NASS Nutrition Project

Eat to Learn, Learn to Eat

West Heath School

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Abstract

An investigation using change management to assess the impact of good nutrition on health, behaviour, and learning amongst vulnerable students in a special school environment. Over a six-month period (December 2018 to May 2019), various pre- and post-measures were taken before the healthy lunches were introduced from the start of January 2019. The results demonstrated some positive outcomes, although no correlation can necessarily be drawn between the introduction of healthy meals and the improved outcomes due to the number of confounding variables which could not be controlled for. Nonetheless, it was a worthwhile exercise in change management, and provided a conscious awareness within the school as to the benefits of healthy nutrition.

Focus Area

To encourage healthy eating within a school environment.

Introduction

Research consistently suggests that nutritional status can directly affect mental capacity among school-aged children. Existing data suggests that with better nutrition students are better able to learn, have fewer absences, and behaviour improves causing few disruptions in the classroom (Belot & James, 2011; Sorhaindo & Feinstein, 2006).

In the UK, policies driven by both the Department for Education (DfE) and the Department for Health have worked hard over the past decade to increase healthy eating in schools highlighting the adverse effects of foods that are high in calories, fat, sugar, and salt. Children with nutritional deficiencies are particularly susceptible to the moment-to-moment metabolic changes that impact upon cognitive ability and performance of the brain. Not only can poor nutrition lead to poor cognitive and behaviour performance but it may result in decreased immunity and greater susceptibility to infectious disease. There is also a growing body of evidence indicating that good nutrition may play an important role in the

prevention, development, and management of diagnosed mental health problems including depression, anxiety, and schizophrenia.

However, food and taste preferences, whilst partially determined by biological and genetic predisposition, are also influenced by social and family factors; additionally, they can be affected by advertising and market trends. For example, the trend for fast food and TV dinners has had a major impact on eating habits over the past two decades. Early life, particularly adolescence, which is a time of transition to adulthood where many lifelong habits are being established, is therefore a critical period in which to educate young people on the benefits of healthy eating.

Rationale/Aims

The aim of this study was to attempt to change the way students and staff at a specialist school for social, emotional and mental health (SEMH) difficulties view healthy nutrition and to recognise and understand the benefits. School is an environment in which there is the possibility to help students develop lifelong healthy eating habits, which in turn should benefit not only their academic performance but also their behaviour and mental health. A secondary aim was to improve staff wellbeing and, in turn, a subsequent decrease in staff absences.

Background Context

West Heath School is an independent secondary school for young people aged 10 – 19 with SEMH. Based in Kent, we have been awarded Outstanding by Ofsted on the past three occasions for both the school and our residential provision. We have approximately 130 students on roll, 25 of whom are weekly boarders. However, 28 students are in the Sixth

Form and attend college so do not access lunch on the school site, so for the purposes of this study, we are talking in the region of 100 students who access lunch daily on the school site.

We have an excellent catering team, Holroyd Howe, who provide breakfast, tuck, and lunch for all students and staff and are very proactive and supportive in helping to keep our students healthy. However, we do have a significant difficulty with persuading our students to eat healthily and the consumption of fizzy drinks, sweets, crisps and biscuits are an ongoing problem. This is exacerbated by some of our staff who at times resort to using unhealthy treats to encourage and reward attendance and engagement in lessons.

The Process

When a decision was made to improve our nutritional programme, both staff and students were consulted for their views. This took the form of a full staff consultation (a presentation followed by discussions amongst several smaller focus groups), in addition to asking the opinions of the student council (who then cascaded it down through their tutor groups). At the time of consultation, the majority of staff were in favour although the students generally less so. The catering team were fully on board and made a significant contribution to generating ideas for healthy meals.

Before the launch of the new nutritional provision, a number of pre-intervention measures were taken in December 2018. These included student attendance figures, emotional wellbeing scores (measured through the Strengths and Difficulties Questionnaire (SDQ)), and numbers of behavioural incidents. The uptake of lunches was also recorded with specific notice paid to the type of lunch (e.g. hot meal, sandwich, dessert only) as we were aware that many students chose not to have lunch. These measures were repeated in May 2019 and the results analysed as can be seen in the Results section below.

In addition to this quantitative analysis, a qualitative element in the form of anecdotal evidence from both students and staff was incorporated. This included feedback from staff and students as to what they thought of the new healthy menus and whether they had noticed any differences in behaviour, emotions, or wellbeing.

In January 2019 the catering team presented an assembly to all students and staff outlining the changes to the menus and emphasising the benefits of healthy nutrition (see Appendix A). Changes included Grab 'n' Go options (e.g. Fusilli with chunky tomato sauce and feta cheese), sandwiches made with 50:50 bread, and healthy main meals such as Thai Green Chicken Curry. Samples of menus can be seen in Appendix B. Posters were also put up around the school reinforcing the message.

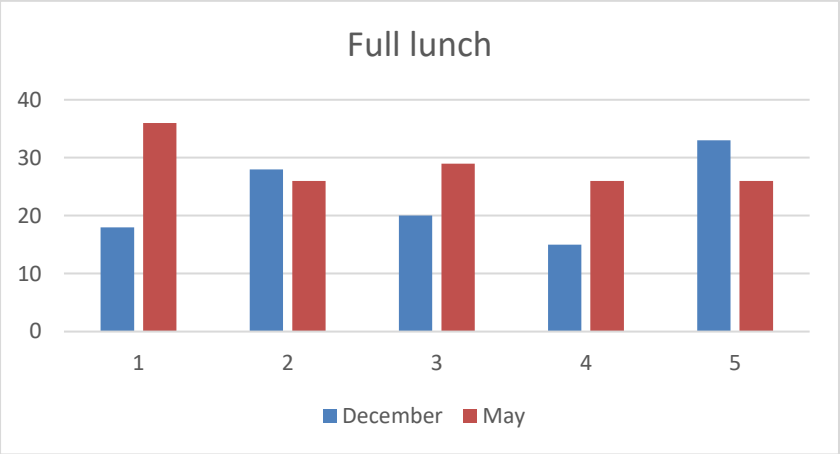
Letters were also sent out to parents/carers asking for their support and advising them of the importance of encouraging their children to eat healthily at home, and not to bring in unsuitable snacks/drinks. (As this was a natural experiment there were no ethical considerations and parental permission was not required).

Results and Impact

1) Uptake of Lunches

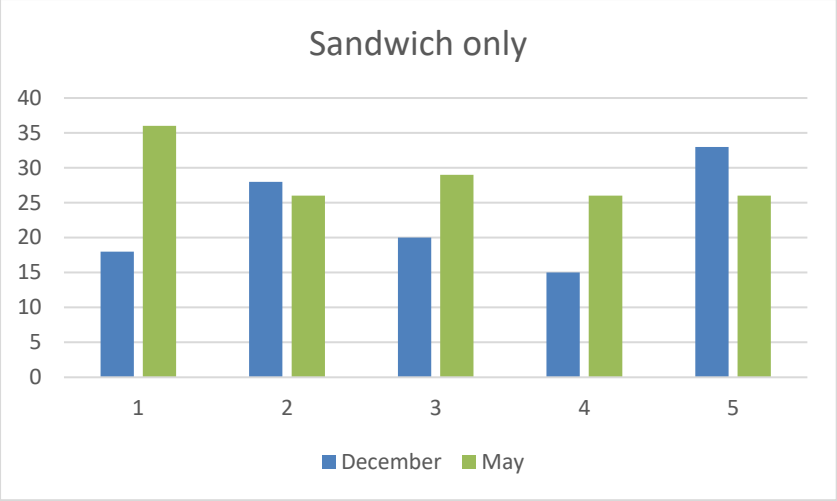
The results from the uptake of lunches during the course of a week in December 2018 compared to a week in May 2019 can be seen below. As can be seen, the number of students accessing lunch of some kind increased from a total of 207 in December to 248 in May.

a) Students accessing a full lunch over the course of a week in December 2018 compared to a week in May 2019



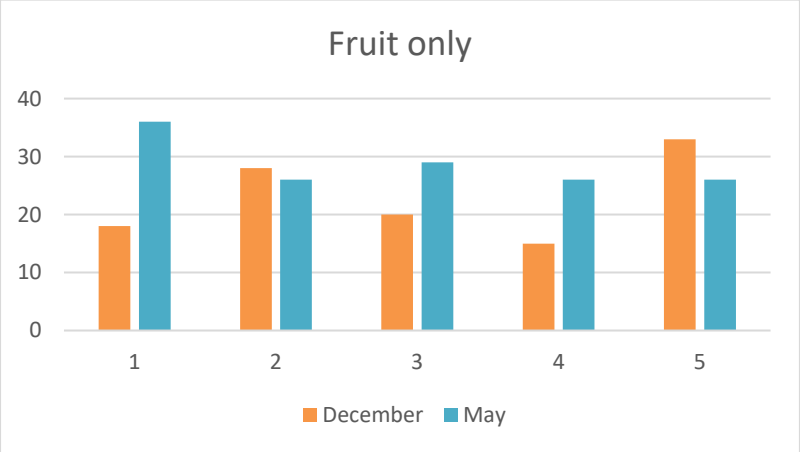
Key: 1 = Monday, 2 = Tuesday, 3 = Wednesday, 4 = Thursday, 5 = Friday

b) Students eating only a sandwich over the course of a week in December 2018 compared to a week in May 2019



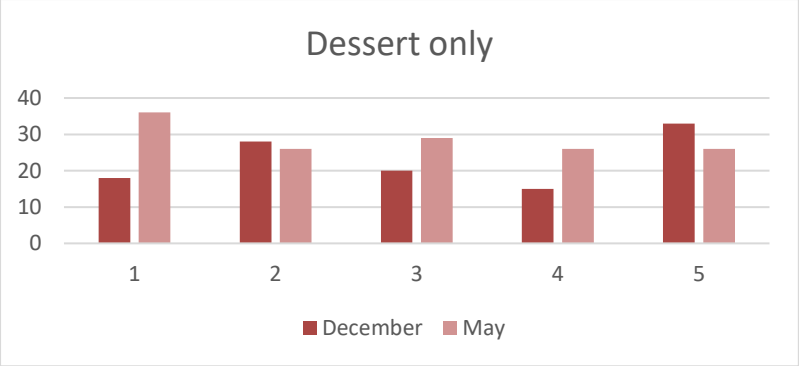
Key: 1 = Monday, 2 = Tuesday, 3 = Wednesday, 4 = Thursday, 5 = Friday

c) Students eating only fruit over the course of a week in December 2018 compared to a week in May 2019



Key: 1 = Monday, 2 = Tuesday, 3 = Wednesday, 4 = Thursday, 5 = Friday

d) Students eating dessert only in the course of a week in December 2018 compared to a week in May 2019



Key: 1 = Monday, 2 = Tuesday, 3 = Wednesday, 4 = Thursday, 5 = Friday

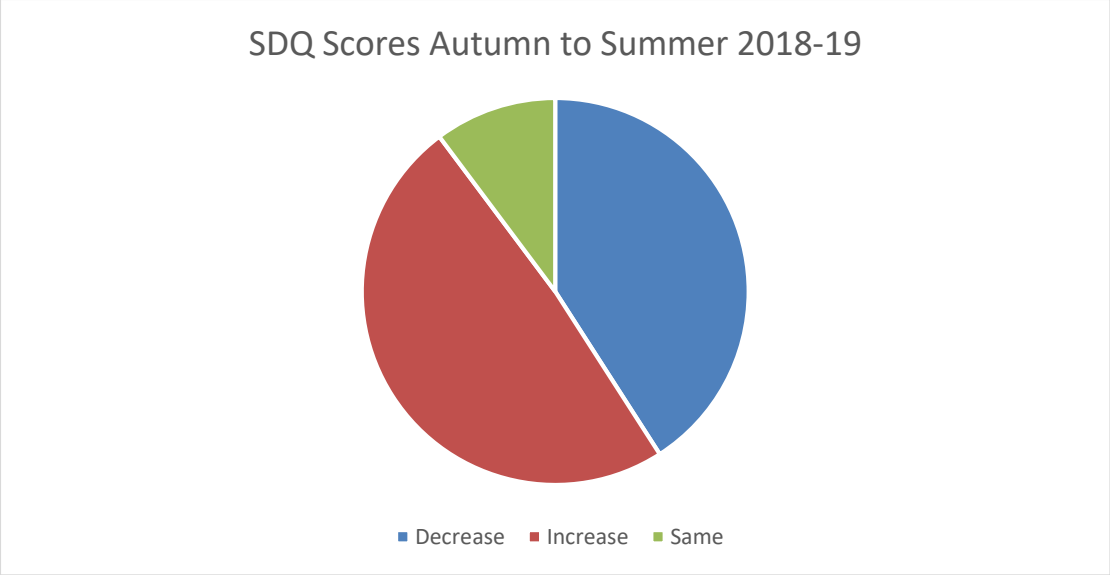
2) Results from the SDQ scores from Autumn to Summer 2018/2019

The SDQ is a brief emotional and behavioural screening questionnaire for children and young people. The tool can capture the perspective of children and young people, their parents/carers and teachers.

The 25 items in the SDQ comprise 5 scales of 5 items each. The scales include:

1) Emotional symptoms subscale
2) Conduct problems subscale
3) Hyperactivity/inattention subscale
4) Peer relationships problem subscale
5) Prosocial behaviour subscale

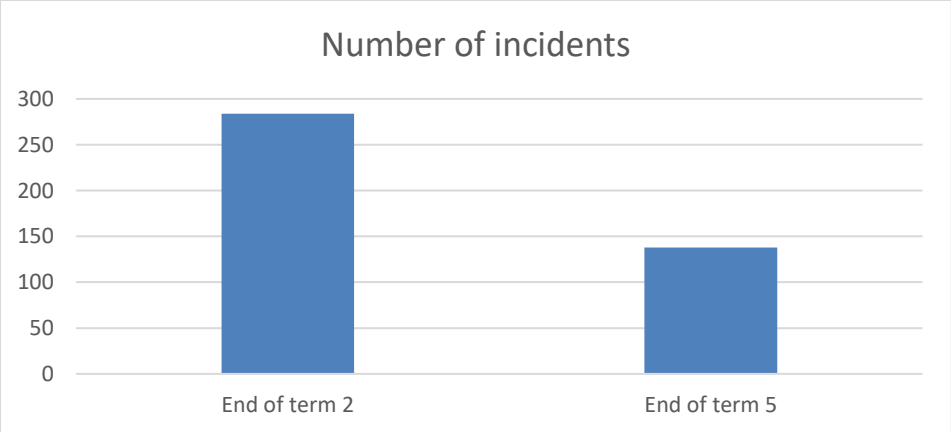
For the purpose of this project, only the teacher's scores were evaluated (there are also parent and student versions). The higher the score, the lower the student's emotional well-being i.e., a decrease in scores is a positive change. The baseline was taken at the end of Term 2 (Autumn) and the exercise was repeated at the end of Term 5 (Summer).



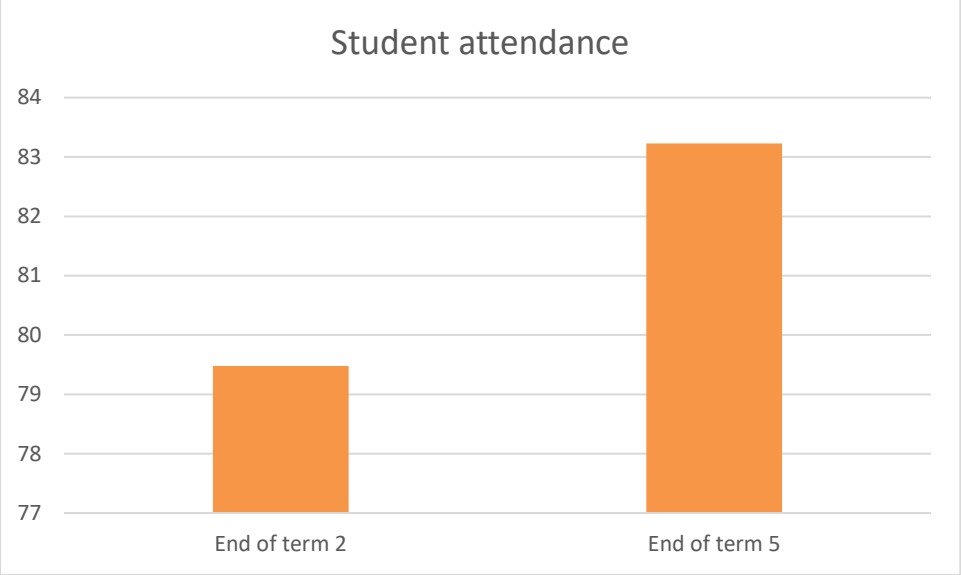
Summary of SDQ scores:

- 41% of students' total difficulties scores decreased from the end of Term 2 (Autumn) to the end of Term 5 (Summer)

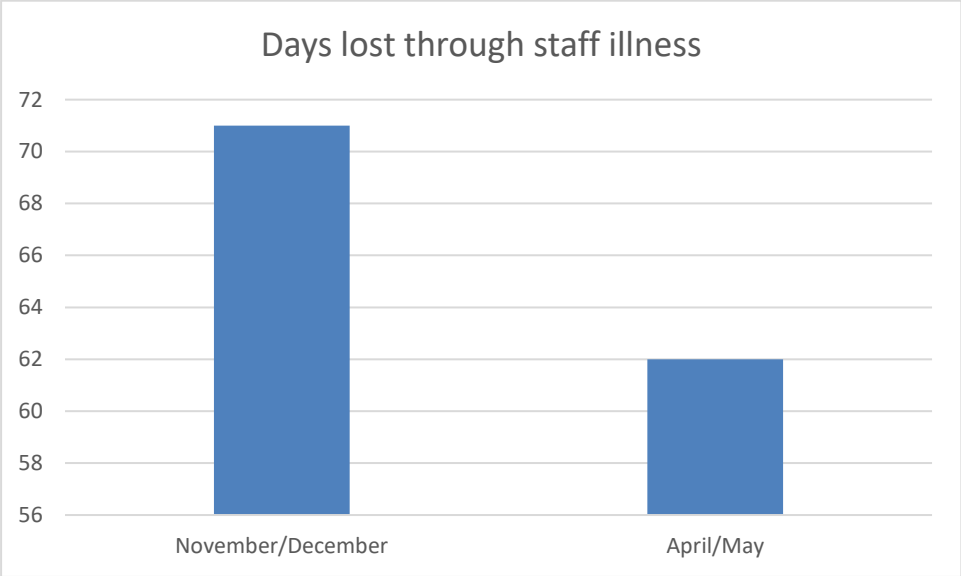
3) <u>Number of incidents:</u>



4) Student attendance



5) Staff absences:



Discussion

The purpose of this research study in change management was to see whether the introduction of a healthy eating campaign would have a positive impact on students' behaviour, emotions, and general wellbeing, and whether this in turn would improve attendance and engagement with learning. It was anticipated that if positive results were achieved, that an added benefit would be an improvement in staff wellbeing and improved attendance at work.

As the results demonstrate, the student uptake of school lunches has increased over the six-month period from December 2018 to May 2019. In total during a week in December, 207 lunches of some kind or another (provided by the catering team) were accessed by students over the course of five days; in May the equivalent number was 248 – an increase of 20%. Whilst this is perhaps not as large an increase as hoped for, it does at least demonstrate a positive trend. Perhaps most importantly, however, is the number of students accessing a full meal: This has increased from 114 over the course of a week in December to 143 over the course of a week in May – an increase of over 25%. It also appears that the introduction of a Grab 'n' Go option has proved to be popular with 59 students choosing this option over the course of a week (N.B. This was only introduced in January so cannot be compared with an uptake in December). Sandwiches also seem to have increased in popularity. Interestingly it also appears that the consumption of desserts increased on some days over the time period; whilst all the desserts are 'healthy' it may reflect that some desserts are more popular than others!

In terms of SDQ scores between the end of Term 2 and the end of Term 5, there has been a positive decrease in scores which is encouraging. Whilst causality cannot be inferred, there appears to be some correlation between the uptake of lunches, the healthier menus, and improved student wellbeing.

In terms of student attendance, there has been a small increase from 79% at the end of Term 2 to 83.23% at the end of Term 5. Whilst this could be attributable to the kinder weather in the Spring/Summer, it is nonetheless an encouraging outcome.

Similarly, in terms of behavioural incidents, there has been quite a dramatic decrease in the number of incidents between the end of Term 2 (284) to Term 5 (138). Again, this is an excellent result – regardless of whether it can be attributed to the improvement in nutrition.

Furthermore, in terms of staff attendance, there has also been a decrease in days lost through sickness: from 71 days in November/December down to 62 days in April/May. Again whilst no causality can be inferred there is a possible correlation between healthier meals/improved student wellbeing/and staff sickness.

In addition to the quantitative results, anecdotal feedback from the student council was positive: Students say they have become more aware of good nutrition and some students have lost weight through healthy eating – generally positive overall. However, feedback from staff was less positive: Some staff report that there have been no noticeable improvements in student behaviour and that students are still bringing in fizzy drinks and sweets in the mornings. Furthermore, some staff are still relying on using biscuits to encourage learning.

Evaluation/Reflections:

Whilst the overall results are generally positive, it must be remembered that this was not a controlled experiment and we therefore cannot necessarily attribute the improvement of nutrition to the reported results. There were a number of confounding variables which could not be controlled for including our student cohort which changes quite often (the addition of one or two new students can totally upset the group dynamics affecting the number of incidents), the fact that student and staff absences may have been adversely affected during the winter months, and the fact that historically the build up to Christmas is extremely difficult for many of our students. Furthermore, without the possibility of a control group we cannot be confident of the veracity of the results, and they may be purely coincidental.

Nonetheless, it was a worthwhile exercise in change management, and provided a conscious awareness within the school – and particularly within the Senior Leadership Team - as to the benefits of healthy nutrition. However, perhaps the area to reflect on the most is that, whilst these results appear encouraging, when one considers that potentially approximately 500 lunches over the course of the week could have been consumed (100 students over 5 days), this still means that just under 50% of our students are either bringing in their own lunch or, of greater concern, not eating any lunch at all.

Next Steps:

Although this is a good start, there is still some way to go in our journey to educate both the students and staff about the benefits of healthy eating. In line with the recommendations from the Education Endowment Foundation (EEF, 2019) consistency, clarity, and a collaborative approach is essential in all aspects of school provision and as a senior management team we need to ensure this occurs. We have already scheduled a meeting for the start of September to discuss our next steps.

As it has been reported that some staff are still at times using unhealthy treats to encourage and reward attendance and engagement in lessons, further training in classroom

management may be an option to consider in order to provide the appropriate tools for teachers.

In the meantime, we will continue to provide healthy food and to encourage all students to eat at least one nutritionally balanced meal at lunchtime. Other steps that we are considering include having breakfast in tutor groups and offering tuck mid-afternoon to overcome the effect of medication and to provide sustenance on the long journey home that many of our students have to face at the end of a school day. In an ideal world, it would be nice to return to the school's original ethos that lunch is a social event and that all students should eat with their tutors/LSAs. However, due to the current student demographic and size of the school intake this may no longer be possible, but it is felt by many to be a valuable model to follow and may be possible to re-visit this at a later date and consult with staff and students.

To end on a really positive note, a fantastic additional outcome is that our wonderful catering team, Holroyd Howe, have been awarded the Health and Well Being Champions Award for the work they have done with the School on this Nutrition and Behaviour Project. Without their enthusiasm and dedication, we would have been unable to carry out this investigation so our thanks and congratulations go to them.

References:

Belot, M., and James, J., (2011). *Healthy School Meals and Educational Outcomes.* Journal of Health Economics, Volume 30, Issue 3, 489-504.

Education Endowment Foundation (2019). *Improving Behaviour in Schools.* eef.li/behaviour.

Sorhaindo, A., and Feinstein, L; (2006). *What is the relationship between child nutrition and school outcomes?* [Wider Benefits of Learning Research Report No. 18]. Centre for Research on the Wider Benefits of Learning, Institute of Education, University of London: London.

Appendices:

Appendix A: Presentation to students on the benefits of healthy eating

Appendix B: A typical menu for the week