

BMX Legacy Programme



Young People Survey Analysis

March 2018



Faculty of Social & Applied Sciences

Context

- Data analysis has been aligned to the most recent DCMS definitions, Outcomes and KPIs.¹ BMX Legacy Programme survey returns have therefore been analysed to provide data on the number of 'Active', 'Fairly Active' and 'Inactive' participants. Where data addresses specific Outcomes and KPIs provided in Sporting Futures, this has been highlighted in the presentation.
- In relation to 'Active', 'Fairly Active' and 'Inactive' please note that these categories have been created and used by DCMS in relation to adults, i.e. they are based on the Chief Medical Officers' recommended levels of physical activity for adults (minimum 150 minutes per week), measured nationally through the Active Lives Survey. In the absence of such categories aligned to CMO recommendations for children (60 active minutes a day), and in recognition of the need to speak to DCMS Outcomes and KPIs, these categories have been used in this data analysis and presentation.
- Categories in the young people survey are structured to allow re-categorisation as new data from Active Lives (children) emerges from January 2019 (measurement of KPIs 1b and 2b).

¹ Department of Culture, Media & Sport. Sporting Future: First Annual Report (Feb 2017).





Who Participated?

| Since March | 2016, the | BMX Legacy | Programme has: |
|-------------|-----------|-------------------|----------------|
|-------------|-----------|-------------------|----------------|

| engaged | 4,925 new young participants |
|-----------------------|---|
| of whom | 43% are boys, 57% are girls |
| and | 12% have a disability. |
| Participants are from | a range of ethnic backgrounds (35% are Black, 31% are White, 9% are Asian, 12% are Mixed, 14% are Other or Prefer not say) |
| and aged between | 7 and 18 years (34% 7 -11, 64% 12-15, 2% 16 -18). |





Who Participated?

On joining the BMX Legacy Programme¹...

| 1,921 participants (39%) | hadn't taken part in 30 minutes of sport and/or physical activity outside of school at least once in the previous 4 weeks. |
|--------------------------|--|
| 1,576 participants (32%) | didn't own a bike or have a bike they could use, |
| 541 (11%) | couldn't ride a bike, |
| 837 (17%) | didn't feel confident riding a bike |
| and 2,413 (49%) | hadn't cycled at all in the previous week. |

¹survey sample n = 1,417 upscaled to population sample of 4,925 from BMX Legacy Programme monitoring data





Who Participated?

On joining the BMX Legacy Programme...



32% (1,576) of participants didn't own a bike or have access to one



49% (2,413) hadn't cycled in the last week





11% (541) couldn't ride a bike



17% (837) didn't feel confident riding a bike



39% (1,921) hadn't taken part in 30 minutes of sport &/or physical activity outside of school at least once in the previous 4 weeks





Since taking part in the BMX Legacy Programme¹...

| 3,595 young people (73%) | ride a bike more than they | v did before |
|--------------------------|----------------------------|--------------|
|--------------------------|----------------------------|--------------|

4,039 young people (82%) want to ride a bike more

3,743 young people (76%) do more sport than before

3,989 young people (81%) want to do more sport than before

3,595 young people (73%) know more about being healthy and active

3,103 young people (63%) want to help others do BMX or other activities

¹ survey sample Week 12 n=445 upscaled to population sample of 4,925 from BMX Legacy Programme monitoring data





Since taking part in the BMX Legacy Programme...



82% (4,039) of participants want to ride more

63% (3,103) of participants want to

help others do more BMX



73% (3,595) of participants ride more then they did before



76% (3,743) of participants do more sport than before & 81% (3,989) *want* to do more sport than before



73% (3,595) of participants know more about being healthy & active





What was the Impact¹?

| | On joining the programme | 12 weeks later | What was the Impact? | 12 week follow up | What was the Impact? |
|---|--------------------------|-------------------|-------------------------|----------------------|-------------------------|
| Meeting CMO physical activity guidelines (60 active minutes every day, Outcome 1, KPI 1b) | 985 (20%) | 1,576 (32%) | 591 (61%)* | 1,428 (29%) | -148 (-9%) |
| Doing 150+ minutes a week (Active, Outcome 1, KPI 1a) | 2,758 (56%) | 3,300 (67%) | 542 (19%)* | 3,300 (67%) | 0 (0%) |
| Doing 30-149 minutes a week (Fairly active, Outcome 1) | 1,576 (32%) | 1,281(26%) | -295 (-19%) * | 1,231 (25%) | -50 (-4%) |
| 30 minutes outside of school at least twice in the past 4 weeks (Outcome 1, KPI 3b) | 2,955 (60%) | 3,743 (76%) | 788 (27%)* | 3,891(79%) | 148 (4%) |
| Doing less than 30 minutes of physical activity each week (Inactive, Outcome 1, KPI 2a & 2b) | 640 (13%) | 394 (8%) | -246 (-38%)* | 394 (8%) | 0 (0%) |
| Doing 10+ minutes of physical activity each week | 2,413 (49%) | 2,660 (54%) | 247 (11%) * | 2,660 (54%) | 0 (0%) |
| Achieving physical literacy standards each week (Outcome 1, KPI5) | 3,004 (61%) | 3,103 (63%) | 99 (3%) | 3,103 (63%) | 0 (0%) |
| Reporting positive (cycling) behaviours & attitudes (KPI 8) | 4,334 (88%) | 4,777 (97%) | 443 (10%)* | 4,777 (97%) | 0 (0%) |
| Reporting positive subjective wellbeing & self-efficacy (Outcomes 2 & 3) | 3,152 (64%) | 3,152 (64%) | 0 (0%) | 3,004 (61%) | -148 (-5%) |
| Reporting positive levels of social trust (Outcome 4) | 3,102 (63%) | 3,004 (61%) | -98 (-3%) | 2,906 (59%) | -98 (-4%) |

¹Cross Sectional Data Week 1: n=1,121, Week 12: n=445, 12 week follow up n=256 upscaled to population sample of 4,925. * change is significant at p<.05.





Physical activity

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- Impact on participants' physical activity is measured by asking questions about their perceptions of their physical activity behaviour i.e. what they do and how often they do it.
- Responses to these questions are analysed to categorise participants as 'meeting CMO guidelines' (60 mins a day, KPI 1b) 'active' (150+ mins a week, KPI 1a), 'fairly active' (30-149 mins a week, Outcome 1), and those 'doing 30 mins outside of school twice in the past 4 weeks' (KPI 3b).
- There are significant increases over 12 weeks in the percentage of participants meeting CMO guidelines, active, fairly active and doing 30 mins of sport &/or physical activity outside of school at least twice in the past 4 weeks.
- These positive increases in activity levels are sustained 12 weeks after the programme.

Physical activity (week 1 n=1,121, week 12 n=445, 12 week follow-up n=256)





*change is significant at p<.05



Physical activity

- On joining the BMX Legacy Programme, only onefifth of young people (20%) were meeting CMO guidelines. By week 12 almost a third (32%) are meeting CMO guidelines.
- 12 weeks after the programme, 29% of participants are still achieving 60 active minutes every day. This compares positively to the 22% of 5-15 year olds nationally meeting CMO guidelines (Health Survey for England, 2015).
- By week 12 of the BMX Legacy Programme, over two-thirds of young people (67%) are 'active' and around a quarter (26%) are 'fairly active'.
- These activity levels remain stable 12 weeks after the programme.

Levels of activity in participating young people...







Physical activity

• A range of analyses and sub-analyses were conducted to explore potential associations (i.e. correlations) between physical activity parameters such as meeting CMO guidelines and positive subjective wellbeing and self-efficacy.

Meeting CMO Guidelines

- No significant correlations between the positive subjective wellbeing and self-efficacy construct and participants meeting CMO guidelines are evident.
- However, further sub-analyses were conducted to explore potential associations between meeting CMO guidelines and the individual elements of the positive subjective wellbeing and self-efficacy construct.
- **Confidence** (*'I feel confident'** (r = .4, p<.01, n=440) is moderately correlated with participants meeting CMO guidelines, suggesting that the number of participants **achieving 60 active minutes a day** rises in tandem with increases in **confidence**.
- Questions with an * indicate links to self-efficacy.

Note: Correlation is not causation - Just because two things correlate does not necessarily mean that one causes the other. Correlations between two things can be caused by a third factor that affects both of them!





Physical activity

Levels of Activity (Active, Fairly active, Inactive)

- No significant correlations between the positive subjective wellbeing and self-efficacy construct and participants' broader levels of activity are evident.
- However, further sub-analyses were conducted to explore potential associations between activity levels and the individual elements of the positive subjective wellbeing and self-efficacy construct.
- Resilience ('I try again if I don't get something right first time', r = .3, p<.01, n=439) and confidence ('I feel confident'*, r = .3, p<.01, n=439) are weak/moderately correlated with participants' levels of activity, suggesting that activity levels rise in tandem with increases in resilience and confidence.
- Questions with an * indicate links to self-efficacy.

Note: Correlation is not causation - Just because two things correlate does not necessarily mean that one causes the other. Correlations between two things can be caused by a third factor that affects both of them!





Inactivity

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- This relates to the percentage of participants not achieving 30 active minutes on any day of the week (i.e. doing less than 30 minutes of physical activity each week; Outcome 1, KPIs 2a & 2b).
- Over 12 weeks the number of 'inactive' participants significantly decreased, and this positive change is sustained 12 weeks after the programme.
- Measures for inactivity in children (Active Lives Children) are likely to be higher than current (adult) measures, e.g. Health Survey for England defines 'inactive' children as those undertaking less than 30 minutes of physical activity a day (adult measure in DCMS uses less than 30 minutes a week).
- This definition of physical inactivity is drawn from Sport England's Active Lives Survey i.e. doing less than 30 minutes of physical activity each week; data is drawn from *spear's* survey.

Levels of inactivity in participating young people...





Physical literacy

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- KPI 5 is the percentage of children achieving physical literacy standards. *"Physical literacy can be described as the motivation, confidence, physical competence, knowledge and understanding to value and take responsibility for engagement in physical activities for life."* (Whitehead, 2016, in DCMS Sporting Future, 2017)
- The young people survey asks questions about participants' motivation, confidence, perceived competence, knowledge and understanding to elicit an overall measure of physical literacy.
- No significant changes are observed in the percentage of participants achieving physical literacy standards (the overall construct). However, this may reflect the exclusion of 'behaviour' in the definition of physical literacy; i.e. data relating to physical activity (which shows an increase over 12 weeks) is not included in the physical literacy construct because behaviour is not referred to in the definition. There is some cross-over between 'physical activity' and 'physical competence', however, activity data has been analysed separately to align to relevant KPIs.
- While no significant increases are evident in the physical literacy construct overall, significant increases are evident in the percentage of participants who think they are good at sports and like to lead activities between weeks 1 and 12 of the programme.

Physical literacy 'every day' (week 1 n=1,121, week 12 n=445, 12 week follow up n=256)



*change is significant at p<.05



Cycling behaviours & attitudes

- The young people survey measures cycling behaviours and attitudes through questions about *what participants do, think and feel about cycling.*
- This aligns to KPI 8 the percentage of children with a positive attitude towards sport and being active.
- Over 12 weeks there is a significant increase in overall cycling behaviours and attitudes.
- After 12 weeks of participation, young people feel more confident riding a bike, more confident riding a bike on the road, and safer doing so. These positive impacts remain relatively stable after the programme.

Cycling behaviours & attitudes (week 1 n=1,121, week 12 n=445, 12 week follow up n=256)

■ Week 1 ■ Week 12 ■ 12 Week Follow Up



* change is significant at p<.05





Cycling behaviours & attitudes

• A range of analyses and sub-analyses were conducted to explore potential associations (i.e. correlations) between cycling behaviours and attitudes, positive subjective wellbeing and self-efficacy, and activity levels.

Cycling behaviour & attitudes

- At this stage no significant correlations between overarching constructs are evident.
- However, further sub-analyses were conducted to explore potential associations between individual cycling behaviours and attitudes questions, individual positive subjective wellbeing and self-efficacy questions, and activity questions.
- 'Confidence cycling on the road ('I feel confident riding a bike on the road', r = .4, p<.01, n=442) is moderately/strongly correlated with cycling confidence in general ('I feel confident riding a bike', r = .4, p<.01, n=442), feeling safe riding a bike ('I feel safe riding a bike on the road', r = .8, p<.01, n=442), and activity levels ('I do more than 60 minutes of physical activity', r = .4, p<.01, n=442) suggesting that the more confident and safe participants feel riding their bike, the more likely they are to do so.

Note: Correlation is not causation - Just because two things correlate does not necessarily mean that one causes the other. Correlations between two things can be caused by a third factor that affects both of them!





Mental wellbeing & individual development

- Mental wellbeing (Outcome 2) is measured by the reporting of positive subjective wellbeing.
- Individual development (Outcome 3) is measured by the reporting of positive perceived self-efficacy.
- Subjective wellbeing and perceived self-efficacy are measured by the BMX Legacy Programme survey through questions about participants' perceptions of their confidence, sociability, resilience, happiness, empathy, creativity and aspirations.
- Overall, no change is evident in the overall construct either across the programme or 12 weeks after.
- However, further sub-analyses reveals that after 12 weeks of participation, young people feel significantly more **resilient** (*I try again if I don't get something right first time'*) and this increase is sustained 12 weeks after the programme.
- It is noted that perceptions of wellbeing are affected by a wide range of individual, family, community and societal factors, and these factors may differentially affect perceptions at any given time.
- Exploring these through qualitative data will enable further insight into impact on this outcome.







* change is significant at p<.05





Social & community development

- Data related to Outcome 4 is measured by the percentage of the population reporting positive levels of social trust.
- The BMX Legacy Programme young people survey measures levels of social trust through questions about participants' perceptions of safety, trust and engagement in their community.
- Overall, no change is evident in the overall construct either across the programme or 12 weeks after.
- While speculative, it is reasonable to suggest that perceptions of community trust are affected by local and wider societal issues.
- Exploring these through qualitative data will enable further insight into impact on this outcome.

Positive levels of social trust 'every day' (week 1 n=1,121, week 12 n=445, 12 week follow-up n=256)



* change is significant at p<.05





What Works?

Aspects of the programme most effective in engaging participants...

- The chance to have fun consistently rates top among aspects of the programme effective in engaging participants.
- Young people also value the opportunity to learn new things, to get fit, to be with friends and to do something 'cool' and 'different'.







Analyses by Gender: Who Participated?

On joining the BMX Legacy Programme...



28% of male participants didn't own a bike or have access to one

10% couldn't ride a bike



12% didn't feel confident riding a bike



39% hadn't cycled in the last week



64% of female participants didn't own a bike or have access to one

15% couldn't ride a bike

24% didn't feel confident riding a bike

57% hadn't cycled in the last week



29% hadn't taken part in 30 minutes of sport &/or physical activity outside of school at least once in the previous 4 weeks

44% hadn't taken part in 30 minutes of sport &/or physical activity outside of school at least once in the previous 4 weeks





Since taking part in the BMX Legacy Programme¹...





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Analyses by Gender: What was the Impact¹?

| | On joining the12 weeks later programme | | eks later | What was the Impact? | | 12 week follow- up | | What was the Impact? | | |
|--|--|-------------|-------------|-------------------------|-------------------|-----------------------|------------|-------------------------|-----------|-------------|
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| Meeting CMO physical activity guidelines | 614 (29%) | 393 (14%) | 890 (42%) | 533 (19%) | 276 (44%)* | 140(41%) | 868(41%) | 477 (17%) | -22(-3) | -56 (-11%) |
| Doing 150+ minutes a week (Active) | 1,377 (65%) | 1,404 (50%) | 1,610(76%) | 1,516(54%) | 233 (17%)* | 112 (9%) | 1,610(76%) | 1,656(59%) | 0 (0%) | 140 (8%) |
| Doing 30-149 minutes a week (Fairly active) | 572 (27%) | 982 (35%) | 381(18%) | 1,011(36%) | -191 (-34%)* | 29 (2%) | 360 (17%) | 898 (32%) | -21(-6%) | -113 (-10%) |
| 30 minutes outside of school at least twice in the past 4 weeks | 1,419 (67%) | 1,572 (56%) | 1,716(81%) | 1,965 (70%) | 297 (21%)* | 393 (25%) * | 1,800(85%) | 2,049 (73%) | 84 (5%) | 84 (5%) |
| Doing less than 30 minutes of physical activity e ach week (Inactive) | 169 (8%) | 449 (16%) | 127 (6%) | 281(10%) | -42 (-27)* | -168 (-34%) | 148(7%) | 253 (9%) | 21(17%) | -28 (-8%) |
| Achieving physical literacy standards | 1,461(69%) | 1,572 (56%) | 1,504 (71%) | 1,488(53%) | 43 (3%) | -84 (-5%) | 1,589(75%) | 1,432(51%) | 85 (6%) | -56 (-4%) |
| Reporting positive (cycling) behaviours & attitudes | 1,949(92%) | 2,414(86%) | 2,076 (98%) | 2,667 (95%) | 127 (7%) * | 253 (10%) * | 2,012(95%) | 2,751(98%) | -64 (-3%) | 84 (-4%) |
| Reporting positive subjective wellbeing & se lf-efficacy | 1,440(68%) | 1,712(61%) | 1,461(69%) | 1,628(58%) | 21(1%) | -84 (-4%) | 1,546(73%) | 1,375 (49%) | 85 (6%) | -253 (-16%) |
| Reporting positive levels of social trust | 1,440 (68%) | 1,684(60%) | 1,440(68%) | 1,488(53%) | 0 (0%) | -196 (-13%) | 1,483(70%) | 1,347 (48%) | 43 (3%) | -141(-10%) |

¹Cross Sectional Data Males: Week 1: n=442, Week 12: n=246, 12 week follow-up n=128 upscaled to population sample of 2,118, Females: Week 1: n=679, Week 12: n=199, 12 week follow-up n=128 upscaled to population sample of 2,807. *Change is significant at p<.05.



Physical activity

- Sub-analyses by gender reveal a significant and sustained increase in the percentage of males achieving 60 active minutes.
- No significant increase in the percentage of females achieving 60 active minutes is evident.
- However, significant increases in the percentage of both males and females achieving 30 active minutes outside of school at least twice in the past 4 weeks is evident. These increases are sustained 12 weeks after the programme.



Meeting CMO Physical Activity Guidelines





- There is a significant increase over 12 weeks in the percentage of male participants classified as 'active', however, no significant change is observed in female participants.
- No significant differences are identified 12 weeks after completion of BMX sessions, suggesting that the positive impact of the BMX Legacy Programme on the activity levels of male participants is sustained.





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Physical activity

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- A range of analyses and sub-analyses were conducted to explore potential associations (i.e. correlations) by gender between physical activity parameters such as achieving 30 and 60 active minutes and positive subjective wellbeing and self-efficacy.
- Overall it appears that increases in activity levels are positively associated with changes in subjective wellbeing and self-efficacy (e.g. confidence and social skills). However, sub-analyses by gender reveals that this association is only significant for males and not females.

Cycling behaviours & attitudes

• Significant and sustained increases in overall cycling behaviours & attitudes in both males and females are evident.



Reporting positive (cycling) behaviours & attitudes



Cycling behaviour & attitudes

Cycling behaviours & attitudes - Males (week 1 n=442, week 12 n=246, 12 week follow up n=128)

• After 12 weeks of participation, both male and female participants feel more confident riding a bike and these positive perceptions are sustained 12 weeks after the programme.



Cycling behaviours & attitudes - Females

(week 1 n=679, week 12 n=199, 12 week follow up n=128)

■ Week 1 ■ Week 12 ■ 12 Week Follow Up

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Social & community development

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Positive levels of social trust - Males

- No changes are evident in male participants' perceptions of social & community development between week 1, 12 and 12 week follow-up.
- While there appears to be a negative trend in female participants' perceptions of social and community trust, a significant decrease is evident only for their perceptions of feeling safe where they live.

Positive levels of social trust - Females





Analyses by Gender: What Worked?

Aspects of the programme most effective in engaging male and female participants...

- The chance to have fun rates top among aspects of the programme effective in engaging both male and female participants
- All participants value the opportunity to get fit and learn new things. However male participants value the competitions, the chance to learn about bikes and to feel part of something significantly more highly than their female counterparts.

What young people like best about the BMX Legacy programme? (males week 12 n=246, females week 12 n=199)



* change is significant at p<.05





Analyses by those doing <30mins at least once in the past 4 weeks at registration



32% didn't feel confident riding a bike



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69% hadn't cycled in the last week

Analyses by those doing <30mins at least once in the past 4 weeks at registration



...since taking part in the BMX Legacy Programme.

¹ survey sample Week 12 n=78





Sub-Analyses by School, Ethnicity & Disability

Disability

- Of participants reporting to have a disability (n=113), no significant differences in activity or other variables are evident across the programme. However, this likely reflects the small sample size of survey returns at week 1 (n=86) and week 12 (n=30).
- Significant increases are evident in the number of participants without a disability achieving 60 active minutes every day over 12 weeks of the programme (n= 125).
- Further sub-analyses reveal that on joining the programme, participants reporting to have a disability felt less resilient than participants without a disability.
- At week 12 however, no significant differences in perceptions of resilience are evident.

Ethnicity

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- Of participants reporting to be 'white' (n=297), no significant differences in activity or other variables are evident across the programme. However, this may reflect the small samplesize of survey returns at week 1 (n=274) and week 12 (n=43).
- Significant increases are evident in the activity levels of BAME participants over 12 weeks of the programme (n=115).
- Further sub-analyses reveal that on joining the programme BAME participants felt less confident riding a bike than their 'white' counterparts.
- However by week 12, no significant differences in cycling specific confidence are evident.

School

- Significant increases are evident in the percentages of both primary and secondary participants achieving 60 active minutes every day over 12 weeks of the programme.
- On joining the programme, primary school participants were more resilient, more confident and more active than their secondary school counterparts.
- However, a significant increase is evident in the resilience of secondary school participants over 12 weeks of the programme.
- While no significant increase in levels of resilience among primary school participants is evident, they remain significantly more confident than their secondary school counterparts after 12 weeks of programme engagement.

N.B, the MME for these analyses is high due to the small samples and these data must therefore be viewed with caution.

Sub-analyses of participation and impact data by 'Coach' has not been conducted because there are insufficient, or no survey returns at the same timepoints (e.g. weeks 1 and 12) for different coaches.





(Informal) recommended evaluation actions

- 1. Continue to collect your survey data if you can. As your survey sample increases, so does the power of your data. spear collected data for Change4Life for 5 years and this data has been referred to as 'the jewel in the crown' (not by us!).
- 2. Continue to collect qualitative data. While it may not open many people's check books right now, it may do so in a couple of years time and it provides insights and richness that quantitative data simply can't provide.
- 3. Demonstrating awareness of programme and methodological challenges will strengthen the credibility of your evidence and provide important insights for the programme moving forward.





Methodological note

- To maximise use of the sample cross sectional analyses has been conducted.
- Values presented in the participation section on slides 3 to 5 represent the survey responses of all unique participants (n=1,417).
- Values presented throughout the impact section on slides 6 to 20 represent the survey responses at week 1 (n=1,121, maximum margin of error = +/-3%), week 12 (n=445, maximum margin of error = +/-4%), and 12 week follow-up (n=256, maximum margin of error = +/-6%).
- Values presented throughout the analyses by gender on slides 21 to 29 represent the survey responses at week 1 (males n=442, females n =679, maximum margin of error = +/-4% and +/-3% respectively), week 12 (males n=246, females n =199, maximum margin of error = +/-6% and +/-7% respectively), and 12 week follow up (males n=128, females n =199, maximum margin of error = +/-8% and +/-7% respectively).
- Values presented throughout the analyses for participants who had not taken part in 30 minutes of sport and/or physical activity outside of school at least once in the previous 4 weeks represent the survey responses at week 1 (n=260, maximum margin of error = +/-6%) and week 12 (n=78, maximum margin of error = +/11%).
- Where changes are identified, these are significant at p<.05. Where values presented suggest a change (i.e. observed increase or decrease), but this change is not identified as significant, these must be viewed with caution.





Methodological note

- Percentages (from sample) have been upscaled to provide participation and impact figures based on the total number of participants in the BMX Legacy Programme as reported in programme monitoring data (n=4,925).
- Participation in the BMX Legacy Programme may involve 'vigorous intensity' physical activity and therefore count as double. It is not possible to collect valid data on whether the intensity of activity is vigorous or not in self-report surveys (validity would need to be tested objectively, e.g. accelerometers); impact data has not been counted as double and may therefore under-represent the amount of physical activity being undertaken during the programme.

What is Maximum Margin of Error (MME)?

The MME shows the level of accuracy the participant sample has; the smaller the MME, the greater the accuracy. It is calculated at the standard 95% confidence level so we can be 95% confident that the sample results reflect the population results to within the MME. For example, if the survey sample has a MME of +/-5% and 50% of participants say they 'do more than 10 minutes of physical activity where my heart beats fast', if the survey were conducted 100 times, the percentage who state they 'do more than 10 minutes of physical activity where my heart beats fast' would range between 45% and 55% most (95%) of the time.







More details on *spear* and its work can be found at:

www.canterbury.ac.uk/spear



