

An exploration of the impact of participation in *buddyboost* on health, wellbeing, and physical activity levels

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Evaluation Report

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Executive Summary

- *'buddyboost'* (formerly Mayathon) is a free app that facilitates the logging and tracking of physical activity alongside a 'buddy' **to help encourage and support people to complete 26 minutes of exercise** a day and establish new behaviour patterns and promote positive social and emotional wellbeing.
- This evaluation report, supported by Sheffield Hallam University's 'Advanced Wellbeing Accelerator', focusses on the contribution of *buddyboost* to increased physical activity levels and associated health and wellbeing outcomes.
- The **evaluation presents a largely positive picture** of the impact of the *buddyboost* app:
 - A number of participants who took part saw **improvements in their mental wellbeing and physical health** alongside **improvements in levels of physical activity**.
 - Participants were **overwhelmingly positive about the impact of participation on their health, wellbeing and activity levels**.
- The social and economic impact of *buddyboost* could be enhanced in two ways:
 - First, by **extending the reach of the app** to segments of the population **known to experience barriers to physical activity** and wider health inequalities.
 - Second, by **enabling as many people as possible to engage in at least 150 minutes of moderate activity per week** (or 75 mins of vigorous activity).

Introduction

The Chief Medical Officer recommends that we should do at least 150 minutes of moderate physical activity a week. Whilst the percentage of those achieving this target is increasing¹ many people do not reach this level on a regular basis.² Currently 12.2% (1.1 million people) report being fairly active (~30-149 minutes a week) and 24.6% (5.5 million people) report being inactive (<30 minutes a week).³ As it is well established that physical activity can positively contribute to an individual's physical wellbeing, mental wellbeing, personal development and social and community cohesion as well as national economic development, further support is required for those not currently meeting physical activity targets.

'*buddyboost*' (formerly Mayathon) is a free app that facilitates the logging and tracking of physical activity alongside a 'buddy' (family member, friend, colleague) with the intention of encouraging and supporting the completion of 26 minutes of exercise a day. Grounded within behaviour change theory, *buddyboost* aims to establish new exercise behaviour patterns and that enable people to achieve the government exercise guidelines, with the additional benefit of helping them feel healthier, happier and more connected.

In 2020 *buddyboost* was accepted as a participant in the 'Advanced Wellbeing Accelerator' run by Sheffield Hallam University's Advanced Wellbeing Research Centre (AWRC). The support provided through the Accelerator included an evaluation led by academics which sought to understand the contribution of *buddyboost* to health and wellbeing outcomes and increasing and physical activity levels and consider the potential for *buddyboost* to have a lasting impact. This report presents the main evaluation findings and headline data.

¹ 63.3% of adults - 28.6 million people - in 2018/19.

² 36.7% - 6.6. million people – in 2018/19.

³ https://sportengland-production-files.s3.eu-west-2.amazonaws.com/s3fs-public/2020-04/Active%20Lives%20Adult%20November%2018-19%20Report..pdf?BhkAy2K28pd9bDEz_NuisHI2ppuqJtpZ

Data and methods

Data for this evaluation was collected during the *buddyboost* (then Mayathon) campaign that ran during October 2020. Participants were asked to complete an online survey prior to commencing activity and a follow-up survey approximately four weeks later once the campaign was over. Overall, 131 participants completed a baseline survey and 116 participants completed a follow-up survey, with 47 participants completing the survey at both time points. For this latter group of 47 participants baseline and follow-up data was 'paired' to enable analysis of in-person change over time.

Analysis and findings

3.1. Profile of respondents

Figures 3.1-3.5 provide an overview of the profile of respondents to the survey. Data for both waves is compared with the paired data to illustrate the representativeness of the sample. Key findings are as follows:

- **Gender:** a majority of respondents were female (77%) with far fewer men taking part (23%).
- **Age:** respondents were most likely to be aged 45-54 (34%), followed by 35-44 (21%). Fewer respondents were aged 35 or younger (13%), aged 55-64 or 65 or older (both 15%).
- **Ethnicity:** a small proportion of respondents were non-White (i.e., Black, Asian or other Minority Ethnic group – BAME). 11% of paired respondents were from a BAME background. This is slightly lower than in the wider UK population, where the figure is estimated to be about 14%.⁴
- **Health:** most respondents were in good health. Only 22% of paired respondents reported that their activities were limited a little or a lot compared due to a health condition.
- **Employment status:** the majority of respondents were employed. 52% of paired respondents were in full-time employment with 15% in part time employment and 9% self-employed.

⁴ See <https://diversityuk.org/diversity-in-the-uk/>

Figure 3.1

Gender: Comparing respondents in **paired** responses and **unpaired** responses for **Wave 1** and **Wave 2**

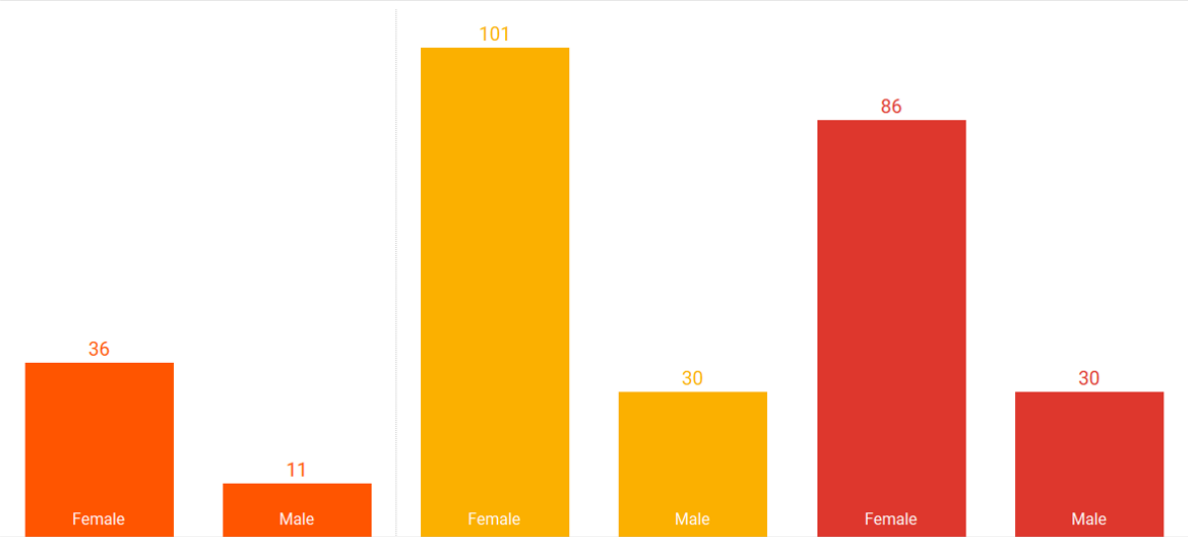


Figure 3.2

Age group: Comparing respondents in **paired** responses and **unpaired** responses for **Wave 1** and **Wave 2**

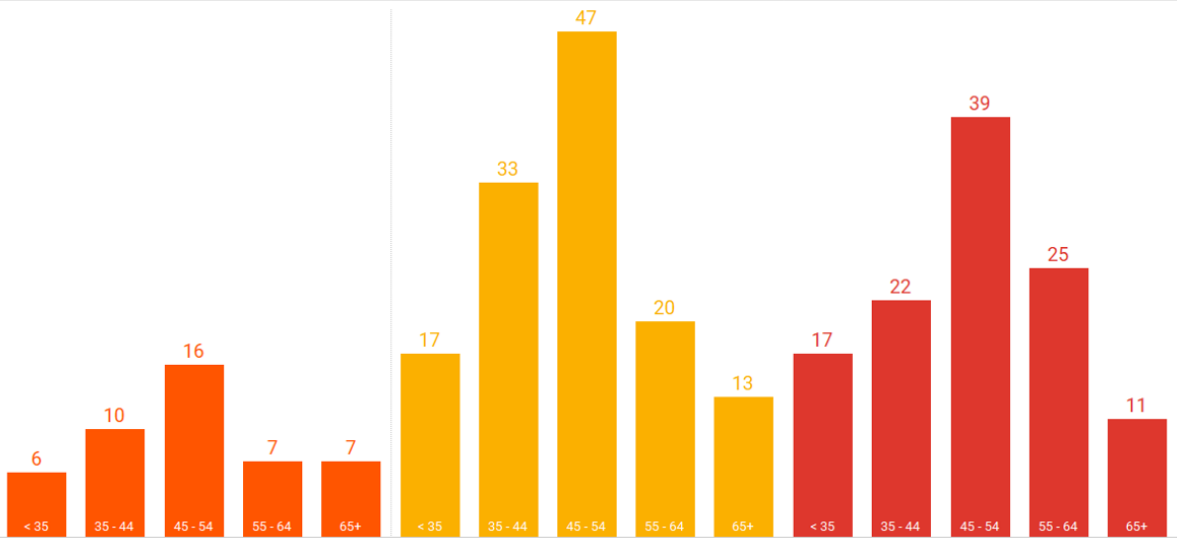


Figure 3.3

Ethnicity: Comparing respondents in **paired** responses and **unpaired** responses for **Wave 1** and **Wave 2**

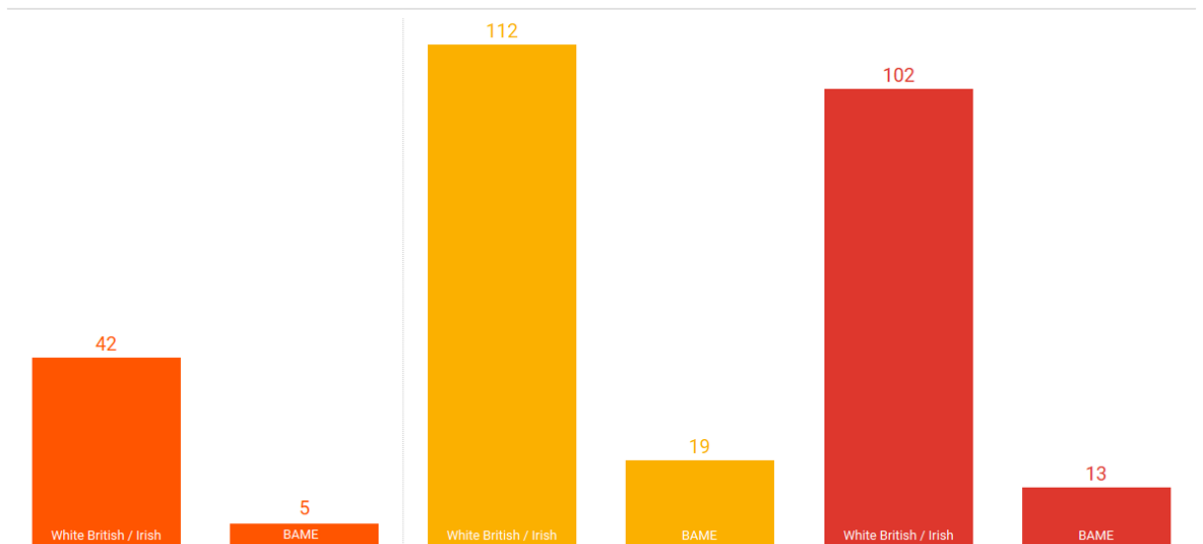


Figure 3.4

Health status: Comparing respondents in **paired** responses and **unpaired** responses for **Wave 1** and **Wave 2**

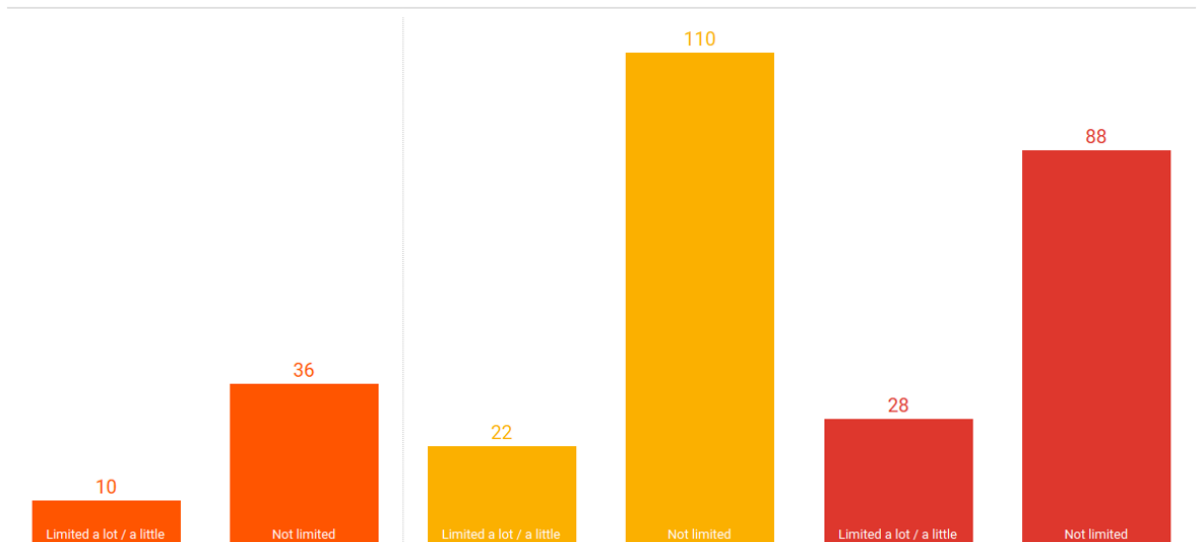
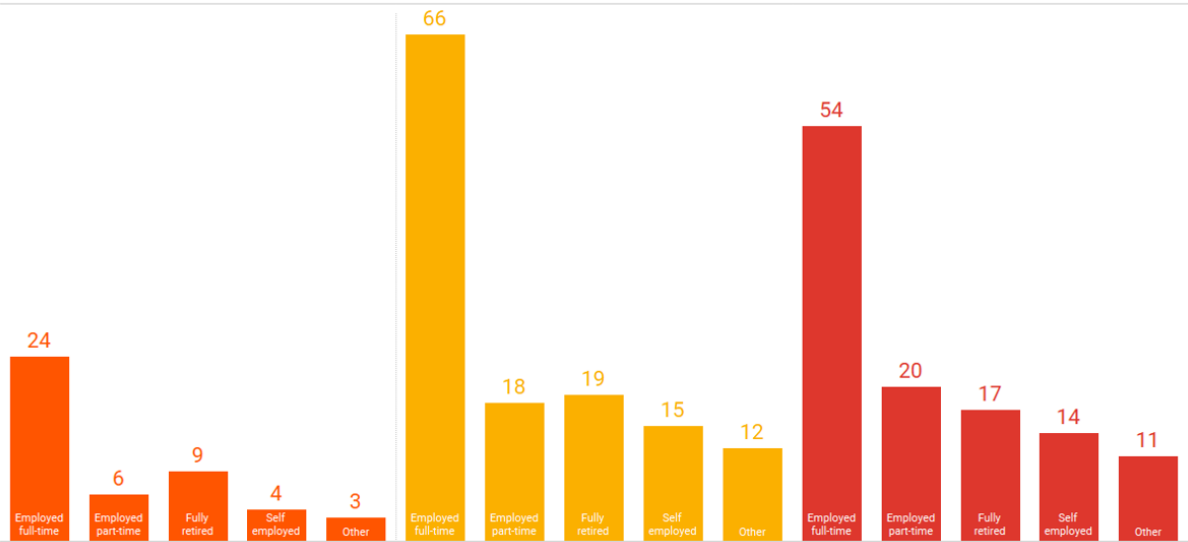


Figure 3.5

Employment status: Comparing respondents in **paired** responses and **unpaired** responses for **Wave 1** and **Wave 2**

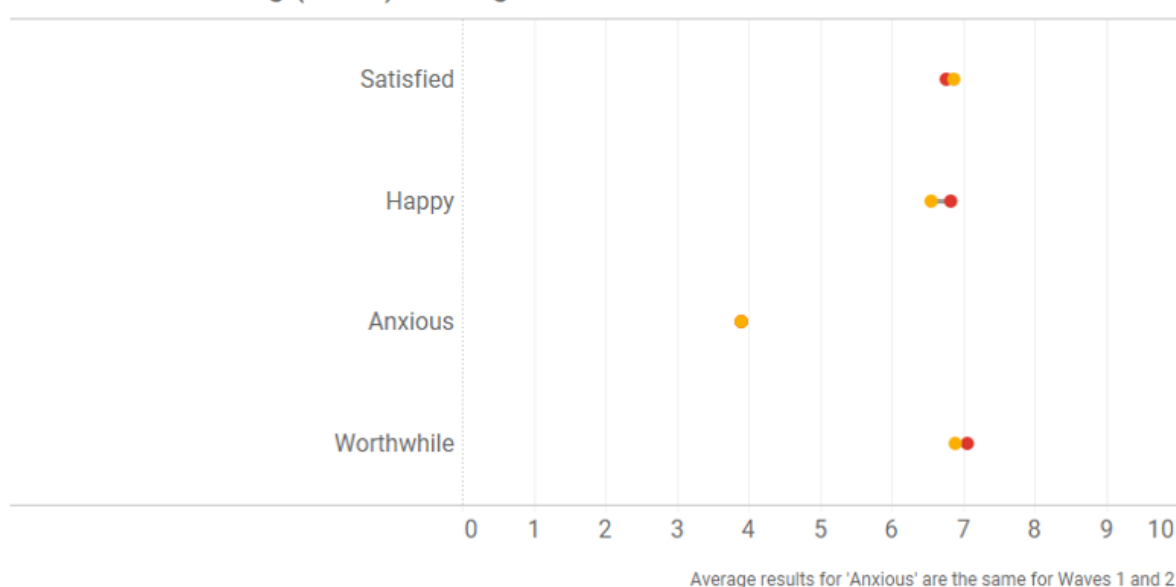


3.2. Personal wellbeing

Survey respondents were asked about their personal wellbeing – life satisfaction, how happy they are, how worthwhile life is, how anxious they feel – using the four wellbeing measures recommended by the Office for National Statistics⁵. Overall, figure 3.6 shows that there were **improvements in average (mean) score for ‘happy’ (from 6.6 to 6.8) and ‘worthwhile’ (from 6.9 to 7.1)**, between Waves 1 and 2. By contrast the average scores for ‘anxious’ did not change, and ‘satisfied’ declined slightly.

Figure 3.6

Personal Wellbeing (ONS4): Average score in **Wave 1** and **Wave 2**

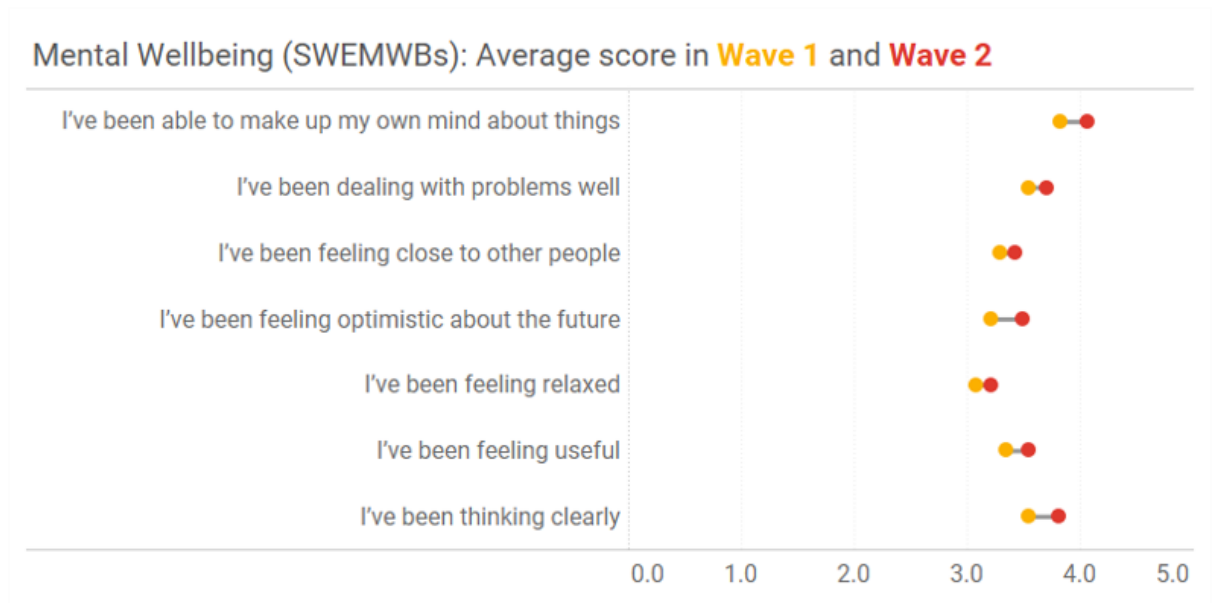


⁵ <https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing>

3.3. Mental wellbeing

Survey respondents were asked about their mental wellbeing using the Short Warwick Edinburgh Mental Wellbeing Scale (SWEMWBS)⁶. Figure 3.7 shows that **the average (mean) scores for all measures improved between Wave 1 and 2**, with the largest increase occurring for 'feeling optimistic about the future'.

Figure 3.7



⁶ <https://warwick.ac.uk/fac/sci/med/research/platform/wemwbs/>

3.4. Physical health

Survey respondents were asked about their health (health related quality of life – HRQL) using the EQ5D and EQVAS measure⁷. Figure 3.8a shows that **the average (mean) score for all five EQ5D measures improved between Waves 1 and 2** (a decrease in score means an improvement) with the biggest change recorded for the ‘anxiety/depression’ component. This is affirmed by figure 3.8b which shows **the average (mean) score for overall health improved from 74.8 to 77.1 (out of 100) between waves 1 and 2**.

Figure 3.8a

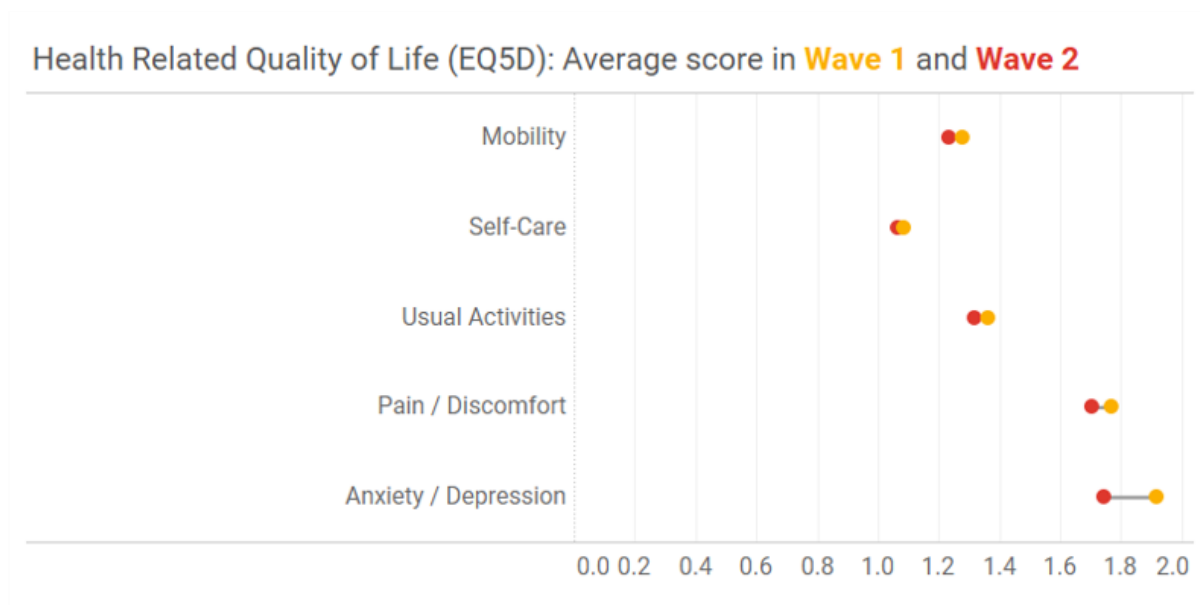
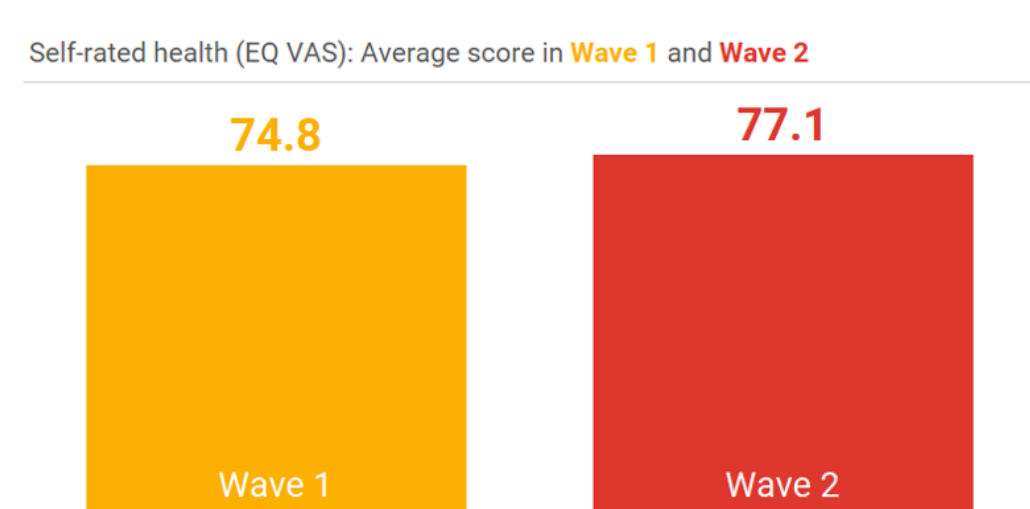


Figure 3.8b



⁷ <https://euroqol.org/eq-5d-instruments/>

3.5. Physical activity levels

Survey respondents were asked about their physical activity levels using the International Physical Activity Questionnaire (IPAQ)⁸. Figure 3.9 shows that the number of respondents completing 150 minutes of exercise (of any intensity) per week **increased from 15 respondents (32%) in Wave 1 to 18 (38%) in Wave 2**. Due to the small numbers in the sample, it was not possible to differentiate significantly between those whose exercise was light, moderate or intense.

Figure 3.9

Number of respondents undertaking more than 150 minutes of exercise (any intensity) per week, in **Wave 1** and **Wave 2**



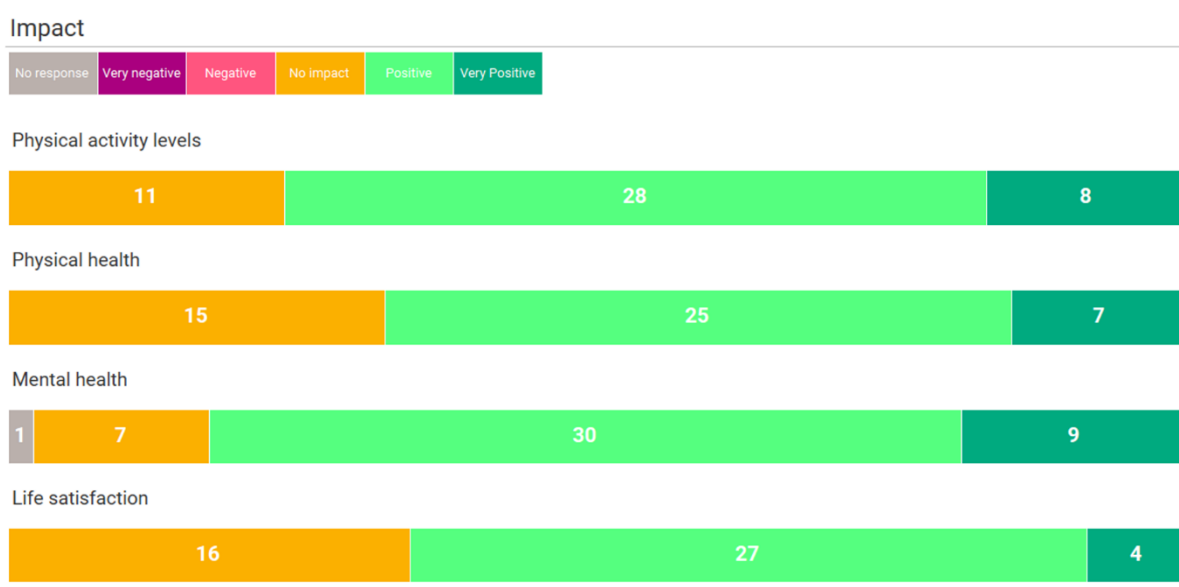
⁸ <https://dapa-toolkit.mrc.ac.uk/instrument/53>

3.6. Assessing impact

Survey respondents were also asked to complete a bespoke question linked to each of the outcome categories reported to help establish the overall impact of the *buddyboost* app. An overview of responses is provided in figure 3.10.

The responses were overwhelmingly positive. **For each category a majority of respondents reported that taking part in *buddyboost* had either a positive or very positive impact** and almost no negative impacts were reported. The category with the highest number of positive responses was mental health, followed by physical activity and physical health.

Figure 3.10. Overall impact



Key findings and implications

Overall, **this evaluation presents a largely positive picture of the impact of the *buddyboost* app**. A number of participants who took part saw improvements in their mental wellbeing and physical health alongside improvements in their overall physical activity levels. Furthermore, **respondents were overwhelmingly positive in their own perceptions of the impact of participation on health, wellbeing and activity levels**. Despite the relatively small sample of paired data **many of these changes were statistically significant** when tests were applied.

However, this evaluation has also highlighted the **limited reach of the *buddyboost* app at the time the evaluation was undertaken**. Participants tended to be female, mid-aged and employed. Whilst this is a segment of the population for whom physical activity is known to have dropped off, and who would benefit from support to 're-start', they were also often in good health, reported positive wellbeing, and were already involved in some form of physical activity. This limited the overall impact of the app and means that ***buddyboost* would need to be scaled-up and implemented on a large scale for demonstrable population level benefits for health and wellbeing to occur**.

Additional targeting of the app at groups known to experience barriers to physical activity – which also tend to mirror wider health inequalities – will help maximise the potential for lasting impact on population health and the wider economy. If *buddyboost* is to maximise its impact, **the goal should be to enable as many people as possible in these groups to engage in at least 150 minutes of moderate activity per week** (or 75 mins of vigorous activity). This is the activity threshold at which health benefits, such as reduced risk of stroke, coronary heart disease, diabetes, several cancers, dementia and other mental health conditions become significant. A recent study for Sport England estimated that for every 100,000 people more regularly active the physical and mental health benefits would be £26 million with wider benefits including wellbeing, personal, social and community development totalling a further £187 million.

A limitation of this report is that data were collected in October 2020 during the COVID 19 pandemic. It is unclear what effect the pandemic had on levels of engagement with the app or participation in physical activity so further evaluation activity during 'normal' times is recommended (see section 5 for more information).

Recommendations for future evaluation

A key objective of this project was to develop and pilot an approach to evaluation that *buddyboost* is able to replicate, build upon and scale-up in the future if appropriate. As such, the evaluation team is able to make some recommendations should *buddyboost* wish to undertake further evaluation in the future.

1. The **evaluation questionnaire should be implemented on a regular and ongoing basis** to build up a larger data set over time and that covers a wider range participant characteristics. This should include universal activities such as the national campaign from October 2020 upon which this evaluation is based, along with any targeted activities and campaigns undertaken on behalf of public and private sector customers.
2. This evaluation was limited by the c.28 day time period between wave 1 wave 2 data collection. This was appropriate given the 26 day window in which the *buddyboost* campaign was focussed, but **future evaluation should consider implementing further follow-up surveys over a longer time period** (for example after three, six and twelve months). This approach will be key to establishing lasting impact and enable a more robust assessment of the effectiveness of the app in contributing to long term behaviour change and the health and economic benefits associated with sustained involvement in physical activity.
3. Further **targeted evaluation of the health benefits of *buddyboost* may also be needed to estimate the economic benefits of behaviour change** that can attributed to the app. This should focus on the extent to which participation leads to a sustained increase in moderate intensity physical activity for 150 minutes a week or more, or vigorous intensity physical activity for 75 minutes or more, based on the Chief Medical Officer's guidance.

4. *buddyboost* would benefit from **developing a theory of change⁹ for the intervention** that explains its overall vision, who it intends to benefit or target, how they might benefit from participation, the factors that may enable or inhibit behaviour change, and the time period over which certain impacts will emerge. Such a process may support future planning, development and targeting of activities related to the wider roll-out of the app.
5. The ‘unique selling point’ of *buddyboost* is the connecting (‘buddying’) of app users to support people achieve their activity goals. Further **in-depth evaluation of this buddying as a contributory mechanism in support of behaviour change** would provide further evidence of how, why, for whom and in which contexts the app is most (and least) effective and may aid future roll-out, scaling and targeting.

⁹ https://www.betterevaluation.org/en/resources/guide/theory_of_change

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