Building Resilient Learners

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EXECUTIVE SUMMARY

DESCRIPTION OF BUILDING RESILIENT LEARNERS

Building Resilient Learners (BRL) is a collaboration between Sidmouth College (senior project lead – Lisa Whitworth), The University of Exeter (Research Associate – Hollie Gay) and Five Areas Ltd (Dr Chris Williams – Director), this project has been funded by the NESTA Future Ready Fund.

Absence from class and school, low resilience and poor well-being have a negative impact on pupil engagement, outcomes and life chances. The aim of this project was therefore, to test whether an emotional health and wellbeing intervention can be effective in improving pupil's wellbeing, which may in turn have a positive effect on their resilience, so that they felt settled in the classroom, were able to attend lessons and improve their school attendance.

The intervention, aimed at Year 7 students with the lowest wellbeing scores, called 'My Big Life', was a six-week series of classes based on cognitive behaviour therapy principles. Each session lasted for one hour per week and was delivered as a life-skills lesson to a class of up to 20 students who were selected based on a screening of all year 7 students. The sessions aimed to develop pupils' emotional wellbeing and provide them with strategies to cope with difficult emotions and situations. Students were given a small My Big Life card that summarised the techniques to use as a step before an exit card (exit cards provide time out of the lesson for the pupil; time out of the lesson may be limited to a few minutes or last the whole lesson). The application of these skills was supported by completion of a daily reflection journal, supported by a trained member of staff, where pupils recorded any situations they faced, what strategies they employed and how they felt about the outcome. Over the period of the intervention pupils gained an increasing toolkit of strategies that they were able to employ.

SUMMARY OF THE EVALUATION

This evaluation was carried out in 13 secondary schools in Devon, Somerset and Dorset, led by Sidmouth College, during the spring and summer term of 2020 to deliver the project and evaluation. All schools delivered the My Big Life course to a selected group of Year 7 pupils selected based on their identified by the whole year screen as having lower than their peers wellbeing scores.

An original target of 15 schools were recruited with 13 secondary schools completing the evaluation. Schools were recruited from the south west region to take part from a range of demographic areas, there was a focus on recruiting schools in urban settings and schools with a higher proportion of students with pupil premium funding. In each of the partner schools we created an intervention group and a wait list control group in order to collect comparative data. A range of data was collected, including validated wellbeing and resilience measures, attendance data and the collation of daily reflective journals to build into qualitative analysis.

As part of the evaluation from a previous iteration, we had found that students who had the lowest wellbeing scores on the Warwick Edinburgh Mental Well Being Scale (WEMWBS), improved in their school attendance most, with an average increase of 3%. When compared to the control group we saw an effect size of 0.5, which would be considered significant from a public health perspective. We therefore decided to screen all the Year 7 students to identify those with the lowest WEMWBS scores to take part in the intervention. The aim was to have 2 groups of 20 students in each partner school, both taken from the lowest scoring group of students, who were randomly allocated to the intervention or control group.

At the start of the project 629 students had provided the partner schools with active consent and were able to complete the screening questionnaire. From this data 409 students were involved in the trial and analysis. In the intervention group there were 210 allocated to receive the My Big Life sessions. There

were 199 students allocated into the wait list control group, who were to take part in the My Big Life session in the summer term of 2020.

We collected the following data at baseline, 2- and 4-month follow-up:

- Student profile data (baseline only) – gender, SEND, and disadvantaged learners (those in receipt of pupil premium funding)
- Student % attendance (baseline and 2-month only)
- WEMWBS
- Stirling Wellbeing Scale
- Student Resilience Survey
- Me and My School

The impact of Covid 19 and the closures of schools has severely impacted on the final stages of the project including the collection of data at 2-, and 4- month follow-up.

SUMMARY OF FINDINGS

Our theory of change linked together wellbeing, resilience and attendance, we postulated that if we can support young people to improve their wellbeing, through teaching Cognitive Behaviour Therapy (CBT) techniques, their wellbeing and resilience would improve resulting in better attendance at school. Our findings support this hypothesis, with the exception of the attendance data.

We used the Warwick Edinburgh Mental Well Being Scale (WEMWBS) as our measure of wellbeing. In the students with the lowest baseline WEMWBS scores, post intervention scores were statistically significantly greater in the intervention group (4.7 ± 1.2, $p < .001$) compared to the control group (.90 ± 1.1, $p = .418$), indicating the WEMWBS post score increased in the intervention group, but not control group, giving a large effect size This low wellbeing group showed an improvement in their resilience scores too, as measure by the Student Resilience Survey (SRS), here there was a statistically significant difference in SRS post scores between group allocations, $F(1, 67) = 4.558$, $p = .036$, partial $\eta^2 = .064$, giving a medium effect size.

Analysis of our attendance data shows no significant difference between the intervention and control groups, in our opinion this was partly caused by the impact of Covid 19 and preparation for lock down.

We have collected a compelling body of qualitative evidence that the students involved in the intervention demonstrate a change in their behaviour and put into practice the CBT techniques that they have learnt. The reflective journals were recorded daily for the intervention group for the 6 weeks of the intervention. Overall, 67% of pupils stated they had done something differently. Reflective journal tick lists were also recorded on a daily basis. A total of 1395 tick lists were recorded across the five skills; what's going on?', advice, breathing, I'm OK and calm control. Goal based outcomes (GBO) were used in the journals by the students to self monitor their progress towards their own goal. Overall, 69% made a reliable improvement, meaning they made an improvement greater than would be due to expected measurement error. Students who chose a goal related to the school environment e.g. "To get a higher route in Science (revise)", "Speak up in class", made the least progress towards their goal (10 out of 19 pupils, 53% reliable improvement). When the data was separated by wellbeing, pupils with the lowest wellbeing (27% of sample) chose a goal categorised as emotional e.g. "To not get peed off and lash out", "To stop crying over stupid things". 60% of these pupils made reliable improvement towards their goal.

INTRODUCTION

DESCRIPTION OF THE PROBLEM

Mental health and wellbeing have become an increasingly important issue for schools to address. This has been driven by a range of factors:

- Rising levels of mental ill health in young people (Kieling et al., 2011)
- An increasing awareness of the impact of wellbeing and resilience on students engagement and educational outcomes
- inclusion of Personal Development in the 2019 OFSTED framework
- government Relationship, Sex and Health Education (RSHE) guidance due to become statutory in all schools in September 2020, which includes a mental wellbeing strand.
- the south west having levels above England as a whole for mental health admissions (ChiMat report for Devon March 2020)

There is a well-documented link between pupil attendance and progress:

"pupils with no absence are 1.6 times more likely to achieve level 4 or above, and 4.7 times more likely to achieve level 5 or above, than pupils that missed 15-20 per cent of all sessions. Specifically, pupils with no absence are 1.5 times more likely to achieve 5+ GCSEs A*–C or equivalent and 2.8 times more likely to achieve 5+ GCSEs A*–C or equivalent including English and mathematics than pupils missing 15–20% of KS4 lessons" (Department for Education, 2015).

As professionals many teachers are aware that students may disengage from school and their learning, due to the barriers that they face in their wellbeing. Building Resilient Learners aims to provide young learners with some practical tools that they can employ when they feel these barriers starting to impact on their education.

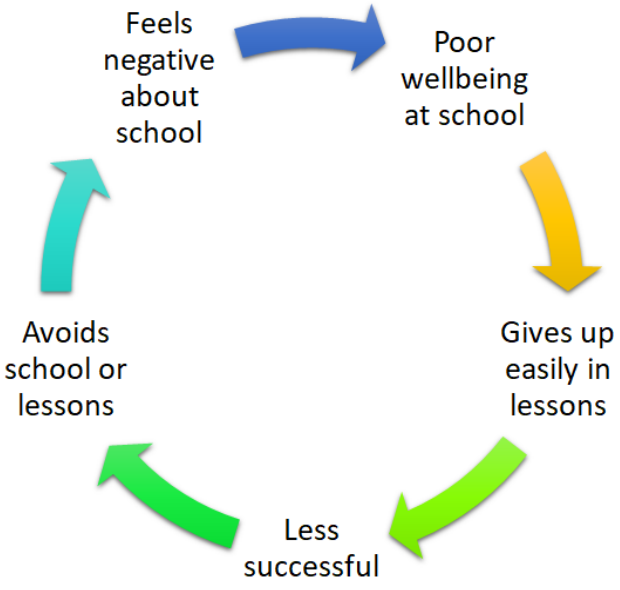

Figure 1 - The cycle of avoidance

REVIEW OF EXISTING RESEARCH

The intervention used in BRL is a course called My Big Life (MBL) which is based on Cognitive behavioural therapy (CBT) techniques, which have been adapted to be accessible to Year 7 and delivered in a classroom setting as a series of life skills. CBT has a wide evidence base and is widely recommended by national treatment guidelines (National Institute for Health and Care Excellence) for problems such as anxiety and depression. However, access to specialist CBT is typically limited to those with more severe and complex problems. An alternative is to deliver access to CBT principles in different ways. Living Life to the Full (LLTTF) is one of the most used CBT systems in the UK and the online adult version of the course is the most recommended website by NHS England mental health trusts and Improving Access to Psychological Therapies (IAPT) teams for low mood and stress ***(Bennion et al, 2017)***. Developed by Professor Chris Williams, Living Life to the Full has been widely used by adults in community settings, the health service and via charities across the UK, Ireland and Canada. LLTTF is available as a series of books using different styles of engagement and aimed at addressing different groups. Published research confirms the accessibility of the approach (***Martinez et al, 2008***) and an RCT of the longer version of the books (Overcoming Depression and Low Mood: a five areas approach) confirms effective improvements in low mood and anxiety ***(Williams et al, 2013***). The Living Life to the Full book has been chosen for the Reading Agency national book prescription scheme1. A pilot study ***(McClay et al, 2015***) and full RCT ***(Williams et al, 2018)*** of the LLTTF adult classes confirms the course improves low and anxious mood in an effective and cost-effective way. A Canadian charity (the Canadian Mental Health Association) funded the development of the LLTTF Young Persons (LLTTF-YP) course aimed at engaging young people in this approach. Content and examples were revised and reviewed throughout and it is available as a classroom course, online and as a book2.

My Big Life is a refinement of the LLTTF-YP course, shortened from eight to six sessions, and targeted at those with reduced concentration and reading abilities so as to communicate key skills and messages. Content has been reduced, and key messages emphasised. Relative to LLTTF-YP more of the content uses images, and content throughout has been made shorter and even more accessible. Worksheets likewise have been often shortened and made more visually attractive. The key message is to challenge the young person that the choices they make can affect whether they live a small, or a Big Life.

As part of a previous Character Education project in 2014-2015, five schools in the Exeter area looked at addressing wellbeing as a barrier to character development. The evaluation of that project found that the LLTTF-YP course was effective at improving self-reported well-being (Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS) scores) for pupils with initial low scores (a final report is available from the authors). However, that previous research did not gather information that would have allowed teachers to link this to wider pupil outcomes or research the link between resilience and attendance. We would seek to develop this initial finding by now also monitoring the wider educational factors; attendance, progress and behaviour.

The most recent iteration of BRL was the Institute of Effective Education funded Innovation Evaluation. This was a collaboration of six rural secondary schools in Devon and Dorset, led by Sidmouth College, that worked together during the summer term of 2017 to deliver the project and evaluation. All schools delivered the My Big Life course to one group of Year 7 or Year 8 pupils selected based on their identified low attendance, achievement, attitude to learning and poor behaviour. A total of 268 pupils were involved in the trial and analysis. In the intervention group there were 136 pupils and in the control group 132 pupils. Data pre- and post-intervention was collected from existing school reporting systems including: attendance, behaviour concerns, progress, attitude to learning and homework. Students also completed a self-evaluation of wellbeing using the Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS).

The evaluation of this found project found that pupils' self-reported wellbeing (measured using WEMWBS) showed a positive effect size, with mean WEMWBS score increasing in the intervention group compared with little change in the control group (between group effect size +0.28). Further

analysis found a within group effect size of +0.3 for the intervention group, which in public health terms is considered significant. The data also suggested a link between wellbeing and attendance. Pupils with low pre-test wellbeing scores (≤ 40 on the WEMWBS) showed a significant increase in attendance, with a 3% increase in average attendance for the intervention group compared to 0% change in the control group (between groups effect size +0.35). The within group effect size for the intervention group was +0.5, which, again in public health terms, can be interpreted as a medium effect size.

DESCRIPTION OF THE INNOVATION

During the summer of 2019 we recruited partner schools from the south west, through presentations at local heads meetings and promotion through social media. 20 schools expressed an interest in the project, reducing to 17 in the final short list. All schools were required to complete a school partner agreement, which clearly explained the requirements and offer of the project. The schools had to commit to the aims of the project, with full support from the Senior Leadership Team, in exchange for the funding of staff to carry out the project.

During the training and consent gathering phase of the project the number of partner schools reduced to 13 due to the challenges faced in gathering active consent from both parents and students. The collation of active consent was a requirement of the ethical clearance we had from the University of Exeter ethics board, this process had a significant negative impact on both partner schools and the number of students in our groups, as many schools struggled to collect this information.

Each partner school was provided one day of training, with a fully resourced course, My Big Life (slides, handouts/worksheets, diaries, relaxation MP3 recordings, posters, diaries and teacher notes), and staff were given specific roles:

- a project lead with responsibility for the overall project
- a programme delivery teacher who ran the six sessions
- a trained teaching assistant or member of support staff who had daily contact with the intervention group to support the reflective journal

These staff received one day of training from a trainer from Five Areas Ltd, developers of My Big Life. This included a full lesson-by-lesson resource pack, including an opportunity to use the worksheets and techniques, and consider how they might be used in practice. Two additional resources (a credit card-sized prompt card to carry plus a diary to record use of the tools) were also distributed.

RESEARCH QUESTION

Does the Building Resilient Learners project have a positive effect on student's wellbeing, resilience and attendance?

We hypothesised that the intervention group, when compared to the control group, would see:

- An increase in pupil self-reported well-being (WEMWBS scores increase)
- An increase in percentage attendance
- An increase in the Goal Based Outcome score
- A reduction in emotional and behavioural difficulties as measured by the Me and My Feelings (previously Me and My School) self-report measure
- An increase in self-reported wellbeing using the Stirling Wellbeing Scale, validated for the specific age group
- An increase in self-reported resilience using the Student Resilience Survey which measures protective factors and mental health
- Increase in the use of MBL toolkit as evidenced by the reflective journals

METHODOLOGY

SAMPLE

Aimed to recruit 1,400 year 7 students from 14 secondary schools as part of a multi-site, mixed methods randomised control trial. With the challenges of the project, a total of 629 students consented. All year 7 pupils from each school were provided with a pupil information sheet and consent form distributed by the school on behalf of the research team. As all pupils invited to participate in the research were aged 15 or under, parental consent was required. A parental information sheet and parental consent form was provided to the pupils' parent/guardian distributed by the school on behalf of the research team. Consent forms were distributed to parents using the most effective means by the school e.g. an online portal, email, printed and sent home with pupils. Schools acted as 'witness signature' to all consent forms (pupil and parent/guardian) and stored the consent forms in accordance with GDPR guidelines. Due to the challenges in collecting consent, many students in each school were not included in the screening.

The 13 partner schools who completed the BRL project for this iteration were:

- Bridgwater College Academy, Bridgwater
- Court Fields School, Wellington
- Cranbrook Education Campus (Secondary Phase), Exeter
- Exmouth Community College, Exmouth
- Ifracombe Academy, Ilfracombe
- Isca Academy, Exeter
- Plympton Academy, Plymouth
- Sidmouth College, Sidmouth
- Stanchester Academy, Stoke-sub-Hamdon
- St James School, Exeter
- St Lukes Academy, Exeter
- The Sir John Colfox Academy, Bridport
- Teign School, Kingsteignton

These schools represent a broad range of settings, with half being set in large towns or cities with larger numbers of students from disadvantaged backgrounds than in previous iterations of the project. This data can be seen in Table 1, along with the numbers of students in each of the schools groups.

Table 1 Partner school group numbers

School	Consented students	Intervention	Control
School A	35	18	17
School C	73	20	20
School D	46	22	21
School E	72	20	20
School F	49	20	20

School G	13	7	6
School H	70	20	21
School I	25	12	13
School J	28	14	14
School K	48	20	20
School L	56	20	20
School M	57	21	21
School N	57	20	20

Sample size

A priori power calculation was run to ensure an adequate sample size using G*Power 3.1. Based on findings from the literature (Fishbein, 1996) and pilot study, we selected a small effect size (0.10), α err probability of 0.05 (p =.05), Power of 0.95, 2x3 ANOVA. The study required a minimum sample size of 260 students. According to the estimated sample size for the study (560 students), we expected the study to be overpowered. However, the impact of pupil/parent consent and COVID-19 reduced our overall sample size, resulting in our study being underpowered.

ASSIGNMENT TO CONDITION

Following online screening, we intended to randomly allocate students who scored below 37 (1 SD below the mean) on the Stirling Wellbeing Scale (SWS) to either intervention (My Big Life classes) or waitlist control arm in a 1:1 ratio (e.g. 1 SD below mean: 30 – 37, 2 SD below mean: 23 – 29, 3 SD below mean: 12 – 22). As certain predictors can influence outcome, such as gender; a moderator for some mental health difficulties (Haugland et al., 2017), and symptom severity (Dunn et al., 2019), pupils were stratified on these characteristics, with a maximum of 20 pupils in each arm. Block randomisation maintained a balance between intervention and waitlist control arm. A research assistant randomly allocated students using an online, computerised randomisation program (Study Randomizer), ensuring allocation concealment.

Due to the challenges faced during consent, and the subsequently low number of pupils taking part, we had to amend the allocation score cut-off slightly as the majority of pupils scored over the SWS mean score. Pupils were randomised as above, but we ensured intervention and control had an equal number of pupils with low wellbeing and higher wellbeing in each arm.

INNOVATION

The six lessons each had a number of linked worksheets to encourage pupils to practise the skills learned (eight in total). These are summarised in the My Big Life overview worksheet that participating pupils were encouraged to turn to whenever they become upset. This asks two questions ("What's been going on?" and "How did it affect you?") This then leads to a third "action" section where the young person describes how they respond, promoted by four short and eight longer term resources they can use to improve how they feel and which are taught sequentially in the course.

Students in the intervention arm were taken off timetable for the specified lessons to attend the 6-week My Big Life classes. Each class lasted for 50 minutes and was delivered face-to-face by the program delivery teacher. Each session builds on the previous session creating a toolkit of clearly defined skills and resources that could be used to respond to anxious, stressful or annoying situations. This includes five short-term strategies (designed to replace exit cards), together with eight longer-term skills they can use to understand their feelings, build confidence, face fears, and respond differently to problems and upsetting thoughts. Finally they also learnt a form of relaxation/meditation called Tension Control Training. Together these strategies were aimed at pupils who struggle when facing an emotionally charged or difficult situation. The My Big Life response sheet is designed to provide pupils with an alternative response when they feel anxious, upset or annoyed, using CBT strategies to remain in the classroom.

Pupils met each day and with the support of a trained member of staff recorded in their reflective journal and diary sheet tick list why they used their card.

OUTCOME MEASURES

WEMWBS' focus is on positive emotions; it has been validated, and indicates a normal distribution among the general population in the UK, with no floor or ceiling effect (Clarke et al., 2011). Previous research on the validation of the WEMWBS shows that this scale is loading under a single factor in factor analysis, which indicates that this scale measures a single concept (Bass, Dawkin, Muncer, Vigurs, & Bostock, 2016; Clarke et al., 2011; Smith, Alves, Knapstad, Haug, & Aarø, 2017). As such, WEMWBS appears to be a suitable tool for measuring mental wellbeing. Prior to the BRL project, the WEMWBS was only validated for use among adolescents aged 13 years old and above (Clarke et al., 2011).

Stirling: To ensure we were appropriately measuring wellbeing using a validated measure for the specific age group, we included the Stirling Wellbeing Scale (SWS) as the primary wellbeing measure (Liddle & Carter, 2015).

SRS: Resilience was measured by the Student Resilience Survey (SRS); this measure explores the relationship between protective factors and mental health, and has been validated for children 11 – 15 years old (Lereya et al., 2016).

MAMS: In addition, the Me and My School (MAMS) self-report measure was also used to evaluate emotional and behavioural difficulties in children and has been validated for this age group (Deighton et al., 2013).

Following consent, students were screened during school hours using the validated Stirling Wellbeing Scale using the online platform Qualtrics.

Randomised students (in intervention or control arm) completed the following measures online using the platform Qualtrics during school hours at baseline, 2- and 4-month follow-up:

(a) Stirling Wellbeing Scale

(b) Warwick-Edinburgh Mental Well-being Scale

(c) Student Resilience Survey

(d) Me and My School

Reflective journals

Following random allocation, 20 students from each school participated in My Big Life classes. Students completed daily reflective journals during daily registration within school hours. They were supported by a trained member of staff. Students were asked to think about their mental health and write a short description of the following: (1) What's been going on? (2) How did it affect you? (3) What did you do differently to cope? Pictorial images of numerous actions that the student may have taken at the time of the event will be visible. Students could select multiple options, and these were likely to support their written responses, and act as a prompt if they found verbalising their actions challenging. They also recorded weekly goal-based outcomes (GBO) to monitor progress of their individual goals during the six-week classes. After the post-intervention outcome measures were completed, student journals were collected. Students used their student study ID number on the cover.

PROCESS EVALUATION

At the end of the delivery phase all partner schools were asked to complete a process evaluation on google forms. At this time schools had been closed due to Covid 19 and we were mindful that a lengthy process would add to staff's already stressful workload.

In order to keep the evaluation process short we asked all staff involved in the project to answer the following questions:

- How many of the lessons were delivered in your school?
- Please rate the following out of 5, with 5 being the best and 1 being very poor.
    - Quality of training
    - Quality of the My Big Life teaching materials
    - Ease of delivery of the teaching materials
    - Ease of collecting data from students
    - Quality of resources to support the daily reflective journal
    - Ease of organising the My Big Life classes in the timetable
    - Ease of organising the daily reflective journal
- In your school, what do you think has been the biggest challenge of the project?
- What would you change about Building Resilient Learners?
- We would be interested to hear any cases where you feel this project has had an impact on a particular individual. This provides us with case studies as part of qualitative analysis, please do not use any pupil names.
- Would your school be interested in being involved in the funded delivery of Building Resilient Learners to the whole of Year 7 in the next academic year?

ANALYSES

OUTCOMES

Quantitative analysis of the questionnaire data (Stirling, WEMWBS, SRS and MAMS). Descriptive statistics by school of the N in control and intervention at baseline.

Analysis of missing data using Microsoft Excel and IBM SPSS version 26. Missing value analysis (missing completely at random) was conducted on each questionnaire. Used SPSS syntax to run imputation of missing data analysis.

Reliability and validity using Cronbach's alpha was reviewed and compared to current literature.

Exploratory factor analysis (EFA) to examine WEMWBS. At the time of the study, the WEMWBS was valid from age 13 and above. EFA used to examine the validity of this measure in a new sample (ages 11-12). An EFA was also used on the remaining 3 questionnaires (Stirling, SRS and MAMS) to provide additional information as to whether these measures provide support to the hypothesis and are therefore necessary for further projects.

Ran repeated measures ANOVA (2x3). Group (control and intervention) x time (baseline, post, follow-up). Substantial attrition noted at follow-up. Follow-up was collected whilst schools were in lockdown. Descriptive statistics reported.

The baseline WEMWBS scores differed for control and intervention. Necessary to control for the baseline score. Attempted an ANCOVA. Tested the assumption of linearity in ANCOVA. The dependent variable (WEMWBS post) and independent variable/covariate (WEMWBS baseline) violated assumption. Both (control and intervention) were linear but not parallel. Leppink 2018 recommend moderated regression analysis when assumptions of ANCOVA are violated.

Ran a moderated regression analysis on Baseline and Post data only. Follow-up was excluded from analysis as i) COVID-19 represents a confounding variable in the data, ii) inclusion of follow-up results in restricted sample size. Followed moderated regression assumptions and made corrections to the data. Ran the analysis on the WEMWBS only. Following the analysis, split the data by WEMWBS cut-off (<=40 and >40). Descriptive statistics on mean WEMWBS baseline. Repeated measures ANOVA (2x2). Descriptive and inferential statistics reported.

Repeated the moderated regression and assumptions for the SRS. Unequal SRS baseline scores required an ANCOVA. Descriptive and inferential statistics reported.

Analysed goal based outcomes (GBO) using reliable improvement. Description of goal was categorised into six categories (health, relationship, school, emotion, hobby, practical). Descriptive statistics used to report on GBO data. Data averaged by school for comparison.

Reflective journal data: Descriptive statistics reported for the diary sheet tick list data (What's going on?, Advice, Breathing, I'm OK, Calm control) across the 6-week classes. Data averaged by school for comparison. Qualitative data recorded in reflective journal under 'What did you do differently' imported into NVivo 12 Plus. Word cloud created to reflect frequency of words generated by pupils.

PROCESS ANALYSES

Due to school closures we have limited data for any process analysis. The two sets of data are the feedback forms from the initial training with staff, these can be seen in Appendix B, along with the details of the post intervention feedback from partner schools.

We shared a google form with all the partner schools, 12 staff from 9 of the partner schools completed the form.

We asked schools to report how many of the six MBL sessions were delivered to students. Of the 9 schools who completed the form 7 completed all the sessions with two schools reporting that they completed 5 of the 6.

The remaining data from the post intervention feedback forms was analysed by finding the mean average in each of the questions. The total number of scores which were high (4 or above) was also totaled and reported to provide an indication of which areas were most and least satisfactory. We also provided the % of the scores for each question that were high (4 or above).

RESULTS

OUTCOME FINDINGS

Descriptive statistics

In total, 629 pupils consented to the BRL project. Of these, 599 (95%) completed screening measures. The final sample randomised to wait-list control or intervention consisted of n=233 in wait-list control and n=234 in intervention. Combined total n=467.

At baseline, a total of n=409 completed the measures; n=199 wait-list control, n=210 intervention. This included n=165 male (40%), n=227 Female (56%), n=6 Prefer not to say (1%), n=1 Non-Binary (>1%), n=10 Missing (2%).

Data screening

An analysis of missing data revealed 20% (80 out of 409) of pupils' responses to the questionnaires had some missing data. This represents 3% of the data. One pupil had over 25% missing data (intervention group, male, 97% attendance). Data appeared to reflect fatigue effects and disengagement with the questionnaires. Stirling and WEMWBS were completed in full, SRS partial, MAMS completely missing. As a result, a decision was made to delete this data. This resulted in a sample size of n=408. The remaining ID's had no visual pattern of missing data. Of the 85 questionnaire subscales i.e. WEMWBS_1, WEMWBS_2 etc, 85% (72 out of 85 subscales) had missing data.

Missing value analysis was run in SPSS version 26. This was run for each questionnaire (Stirling, WEMWBS, SRS, MAMS). Table 2 shows univariate statistics of % missing data and EM estimated statistics of Little MCAR (missing completely at random) test significance on baseline scores.

Table 2 EM estimated statistics: missing value analysis of baseline scores

	Max missing %	Chi-Square	DF	Significance	MCAR
Stirling	1.5 (Q.10)	170.015	135	0.022	No
WEMWBS	1.5 (Q 10)	187.170	164	0.104	Yes
SRS	1.5 (Q31)	1292.334	1187	0.017	No
MAMS	0.7 (Q5, 6, 15)	82.053	75	0.270	Yes

Fail to reject null hypothesis for Stirling and SRS; missing values are not at random). Listwise deletion not appropriate as may result in bias. Further exploration of the percentage of missing data required. Jakobsen, Gluud and Wetterslev (2017) state missing data below 5% is negligible and only observed data is analysed. Multiple imputation analysis for each questionnaire. Questionnaires subscale missing data did not exceed 5%. In addition, output did not reveal monotonicity (rigid increasing or decreasing across a sequence). Multiple imputation was appropriate.

Univariate normality was assessed using skewness and kurtosis with normal distribution values of ±2 and ±7 respectively (Fabrigar, Wegener, MacCallum and Strahan, 1999). No variables were outside of

these values; therefore, normality was assumed. Data screening and multiple imputation was also run on Post and Follow-up data following assumptions.

Internal consistency of questionnaires measured by Cronbach's alpha was above the lower limit of the confidence interval at 0.7 (Cronbach, 1951), indicating high internal consistency as shown in Table 3.

Table 3 Cronbach's alpha of baseline scores

Questionnaire	Number of subscales	Cronbach's Alpha	95% confidence interval	
			Lower	Upper
Stirling	15	.912	.892	.930
WEMWBS	14	.920	.891	.930
SRS	40	.947	.929	.953
MAMS	16	.884	.840	.896

Exploratory Factor Analysis

An exploratory factor analysis, using a principle components extraction method, with a promax (oblique) rotation, was run on each of the questionnaires as the factors are correlated. As the WEMWBS was not validated for the age group in this sample, it was necessary to determine if the underlying factor structure in the literature was identified in this sample. The EFA was run on the Stirling, SRS and MAMS to support further analysis of the questionnaires and to ascertain if they are appropriately capturing aims of the hypothesis.

The WEMWBS is cited as measuring one construct: wellbeing. Promax explains 50.56% of variance and loads onto one factor: wellbeing. Of note, question 4 had a Communalities of .197. Question 4: 'I've been feeling interested in other people' was identified as having the potential for causing misinterpretation in the Clarke et al (2011) WEMWBS validation of 13-16-year olds. Question 4 removed. Question 5 communalities .279. Clarke (2011) revealed some issues of definition and understanding with question 5 'Energy to spare'. Question 5 removed. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was .953, above the recommended value of .6, and Bartlett's test of sphericity was significant (χ (66) = 2659.66, p < .001); indicating populations of equal variances (Field, 2013).Promax explains 55.47% of variance following removal of 2 subscales. All communalities greater than .394.

Stirling Children's Wellbeing Scale loads onto one factor as cited in the literature (Carter and Liddle, 2011). KMO was .940 and Bartlett's Test were significant (χ (66) = 2971.70, p < .001). Promax explains 56.58% of variance and loads onto one factor: wellbeing.

In the literature, the Student Resilience Survey loads onto a 10-factor structure (Lereya et al, 2016). Data indicated a 7-factor structure. KMO was .936, and Bartlett's Test were significant (χ (780) = 9914.30, p < .001). Promax explains 64.35% of variance. Communalities greater than .502. Cross-loadings on five subscales, three of the five differed more than .2. Questions 1-4 and 9-12 loaded onto the same factor. Factor correlation matrix did not exceed .7, and therefore are not sharing the majority of their variance.

Me and My School loaded on to a 3-factor structure following the removal of one item (reverse scored). This contrasts with the two subscales of the MAMS (Patalay, Deighton, Fonagy, Vostanis, and Wolpert, 2014). Two

closely related items (associated with sleep) loaded onto a single factor. KMO was .887, and Bartlett's Test were significant (χ (105) = 2534.70, p < .001). Promax explains 59.04% of variance. Communalities greater than .390.

Inferential statistics

ANOVA

Repeated measures ANOVA using baseline to post, and baseline to post to follow-up.

Baseline to Post (n=178). Significant effect of Time: there was an increase from baseline to post in Stirling and a decrease in attendance, but these did not differ by group. Significant effect of Group: the intervention group scored higher in general than the control group on both WEMWBS and SRS, but baseline differences are unequal. ANOVA not suitable.

Baseline to Post to Follow-up (n=51). Significant effect of Time: there were increases at follow-up for Stirling, WEMWBS, and SRS, but this did not differ by group. Significant effect of Group: the intervention group scored higher in general than the control group on Stirling, WEMWBS, and SRS, and lower on MAMS, but baseline differences are unequal. ANOVA not suitable.

ANCOVA

The unequal WEMWBS baseline scores (independent variable) influenced the dependent variable. To control for this, conducted an ANCOVA, with IV as covariate. Violated ANCOVA assumption of linearity (linear relationship lines are not parallel). Same violation with Stirling. Leppink 2018, recommends moderated regression when ANCOVA assumptions are violated.

Wellbeing

Moderated regression

A hierarchical multiple regression was run to assess the statistical significance of the interaction term between WEMWBS baseline score and group allocation. Ensured assumptions for moderated regression were met. Linearity was established by visual inspection of a scatterplot. There was evidence of multicollinearity (predictors are correlated), resolved by transforming the data using centring. There was no evidence of multicollinearity, as evidenced by no tolerance values less than 0.487 and no VIF values greater than 2.055 (Hair, Risher, Sarstedt and Ringle, 2019). Five unusual points were identified, one violating all assumptions (outlier, leverage point and influential case). Homoscedasticity presented an outlier; residuals were not normally distributed. Outlier deemed to need removal. There was homoscedasticity, as assessed by visual inspection of the studentized residuals plotted against the predicted values for group allocation (control and intervention). The studentized residuals were normally distributed, as assessed by Shapiro-Wilk's test ($p > .05$).

Group allocation moderated the effect of WEMWBS baseline score on WEMWBS post score, as evidenced by a statistically significant increase in total variation explained of 0.9%, $F(1, 173) = 4.334$, $p < .039$. Simple slopes analysis revealed that there was a statistically significant positive linear relationship (0.938 ± 0.068) between WEMWBS post score and WEMWBS baseline score in the control group, $p < .001$, and a statistically significant positive linear relationship (0.739 ± 0.068) in the intervention group $p < .001$. The coefficient of the interaction term (0.199 ± 0.096) was statistically significant ($p < .039$) indicating that group allocation moderated the relationship between WEMWBS post and WEMWBS baseline.

Repeated measures ANOVA

In line with the research hypothesis (screening and randomising pupils with lowest wellbeing to study) and findings from the pilot study (pupils with low wellbeing benefit from the MBL classes to a greater extent than pupils with high wellbeing), data was separated into low and high wellbeing categories. Using Carleton et al (2013) WEMWBS cut-off of <= 40 (low wellbeing) and > 40 (high wellbeing), we ran a repeated measures ANOVA. There were no WEMWBS baseline differences between group allocation. There was homogeneity of covariances, as assessed by Box's test of equality of covariance matrices (p = .002).

There was a statistically significant interaction between group allocation and time on WEMWBS score, F (1, 68) = 5.298, p = 024, partial η^2 = .072, medium effect size. Data are mean ± standard error, unless otherwise stated. WEMWBS post score was statistically significantly greater in the intervention group (4.7 ± 1.2, p < .001) compared to the control group (.90 ± 1.1, p = .418), indicating the WEMWBS post score increased in the intervention group, but not control group, F (1, 68) = 14.51, p < .001, partial η^2 = .176, large effect size (see Figure 2).

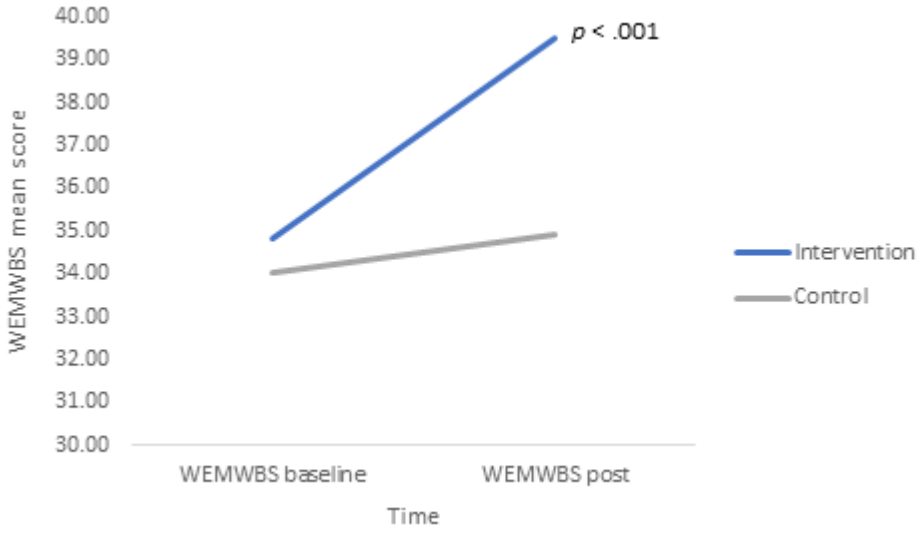

Figure 2 Change in WEMWBS baseline and post score by group allocation

Resilience

Moderated regression

A hierarchical multiple regression was run to assess the statistical significance of the interaction term between SRS baseline score and group allocation. Ensured assumptions for moderated regression were met. Linearity was established by visual inspection of a scatterplot. There was evidence of multicollinearity (predictors are correlated), resolved by transforming the data using centring. There was no evidence of multicollinearity, as evidenced by no tolerance values less than 0.405. Although two unusual points were identified, none were deemed to need removal. There was homoscedasticity, as assessed by visual inspection of the studentized residuals plotted against the predicted values for group allocation (control and intervention). The studentized residuals were normally distributed, as assessed by Shapiro-Wilk's test (p > .05). Group allocation did not moderate the effect of SRS baseline scores on SRS post scores, as evidenced by an increase in total variation explained by 0.5%, which was not statistically significant F(1, 173) = 3.738, p = .055.

Univariate analysis

Data was separated into low and high wellbeing using the WEMWBS cut-off (Carleton, 2013).As there were baseline differences in the SRS between wait-list control and intervention, it was necessary to control for this in the analysis. An ANCOVA was run to assess group allocation differences on SRS post scores whilst controlling for SRS baseline differences.

Data are adjusted mean ± standard error, unless otherwise stated. SRS post score was greater in the intervention group (128.58 ± 3.37) compared to the control group (118.89 ± 3.00). After adjustment for SRS baseline scores, there was a statistically significant difference in SRS post scores between group allocations, $F(1, 67) = 4.558$, $p = .036$, partial $\eta^2 = .064$, medium effect size.

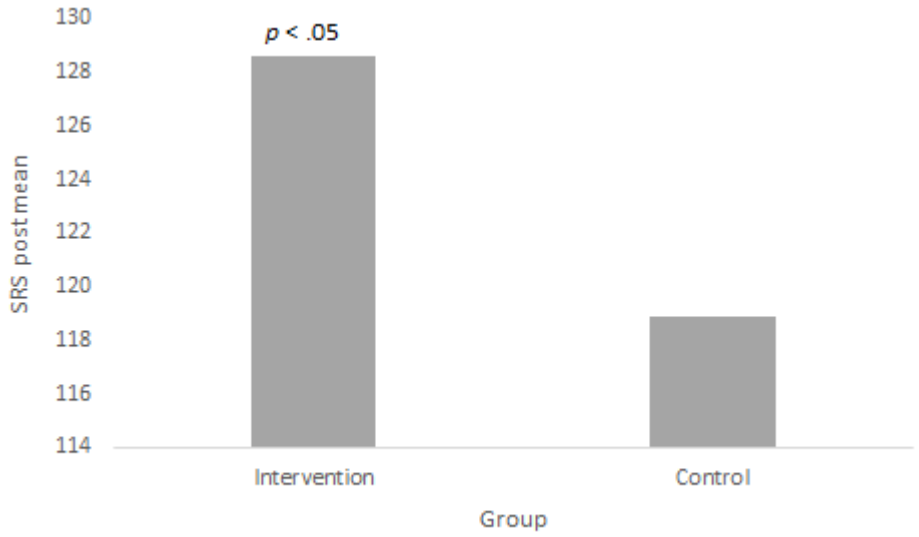

Figure 3 Change in SRS post score by group

Power analysis

A post hoc power analysis using G*Power 3.1 was necessary, as the a priori analysis indicated the study would be underpowered. Used a medium effect size of 0.25 (based on pilot study findings for low wellbeing), sample size n=70, α err probability of $p = .05$, 2x2 repeated measures ANOVA, produced a β power of 0.98. According to the result, the findings represent an adequate sample size to achieve power for the study.

Goal Based Outcomes

Seven schools submitted reflective journals from n=107 pupils. Goal Based Outcomes (GBO) were recorded in the reflective journals. A goal was set at baseline and progress was rated weekly using a scale from 0 (no progress made) to 10 (fully met the goal). 93% (100 pupils) recorded a matched goal (two time points). Average GBO at baseline was 2.36, average at post was 6.38. Average goal difference was 4.02. Research suggests a reliable change index of 3.00 (Edbrooke-Childs, Jacob, Law, Deighton and Wolpert, 2015).

Of the matched pairs data, 69% (n=69) made a reliable improvement, 27% (n=27) recorded no change, 4% (n=4) reliably deteriorated. Data was separated by wellbeing (low wellbeing and high wellbeing). 92 pupils had a recorded WEMWBS baseline score. Of these, 40% (n=37) were in the low wellbeing category. This was further separated by school (see Table 4). This table outlines the number of pupils

making a reliable improvement, ranging from 33% to 83% of sample; the number categorised as low wellbeing, ranging from 8% to 71% of sample; and the percentage of low wellbeing students in sample making a reliable recovery on their goals, ranging from 25% to 100%. School variation on the GBO has impacted these results.

Table 4 GBO reliable improvement and low wellbeing

School	N	Reliable improvement		Low wellbeing		Reliable improvement of low wellbeing pupils	
		N	%	N	%	N	%
School C	12	9	75%	5	42%	5	100%
School D	23	19	83%	6	26%	5	83%
School E	9	3	33%	4	44%	1	25%
School G	7	4	57%	5	71%	3	60%
School H	18	15	83%	12	67%	9	75%
School K	13	9	69%	1	8%	1	100%
School L	18	10	56%	4	22%	3	75%

Pupils entered a brief description of their goal. These were grouped into six categories; health, relationships, school, emotional, hobby, practical. Table 5 illustrates the GBO category by the reliable improvement rate, ranging from 53% for school-based goals to 91% for practical goals. The percentage of pupils with low wellbeing, and those with low wellbeing who made a reliable improvement are also provided.

Table 5 GBO category, reliable improvement and low wellbeing

GBO category	N	Reliable improvement		Low wellbeing			Low wellbeing and reliable improvement		
		N	%	N	% of GBO category	% of low wellbeing total	N	% of GBO category	% of low wellbeing and RI total
Health	21	16	76%	7	33%	19%	7	100%	26%
Relationship	14	10	71%	5	36%	14%	4	80%	15%
School	19	10	53%	8	42%	22%	4	50%	15%
Emotional	19	12	63%	10	53%	27%	6	60%	22%
Hobby	16	11	69%	4	25%	11%	3	75%	11%
Practical	11	10	91%	3	27%	8%	3	100%	11%
Total	100	69		37			27		

Attendance

Following findings from an earlier pilot study (3% attendance increase in pupils with low wellbeing), attendance was analysed. It should be noted that attendance was taken at two time points (baseline and post), with the second time point coinciding with the UK's recognition of COVID-19 and imminent lockdown. It is therefore likely this impacted the reliability of pupil attendance.

Data are mean ± standard deviation, unless otherwise stated. Baseline attendance for control group; 96.54 ± 4.21 and intervention group 96.53 ± 4.26. Post attendance for control group; 96.23 ± 3.54 and intervention group 96.11 ± 3.77. Baseline mean attendance did not differ by group. A one-way ANOVA was conducted to determine if post attendance was different for the allocation groups. Data is presented as mean ± standard deviation. Post attendance differences between the two groups were not statistically significant, $F(1, 156) = 0.039$, $p = .843$. Data was separated into low wellbeing and high wellbeing. Post attendance difference was not statistically significant for the low wellbeing group, $F(1, 64) = 0.772$, $p = .383$, or the high wellbeing group, $F(1, 90) = 0.153$, $p = .696$.

Daily reflective journals

Pupils recorded the number of diary sheet tick lists used. Table 6 shows the total number of skills recorded by school. Average skills per person is recorded for comparison between schools.

Table 6 Dairy sheet tick list sum total and average per person

School	N	Diary sheet tick lists					Total skills	Average skills per person
		What's going on?	Advice	Breathing	I'm OK	Calm control		
School C	12	4	7	6	23	12	52	4
School D	23	52	28	51	68	58	257	11
School E	9	4	4	11	15	6	40	4
School G	7	42	12	3	48	72	177	25
School H	18	48	28	43	54	75	248	14
School K	13	39	8	12	48	37	144	11
School L	18	84	70	70	112	141	477	27
Total	100	273	157	196	368	401	1395	

Word cloud

Qualitative data recorded in the reflective journals' category 'What did you do differently?' was imported into NVivo 12 Plus. Surplus data was removed to leave key words. A word cloud was created to reflect the frequency of words generated by pupils (see Figure 4). The more frequent a word appeared in the data, the larger it appears in the word cloud.

Figure 4 Word cloud of reflective journal 'What did you do differently?'

PROCESS EVALUATION FINDINGS

We had 12 responses from 9 different partner schools. In these schools we know that 6 of the schools were able to deliver all 6 of the My Big Life lessons to the intervention group and 3 of the schools were able to deliver 5.

Table 7 Summary of partner school process evaluation

	Quality of training	Quality of support	Quality of the My Big Life teaching materials	Ease of delivery of the teaching materials	Ease of collecting data from students	Quality of resources to support the daily reflective journal	Ease of organising the My Big Life classes in the timetable	Ease of organising the daily reflective journal
Average score	4.09	4.36	4.18	4.00	3.64	3.82	3.82	3.09
High Scores (4+)	8	10	10	10	7	8	7	3
% of high score	72.73	90.91	90.91	90.91	63.64	72.73	63.64	27.27

DISCUSSION

INTERPRETATION OF FINDINGS

The pilot study of Building Resilient Learners funded by the Institute of Effective Education in 2018 concluded the following:

'Pupils' self-reported wellbeing (measured using WEMWBS) showed a positive effect size, with mean WEMWBS score increasing in the intervention group compared with little change in the control group (between group effect size +0.28). Further analysis found a within group effect size of +0.3 for the intervention group, The data also suggests a link between wellbeing and attendance. Pupils with low pre-test wellbeing scores (≤ 40 on the WEMWBS) showed a significant increase in attendance, with a 3% increase in average attendance for the intervention group compared to 0% change in the control group (between groups effect size +0.35). The within group effect size for the intervention group is +0.5, which, again in public health terms, can be interpreted as a medium effect size. This is an important finding and demonstrates that wellbeing interventions can have a significant impact on the attendance of pupils who have initial low wellbeing scores.'

The findings from this iteration support this and demonstrate a significant improvement in wellbeing and resilience for pupils with initial low wellbeing who attended My Big Life classes, compared to a wait-list control group. The results showed a medium effect size, this is greater than expected. The effect size is important to understand how much an intervention worked, compared to a control group. The addition of the student resilience survey in the current study was important to explore the effect of My Big Life classes on resilience, as it is widely accepted that resilience is a component of mental wellbeing (Zarobe and Bungay, 2017). The results also showed that pupils with initial high wellbeing maintained their wellbeing and resilience over time, irrespective of group allocation (control or intervention).

These results support the conclusion of the pilot study, which also found the greatest improvements in wellbeing following the attendance of My Big Life classes, were made in those students with the lowest initial wellbeing scores. The findings are also in line with a 2018 systematic review, which concluded targeted interventions produce longer-lasting improvements on young people's mental health in comparison to universal approaches (Gronholm, Nye & Michelson, 2018).

Goal based outcomes (GBO) were a useful way to gain information about progress in the intervention group. Overall, 69% made a reliable improvement, meaning they made an improvement greater than would be due to expected measurement error. When separated by school, the majority achieved reliable improvement scores over 50%. School E is an outlier, achieving only 33% reliable improvement. Further, when pupils were separated by wellbeing, the majority of schools with pupils with low wellbeing made reliable improvements towards their unique goal. School E was again an outlier, with only 1 in 4 pupils with low wellbeing making a reliable improvement on their goal. It should be noted School E experienced specific challenges with the daily reflective journals, and as a consequence this impacted on the weekly rating of the GBO, as pupils were unwilling to complete the journals on a daily basis. Schools in general reported completion of the daily reflective journals was challenging at times. The frequency of recording the reflective journals will be reviewed in future studies in order to find a balance for schools, whilst ensuring pupils have an opportunity to use the skills learned in the My Big Life classes and applying their learning to real-world situations.

The description of the goal was grouped into six categories for analysis; health, relationships, school, emotional, hobby, practical. Pupils who chose a practical goal e.g. "To read 30 minutes a day", "To think before I speak every time I make a comment", made the greatest reliable improvement towards their goal (10 out of 11 pupils, 91%). Pupils who chose a goal related to the school environment e.g. "To get a higher route in Science (revise)", "Speak up in class", made the least progress towards their goal (10 out of 19 pupils, 53% reliable improvement).

When the data was separated by wellbeing, pupils with the lowest wellbeing (27% of sample) chose a goal categorised as emotional e.g. "To not get peed off and lash out", "To stop crying over stupid

things". 60% of these pupils made reliable improvement towards their goal, whereas pupils who chose a health related goal e.g. "To do 20 minutes of stretching a day", "Try and get more hours of sleep (at least 8 hours)".

Pupils with low wellbeing are likely to choose an emotion-related goal, however the goal categories that made the biggest reliable improvement were health- or practical-related goals. This may be because health and practical goals are more likely to be SMART goals, and therefore measurable and achievable.

Data collection for 2- and especially 4-month follow-up questionnaires (Stirling Wellbeing Scale, WEMWBS, Student Resilience Survey, Me and My School) and attendance was adversely affected by COVID-19 due to government guidance on self isolation when displaying Covid symptoms and national lockdown. There was no difference in attendance from baseline to 2-month (post) follow-up for the wait-list control or intervention group.

Reflective journals were recorded daily for the intervention group. Pupils were asked to provide a brief statement on 'What's going on?', 'How did it affect you?' and 'What did you do differently?'. Overall, 67% of pupils stated they had done something differently. This was interpreted using a word cloud. The most common action taken was 'staying calm' and 'saying sorry'. Pupils also reported that they 'did their homework' and talked to a parent, often 'mum' or talked to friends.

Reflective journal tick lists were also recorded on a daily basis. A total of 1395 tick lists were recorded across the five skills; what's going on?', advice, breathing, I'm OK and calm control. This was separated by school. There was wide variation across the schools, with School C and E having the lowest average number of skills per pupil (n=4). The most commonly used skill in the tick list was 'calm control'. This was also reflected in the word cloud.

Due to the age group targeted for this study (11-12 years old), we chose to support the use of the WEMWBS (validated for ages 13 and above) by using the Stirling Wellbeing Scale (validated for ages 8-15 years old) and Me and My School. In addition, we used this analysis to support our aim to reduce the number of measures pupils needed to complete at each time point. Using exploratory factor analysis, we hoped to understand the overall structure of each questionnaire and the relationship between each question in the questionnaire. An analysis of the WEMWBS illustrated good fit to one factor. This supports the literature that the WEMWBS measures one factor; wellbeing. The analysis also reflected findings from Clarke's (2011) validation of the WEMWBS in 13-16 year olds; some questions had the potential for causing misinterpretation and issues of definition and understanding. Furthermore, Melendez-Torres et al (2019) conducted a large scale review of the appropriateness of using the Short WEMWBS (SWEMWBS) across all ages in secondary schools (11-16 years). Their findings add to growing literature and suggest the SWEMWBS is appropriate for tracking wellbeing across adolescence. The SWEMWBS excludes two questions (Q4 and 5) our exploratory factor analysis suggested had the lowest relationship with other questions in the scale. As a result, we will use the SWEMWBS in future research and remove the Stirling Wellbeing Scale and Me and My School.

An exploratory factor analysis of the Student Resilience Survey (SRS) showed it did not map well onto the established 10-factor model in the literature. Our data analysis illustrated difficulties separating 'at home' and 'away from school'. We also observed fatigue effects; it has 47 items. In addition, there is no published test-retest reliability which measures changes over time. We concluded the Strengths and Difficulties Questionnaire would be a more appropriate measure in future research. The SDQ is a widely used and established measure with extensive normative data and test-retest reliability. It is also a shorter measure, with 25 items. In addition to the self-reported SDQ, there is a teacher version of the SDQ, enabling the capture of external data. We will therefore be able to compare pupil and teacher data using the SDQ.

LIMITATIONS

Impact of Covid 19

Effect on attendance figures for post intervention data collection: Some students were already not attending school due to concerns over infection. The attendance data was collected for the week commencing 2nd March 2020 when there was already an increase in absence rates due to government guidance on self isolation when displaying Covid symptoms.

The effect of COVID-19 and national lockdown impacted our data collection, affecting the 4-month follow-up most acutely. The resulting sample size meant analysis was impractical. In addition, no data was available for attendance as a follow up measure, as schools were closed and therefore unable to provide attendance figures for the 4-month follow up data collection.

Effect on self evaluation of wellbeing and other measures. We could speculate that the uncertainty, media coverage and fear of Covid 19, that has been a feature of individuals responses to the worldwide pandemic, may have had an effect on the wellbeing scores of the students in the evaluation.

Incomplete MBL delivery in partner schools: We know that some of the partner schools who were delayed in starting the delivery of MBL were unable to complete delivery of all of the 6 sessions.

Limited response to the process evaluation: Only 9 of the partner schools completed the process evaluation, this was shared at a time when schools were preparing to close and staff were preparing for home learning.

Reduction in group numbers due to consent gathering

In order to obtain ethical clearance from the University of Exeter, we had to comply with robust active consent protocols. This included providing all parents and students with a detailed information sheet, gaining permission through the signing and returning of BOTH student and parent consent forms and ensuring that participants could withdraw at any stage of the project. As an administrative task this was an additional workload that we and our partner schools had not anticipated, this resulted in low returns and one partner school withdrawing from the project due to having insufficient returns

Increase in focus on mental health and wellbeing in education

Since September 2019 all schools are now guided to address young people's mental health and wellbeing and resilience by the new OFTSED framework:

'the curriculum and the provider's wider work support learners to develop their character – including their resilience, confidence and independence – and help them know how to keep physically and mentally healthy'

This has meant an increase in both universal and intervention work in schools to support mental health and wellbeing, which is a positive step in the right direction BUT does mean that there is a less obvious improvement for students as their understanding of, and ways of managing their own mental health and wellbeing begin to improve

IMPLICATIONS FOR PRACTICE

All students can potentially benefit from BRL and the MBL sessions.

The most significant improvement in wellbeing can be seen in students with the lowest wellbeing scores, but we can see from the student reflective journals that many students benefit from the MBL sessions. This can be seen clearly in the student case studies (Appendix A) where students with little improvement in their reported wellbeing scores demonstrate changes in their behaviour, an increasing use of the MBL tools and an improvement in their goal based outcomes score. Student G047 shows a drop in WEMWBS but a change from a GBO score of 3/10 to final GBO score of 10/10 along with 15 uses of the tension control technique that had been taught.

IMPLICATIONS FOR FURTHER EVALUATION

Are the MBL lessons and reflective journals equal in the impact they have on students' wellbeing?

Randomisation at schools level - we are recruiting 30 schools for the next iteration of BRL and will be offering universal provision for all year 7 students in the partner schools. All schools will be randomised into 1 of 3 groups, including a wait list control group who will deliver the programme after we have gathered all our data.

Impact of the sessions vs the impact of the daily journal - we have created comparison groups to explore the impact of the reflective journals on students. 10 of the partner schools will deliver the My Big Life lessons only and 10 will deliver with the provision of the reflective journals. There will be a wait list control group of 10 schools also.

Changes to consent gathering- we will be offering an opt out of data gathering in this iteration rather than active consent. This will reduce the burden of work in partner schools and support their PSHE provision in meeting the new RSHE 2020 guidance.

We will change from intervention to universal model, removing the need for screening and the burden of administration in schools. Students benefit from the programme, so this iteration will be a universal offer.

Larger scale up to 4500 young people across the southwest - by offering a universal programme to 30 schools we will have sufficient numbers in the study to power our statistical analysis.

We have concluded a reduction (removal of Stirling and MAMS) and subsequent change in measures (Short WEMWBS and SDQ) will reduce the time spent for pupils completing the questionnaires, and allow for comparison between self-report (pupil) and external (teacher) data, without compromising the results.

Not collecting attendance data due to the impact of Covid 19, both government guidance on self isolation when experiencing symptoms and the potential for local lockdowns and school closures

Will use focus groups to gather some process evaluation and qualitative data.

Addition of the Strengths and Difficulties questionnaire (SDQ) to examine impact on these areas and the use of teacher data using the SDQ to gather external data, rather than relying on all self evaluation. We are also discussing the possibility of using the parietal SDQ

CONCLUSION

Despite the challenges of completing an evaluation during a global pandemic and whilst schools are closed, we can show that the Building Resilient Learners programme has a positive effect on the measurable wellbeing and resilience of students with low wellbeing scores.

This conclusion is supported by the substantial qualitative data we have collected in the form of the student reflective journals. These journals provide us with a rich and colourful source of evidence that the young people involved in the My Big Life lessons were not only learning techniques to help them manage their own difficulties and challenges, but they were actually putting them into practice in their everyday life, both in school and outside.

Due to the impact of Covid 19, we have been unable to draw any conclusions about changes in attendance. There was no difference between the control and intervention groups, but this may well have been a product of increasing levels of absence already occurring in schools by the start of March.

Our theory of change has always been that if we can teach young people the tools to emotionally self-manage and face challenges, then their wellbeing and resilience will improve, thus improving their attendance at school and replacing avoidance strategies with active techniques. The evidence that we have gathered clearly demonstrates this theory; after taking part on the MBL sessions students use active techniques (as shown in Table 6), are able to articulate these changes (reflective journals), feel better (improved WEMWBS), are able to keep going (GBO scores) and demonstrate improved resilience (SRS). The final piece of the puzzle, is of course the improvement in attendance, which for this iteration we are unable to demonstrate due to the situation created by Covid 19.

APPENDICES

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Student ID	Baseline WEMWBS	Follow-up WEMWBS	Difference	Category	GBO start	GBO final	CBT used (6 week total)				
							Whats going on	**Advice**	**Breathing**	**I'm OK**	**Calm Control**
G015	37	45	8	Improved	2	7	7	3	0	19	8
G057	39	39	0	No change	2	6	2	1	0	12	2
G047	53	44	-9	Declined	3	10	3	1	1	10	15

Student ID	Baseline WEMWBS	Follow-up WEMWBS	Difference	Category	GBO start	GBO final	CBT used (6 week total)				
							Whatsgoing on	**Advice**	**Breathing**	**I'm OK**	**Calm Control**
H055	34	54	20	Improved	0	10	12	7	11	8	14

H118	45	47	2	No change	1	9	0	0	2	0	1
H051	35	28	-7	Declined	0	7	8	14	4	0	0

APPENDIX B PROCESS EVALUATION - PARTNER SCHOOL FEEDBACK

In your school, what do you think has been the biggest success of this project?
Quality of pupil discussion during daily reflection and lessons
The groups were well attended and logistics were well supported across the school.
students seemed to enjoy taking part
Spending time with vulnerable students and considering the type of intervention that may be beneficial for students in the future.
We have been able to reach students we would usually not reach through our 1:1 and small group approach.
introducing the concept of resilience
Hearing of students who have actively started using some of the tools they were given during sessions.
Meditation exercises
Meeting the vulnerable students on a daily basis and actually taking time to talk to them and discuss strategies... waiting and probing for a true answer to the question "how has your day been?" rather than accepting the stock answer of "ok".
Student engagement in sessions.
Growth in confidence of the intervention group - they came out of their shell with every session. They really began to trust each other and express themselves

In your school, what do you think has been the biggest challenge of the project?
Getting parental and pupil consent.
The time to deliver each individual session needed to be longer.

getting students to truly reflect on their experiences. Most students seemed to have a "tick box approach" to the self journal. They came in each day, wrote the same thing and were keen to leave. There were not enough examples and modelling of how to reflect on experiences. Students focused on achieving in school as a target, they found it very hard to set targets that would help them be compassionate to themselves.
Gaining parental consent was problematic in that consent couldn't be assumed. This meant that we were not necessarily working with those students who were most in need of the intervention, possibly undermining the project outcomes and data.
We need to give consideration as to the emphasis given to different parts of each lesson and be selective to the key focus to develop during the session.
getting back the permission forms
Students filling in their daily reflective journal!
Quality of what was written in daily reflective journals
The set up; getting all students to complete the initial questionnaire, gaining consent from parents and students....
Logistics involved in collecting in forms and organising lessons during school day.
Data collection.

TRAINING DAY FEEDBACK

What were your expectations for today?

To gain a full understanding of the programme and how to deliver it

To learn more about the project

To understand it

To learn more about the research taking place and how that would be presented in schools

To gain understanding of the programme, to meet people running it & being involved in the programme

To become fully informed about the project & check the school plan

To gain more insight of the course resources

Overview of the 6 week resilience training

Learn the history behind & how to conduct the research trial

Clarity over the course & understanding of timescales

Learn about the BRL project, understand what the sessions provide the students with & what techniques are taught

Informed of the content of the study, what the expectations were of everyone & understand my role

Techniques to helping our learners & view resources

Very high

I was concerned that this may be a ‘study plate’ course

To understand the rationale of the project & how to implement it

Hadn’t given it much thought

To understand what I am doing with the BRL project

To know what & how to implement. Awareness of benefit to students

To be clear on expectations of parents, students & staff for this intervention. What paperwork is needed

I didn’t know what to expect!

To learn more about projects inc. evidence & logistics

I was expecting to have an overview of the project & what it involved

To make it clear what is expected from the project & how it runs for both staff & students

To be informed

Learn about the course & how to implement it successfully

To give structure to the project & explain its basis

To learn how to deliver the six week course

In what ways has today met or not met your expectations?

Fully met

V. good. Questions answered

I have a clear understanding of the research taking place

Expectations fully met

Good introduction to My Big Life. I was at the SWTSA presentation so I knew some of it!

Met more that my expectations. Excellent

Clearly understand the structure of how the students selected & how S.O.W is delivered

ALL expectations met

Achieved the above fully

It has met my expectations – I understand my role within the project and the roles that my colleagues will be undertaking

I'm now aware of what is included in the study and mine & everyone else's role

Fully

Totally

It has exceeded them, I'm excited to get this implemented

Met expectations – clearly explained

Exceeded – understand the project & goals etc.

Met very well

Much Clearer about what to do. Confident I can communicate with course leaders should I have questions

Today has met both of my expectations

Feel a lot more confident about the project; the ethics & consent plus how it works. Good chance to talk to other staff at different schools who are involved in the project

All met & more, I've come away understanding what I need to do

It has given me clear advice on what to expect

Clarified understanding

Understanding clearly what course is & how to put it in place

Met. Detailed timeline and detailed explanation from University of Exeter

A lot clearer – mostly met – I'm sure I'll have questions when I start to deliver it!

Can you please tell us about anything new you have learnt today?

A much better understanding of the programme from all aspects

The structure of the lessons and the way in which the young people will be selected

How to deliver the course

I have learnt about the My Big Life programme

How the programme works (I didn't know much about it before)

Role of the University

The course materials were easy to follow – learnt the thoughts behind

Bad thought spotter

How to run the sessions

How to deliver the course, how to log information/carry out screenings, I can claim £

I have learnt about the process of CBT and the possible benefits of the BRL Project

Some techniques on improving wellbeing

Snow globe as calming technique

Details & overview of how sessions work

Ethical research methods, quantifying wellbeing, successful methods

Project links to attendance, self-help books available to purchase, how to implement the project at school

Leaving feeling competent & ready to implement the programme, better understanding of CBT

Eating elephants isn't ethical

Structure of the course & some strategies I can implement in my own teaching!

I have gained a deeper understanding of CBT & reflective practice for this intervention

Not necessarily learnt but I appreciated the information that this is as much an important research project as it is a sense to benefit the wellbeing of students!

The background research behind the project

CBT & the programme finders

It has given me a clearer better understanding of the project

Clarified dates, do's & don'ts etc.

Understanding fully what the course entails

Strategies to support students

The affect it has on attendance

Are there any ways that you feel we could improve this training day?

Very thorough – plenty of opportunity to discuss & ask questions, thank you

Nope

N/A

No

It was the 1st time through – some slides need to be updated

Practice running a session

More examples of daily journals/videos of sessions being delivered etc., More brownies

More detail about individual roles within the study

A video of a session being delivered from a school who have undertaken – GDPR permitting?

Shorted lunch (30 mins), a couple more practical bits for fun, not so much 'exploration learning' – we didn't know the answers – tell us then check we understood with questions

None

Introduce the school box at the start of the day so we could work through it whilst the presentation were taking place

Would have been helpful if the box contents were explained properly so we could have used the 'teacher notes' to understand the slides etc.

Little bit more practical/active engagement

V content heavy. Perhaps some more practical application of the 6 sessions. Blow-by-blow, "do this on this day" (session) e.g. intro session. Task 1, 2, 3 etc.

Clearer explanation of the contents of the resources box

Practicalities _ seats facing the speaker/screen!, Tiny space to turn chair around

None

Practical activities relating to the programme, modelling/role play

None

No – very comprehensive•

Anything else you would like to say?

Thank you for involving us in the project

Thanks, great lunch

Thank you

Thank you! Very excited about this.

No

Thank you for a welcoming, informative day

Well delivered training and I feel well informed about the BRL project

Well delivered

Thank you for pioneering this – it sounds great! Very excited

I genuinely thought that using 6th Formers for catering was a great idea

Really useful day – thank you. Great lunch from 6th form

Thank you!. Well done 6th formers lunch makers

Thank you

Thanks for your hospitality, expertise & enthusiasm. Look forward to implementing this

Thank you & I'm looking forward to seeing the outcomes of this study

Thank you!

Great lunch!

Thank you…. What a brilliant project to be part of which is student centred

I found it as a whole very interesting gaining a lot of knowledge

Thank you!

Thank you very much

Fantastic – really excited about being part of it