implications for delivery

Equity

- Evening sessions viewed as inclusive for parents
- Missing lessons - education inequality

4 Formative evaluation

University of Hertfordshire UH

APEASE

Effectiveness

"I think my relationships are more healthy" (Monica, 14)

"Being a bit more aware of [healthy eating], and not being like, oh, it doesn't matter. And being a bit more, yes, it does matter" (Rex, 12)

"The girls' eating has improved since the course. For instance, they wouldn't eat Chinese food; they now eat that. They wouldn't eat scrambled egg, so we now eat that and they're eating curry." (Olivia, 43)

Healthy eating
Physical activity
Wellbeing
Sleep
Knowledge
Relationships
Family life

"I've been doing it - been more encouraged to do it from the programme, because I think when I was doing it, I didn't really want to do PE with Joe Wicks, but now I do want to do it a bit more." (George, 13)

"It's more easy to wake up" (Peter, 13)

"I'm not, it's not in my head so much anymore. If I even begin to think that, I'm just like, no, I'm not going to think about that stuff" (Tilly, 12)

4 Formative evaluation

University of Hertfordshire UH

APEASE

Spill-over effects

- Feeling ‘bad’ not more active
- Anxiety during taste testing
- Missing lessons

- Children taking part in new activities, open to trying new things
- Increased physical activity of siblings not on programme
- Parent not on programme took active role to support child

4 Formative evaluation

University of Hertfordshire UH

Exploratory statistical analysis - young people

Measure (variable)	Pre mean (SD)	Post mean (SD)	Mean change (SD)	*p* value	Effect size
Fruit intake (portions/day)	2.1 (1.4)	2.8 (1.4)	.67 (0.5)	.07	.46
Veg intake (portions/day)	1.9 (1.5)	2.6 (1.5)	.72 (1.5)	.06	.49
Total F&V (portions/day)	4.0 (2.6)	5.4 (2.6)	1.4 (2.7)	.04	.51
Youth-Physical Activity Questionnaire (mins MVPA/week)	694 (432)	727 (514)	32 (298)	.66	.11
Short Warwick Edinburgh Mental Well Being Scale (score)	21.9 (4.8)	21.8 (4.5)	-.07 (3.7)	.93	-.02

5-a-day

Pre: 44%
Post: 72%

420 mins MVPA/week

Pre: 72%
Post: 72%

4 Formative evaluation

University of Hertfordshire UH

Descriptive statistics - parents

Measure (variable)	Pre mean (SD)	Post mean (SD)	Mean change (SD)
Fruit intake (portions/day)	2.4 (.6)	2.4 (.6)	0 (.7)
Veg intake (portions/day)	2.2 (.8)	2.6 (.6)	.4 (.6)
Total F&V (portions/day)	4.6 (.6)	5.0 (1.0)	.4 (.6)
Short Active Lives Survey (mins MVPA/week)	287 (354)	168 (98)	-119 (333)
Short Warwick Edinburgh Mental Well Being Scale (score)	21.8 (3.8)	21.1 (2.7)	-.75 (2.3)

5-a-day
Pre: 60%
Post: 60%

150 mins MVPA/week
Pre: 40%
Post: 60%

4 Formative evaluation

University of Hertfordshire UH

Conclusions

Findings:

- Acceptable, Practicable, limited Spill-over effects
- Minor alterations will enhance programme

Next steps:

- Refine programme
- Further evaluation - include deliverers and HENRY
  - assess Affordability and Equity
  - community settings
- Formal effectiveness testing

University of Hertfordshire UH

Thank You!

h.allcott-watson@herts.ac.uk

@HannahAW

References

Allcott-Watson, H., Chater, A., Troop, N., & Howlett, N. (2024). A systematic review of interventions targeting physical activity and/or healthy eating behaviours in adolescents: practice and training. Health psychology review, 18(1), 117-140. doi.org/10.1080/17437199.2023.2173631

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative Research in Psychology, 3(2), 77–101. doi.org/10.1191/1478088706qp063oa

Brooke, H. L., Atkin, A. J., Corder, K., Ekelund, U., & van Slujis, E. M. F. (2016). Changes in time-segment specific physical activity between ages 10 and 14 years: A longitudinal observation study. Journal of Science and Medicine in Sport, 19, 29-34. doi.org/10.1016/j.jsams.2014.10.003

Corder, K., van Sluijs, E. M., Wright, A., Whincup, P., Wareham, N. J., & Ekelund, U. (2009). Is it possible to assess free-living physical activity and energy expenditure in young people by self-report? The American Journal of Clinical Nutrition, 89(3), 862–870. doi.org/10.3945/ajcn.2008.26739

Corder, K., Winpenny, E., Love, R., Brown, H. E., White, M., & van Sluijs, E. (2019). Change in physical activity from adolescence to early adulthood: a systematic review and meta-analysis of longitudinal cohort studies. British Journal of Sports Medicine, 53, 496-503. doi.org/10.1136/bjsports-2016-097330

Huang, P., O'Keeffe, M., Elia, C., Karamanos, A., Goff, L. M., Maynard, M., Cruickshank, J. K., & Harding, S. (2019). Fruit and vegetable consumption and mental health across adolescence: Evidence from a diverse urban British cohort study. International Journal of Behavioral Nutrition and Physical Activity, 16(1), 19. doi.org/10.1186/s12966-019-0780-y

Lytle, L. A., Seifert, S., Greenstein, J., & McGovern, P. (2000). How do children's eating patterns and food choices change over time? Results from a cohort study. American Journal of Health Promotion, 14(4), 222-228. doi.org/10.4278/0890-1171-14.4.222

Michie, S., Atkins, L., & West, R. (2014). The Behaviour Change Wheel: A Guide to Designing Interventions. Silverback Publishing.

Michie, S., Richardson, M., Johnston, M., Abraham, C., Francis, J., Hardeman, W., Eccles, M. P., Cane, J., & Wood, C. E. (2013). The Behavior Change Technique Taxonomy (v1) of 93 Hierarchically Clustered Techniques: Building an International Consensus for the Reporting of Behavior Change Interventions. Annals of Behavioral Medicine, 46(1) 81 - 95.

Michie, S., van Stralen, M. M., & West, R. (2011). The behaviour change wheel: A new method for characterising and designing behaviour change interventions. Implementation Science, 6(1), 42. doi.org/10.1186/1748-5908-6-42

Milton, K., Engeli, A., Townsend, N., Coombes, E., & Jones, A. (2017). The selection of a project level measure of physical activity: Final report. Sport England. https://evaluationframework.sportengland.org/media/1348/short-active-lives-research-report.pdf

Movassagh, E. Z., Baxter-Jones, A. D. G., Kontulainen, S., Whiting, S. J., & Vatanparast, H. (2017). Tracking Dietary Patterns over 20 Years from Childhood through Adolescence into Young Adulthood: The Saskatchewan Pediatric Bone Mineral Accrual Study. Nutrients, 9. doi.org/10.3390/nu9090990

Public Health England. (2018). Statistical Summary: National Diet and Nutrition Survey: results from Years 7 and 8 (combined) of the Rolling Programme (2014/15 – 2015/16). https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/690748/NDNS_years_7_and_8_statistical_summary.pdf

Sport England. (2019). Active Lives Children and Young People Survey: Academic Year 2018/19. https://sportengland-production-files.s3.eu-west-2.amazonaws.com/s3fs-public/2020-01/active-lives-children-survey-academic-year-18-19.pdf?cVMsdnpBoqROViY61iUjpQY6WcRyhtGs

Stewart-Brown, S., Tennant, A., Tennant, R., Platt, S., Parkinson, J., & Weich, S. (2009). Internal construct validity of the Warwick-Edinburgh Mental Well-being Scale (WEMWBS): A Rasch analysis using data from the Scottish Health Education Population Survey. Health and Quality of Life Outcomes, 7(1), 15. doi.org/10.1186/1477-7525-7-15

West, R., Michie, S., Chadwick, P., Atkins, L., Lorencatto, F., Chadborn, T., & Sallis, A. (2020). Achieving behaviour change: A guide for national government. Public Health England. https://assets.publishing.service.gov.uk/media/5fa537c7d3bf7f03b249aa12/UFG_National_Guide_v04.00__1___1_.pdf