**Sport Wales ComRes survey**

Savanta ComRes interviewed 1,007 adults in Wales (16+ years) online from the 8th to 12th May 2020. Data were weighted by gender, age and the estimated households with children under 16 years, to be demographically representative of adults in Wales. The aim of the survey was to explore the attitudes and behaviours to physical activity (PA) during the coronavirus pandemic, specifically relating to the amount and types physical activity individuals engage in.

**Physical activity levels -** The amount of PA individuals reported engaging in during the Coronavirus pandemic was highly variable. Participants were asked to report how many days in the previous week they had engaged in at least 30 minutes of moderate-intensity physical activity (enough to their raise breathing rate). All 1,007 participants responded and reported engaging in 30 minutes of moderate PA on 0 days (21%), 1 day (9%), 2 days (12%), 3 days (15%), 4 days (11%), 5 days (11%), 6 days (3%) and 7 days (18%) in the last week (Figure 1). The majority of respondents (36%) reported that this was more PA than they were engaging in prior to the Coronavirus pandemic. However, others reported that their PA was unchanged (30%). or that they were engaging in less PA (32%) as a result of the pandemic.

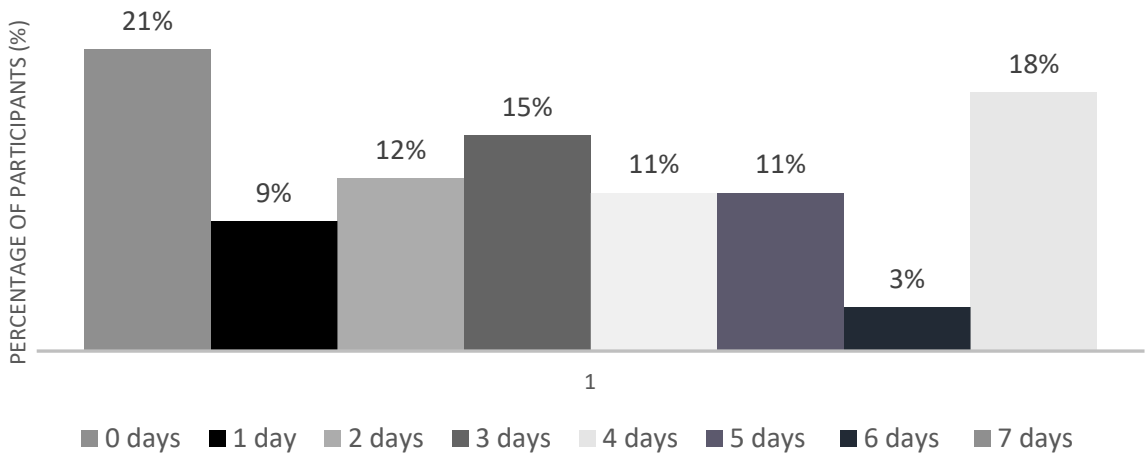



**Figure 1 – Self-reported number of days in which participants engaged in at least 30 minutes of moderate intensity physical activity per week.**

**Physical activity between groups**

**Age -** The 16-34 year age olds (3.06 ± 2.33 days) engaged in significantly (*P* = 0.046) less PA than the 35-54 year olds (3.50 ± 2.56 days). There were no other significant differences between any other age groups.

**Sex –** There was no significant difference (*P = 0.063*) in reported PA levels between males (3.20 ± 2.21 days) and females (3.24 ± 2.41 days).

**Ethnicity -** There was no significant difference (*P* = 0.221) between Caucasian (3.19 ± 2.48 days) and Black, Asian and Minority Ethnic (BAME) (3.62 ± 1.92 days) groups reported PA.

**Socioeconomic status –** Socioeconomic status appears to have a significant influence on PA. The mean number of days engaging in at least 30 minutes PA was significantly lower (*P* = 0.003) for the lower socioeconomic group (2.97 ± 2.49 days), in comparison to the higher socioeconomic group (3.44 ±

2.41 days). There was also a significant difference in days spent engaging in at least 30 minutes of PA per week ($P$ = 0.006) between socioeconomic groups, when adjusting for age and sex.

**Health status** – Pre-existing long-term health conditions or illness also appear to adversely impact PA, with individuals with long-term health conditions or illness engaging in significantly less PA than those without.

The mean number of days engaging in at least 30 minutes PA was significantly ($P$ <0.001) higher for individuals without a long-term health condition or illness (3.42 days ± 2.411) than for those with (2.85 days ± 2.506).

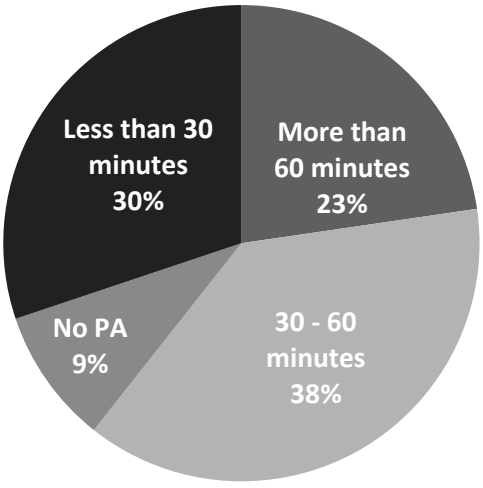
**Isolation status –** PA was significantly lower in individuals self-isolating due to being considered as 'at risk'. Although it's not clear as to whether these individuals were isolating due to their age or the presence of a pre-existing condition, PA levels remain significantly lower in individuals isolating due to being 'at risk' when compared with individuals not self-isolating when controlling for age. Individuals considered to be at risk therefore represent an import cohort for any future interventions.

The mean number of days engaging in at least 30 minutes PA for the group self-isolating due to being high risk (2.60 ± 2.50 days) was significantly lower ($P$ < 0.001) than the mean number of days engaging in at least 30 minutes PA for the group not isolating (3.41 ± 2.44 days). There were no other significant differences between, not isolating, isolating due to being at risk, isolating due to symptoms (3.11 ± 1.88 days ), isolating due to household symptoms (2.95 ± 2.06 days ) and prefer not to say (3.68 ± 2.73 days ) groups ($P > 0.05$).

**Geographical location**

There was no significant effect of geographical location on days engaging in at least 30 minutes of PA ($P$ = 0.073).

**Children's Physical activity**




Children's PA was reported by 282 participants (Figure 2). Only 23% of children were reported to be meeting recommended PA guidelines of at least 60 minutes moderate-to-vigorous physical activity (MVPA) per day. However, the majority of children were reported to be engaging in between 30 and 60 minutes of PA (38%) or engaging in some PA but less than 30 minutes per day (30%). Alarmingly, 9% of children were reported to be engaging in no PA per day. There was no significant difference in children's PA between higher and lower socioeconomic status families ($P$ = 0.525).

**Figure 2 – Children's daily physical activity levels, reported by parents in hours per day.**

**Summary of qualitative analysis**

Of the 1,007 adults (16+ years) surveyed in Wales, 722 participants stated that the Coronavirus health emergency had changed their feelings about PA and exercise. This question was expanded using an open-ended question ("How has Coronavirus changed how you feel about physical activity (PA) and exercise?"), allowing free text entry to collate qualitative responses, of which 214 (29.6%) participants responded. As with self-reported levels of PA the perceived impact of the Coronavirus pandemic on PA varies between individuals (Figure 3), with some reporting increased motivation, for and enjoyment of, PA during the pandemic whilst others reported reduced opportunities for PA and feelings of anxiety and depression, potentially mediated by reduced social contact and fear of contracting the Coronavirus. Regardless of the direct impact of the pandemic on PA, it has served as an opportunity for reflection, with respondents reporting a change in perceptions of PA. Participants reported that the pandemic had highlighted and heightened the importance of PA. This shift in perception, coupled with a desired to engage in more PA, primarily driven by improving health, may represent an opportunity for policy makers and intervention designers to have a significant, meaningful and long-term impact on population level PA in the months and years that follow the Coronavirus pandemic.

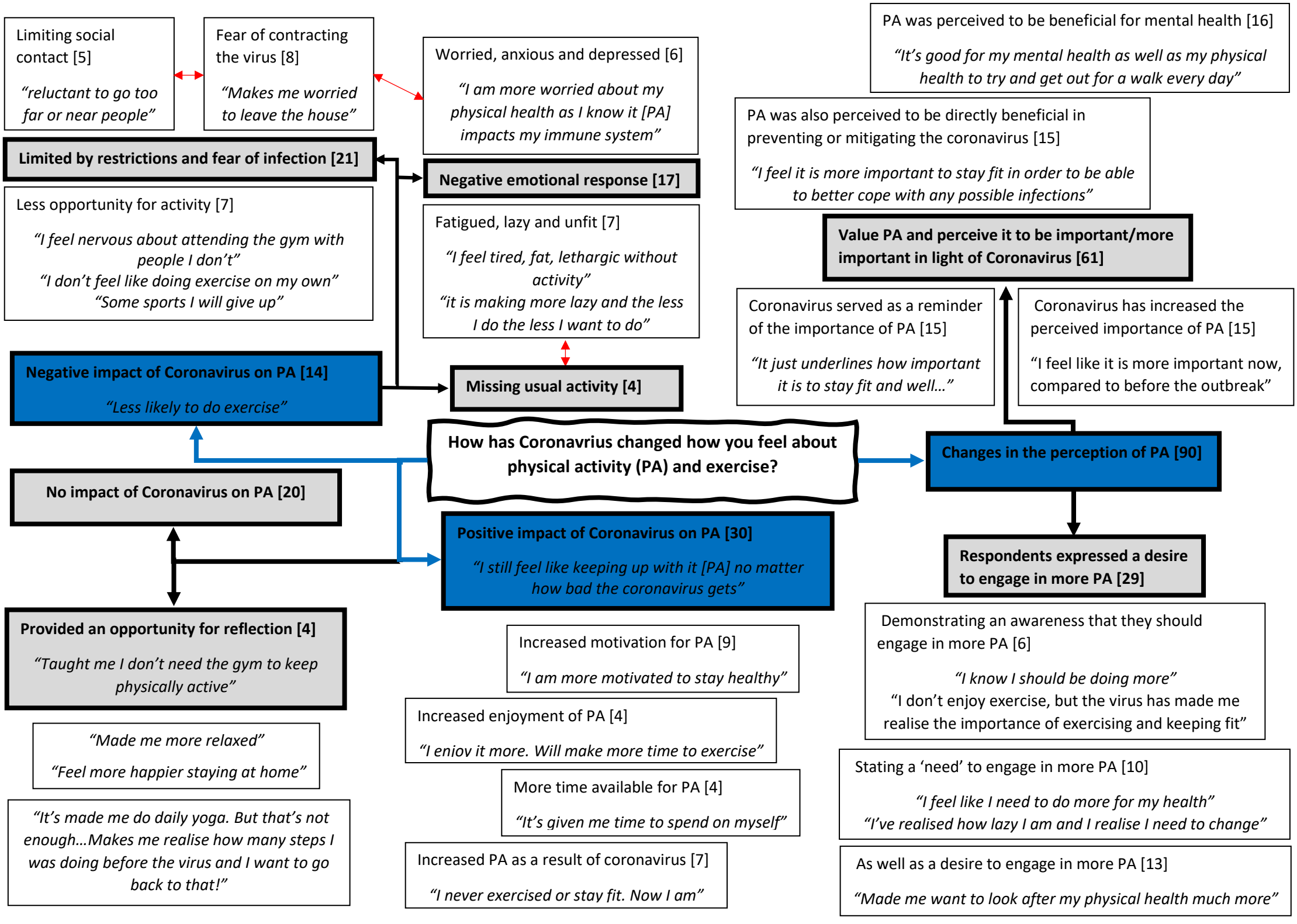
**Limitations**

The findings presented within the current report are based on a single self-reported questionnaire and although the sample was representative of the wider population of Wales the findings may not be generalisable. Some of the factors which were not reported to significantly impact PA in the current survey (geographical area, sex, ethnicity) may still be important correlates of PA and should not be overlooked in future research and policy. It is also important to acknowledge the potential sample bias resulting from recruiting from an existing incentivised database. Additionally, given that the results were obtained using free-text entry within the survey it was not possible to prompt or further explore any answers in order to obtain a greater understanding and context.

**Recommendations**

- Individuals report that the Coronavirus pandemic has changed their perspective of PA and resulted in them valuing and recognising the importance of PA. This may present an opportunity for interventions and policy post-COVID-19 to utilise this change in perception to translate into positive behaviour change, thereby increasing PA.
- Individuals with pre-existing long-term health conditions or illness will likely require additional support post-COVID-19, particularly those who were require to self-isolate due to being considered 'at risk'.
- Lower socioeconomic groups engage in less PA, and therefore may require additional support post-COVID-19.
- Better understanding of the correlates of PA during the Coronavirus pandemic may help future interventions to maintain some of the benefits associated with the pandemic, such as increased motivation for PA whilst also attempting to overcome some of the negative consequences of the pandemic such as feelings of isolation and fear of social interaction.
- Additional research is required to better understand the impact of the Coronavirus pandemic on children and their PA behaviour.

**Figure 3 – Pen-profile displaying constructed themes relating to the impact of Coronavirus on physical activity, where blue represents higher order themes, black/grey represents themes, with sub-themes in white clustered around the themes. Frequencies are displayed in square brackets and potential interactions between themes are denoted by red arrows. Verbatim quotes are provided to illustrate themes.**


How has Coronavrius changed how you feel about physical activity (PA) and exercise?
Limiting social contact [5]
"reluctant to go too far or near people"
Fear of contracting the virus [8]
"Makes me worried to leave the house"
Worried, anxious and depressed [6]
"I am more worried about my physical health as I know it [PA] impacts my immune system"
Limited by restrictions and fear of infection [21]
Negative emotional response [17]
Less opportunity for activity [7]
"I feel nervous about attending the gym with people I don't"
"I don't feel like doing exercise on my own"
"Some sports I will give up"
Fatigued, lazy and unfit [7]
"I feel tired, fat, lethargic without activity"
"it is making more lazy and the less I do the less I want to do"
Negative impact of Coronavirus on PA [14]
"Less likely to do exercise"
Missing usual activity [4]
No impact of Coronavirus on PA [20]
Positive impact of Coronavirus on PA [30]
"I still feel like keeping up with it [PA] no matter how bad the coronavirus gets"
Provided an opportunity for reflection [4]
"Taught me I don't need the gym to keep physically active"
"Made me more relaxed"
"Feel more happier staying at home"
"It's made me do daily yoga. But that's not enough…Makes me realise how many steps I was doing before the virus and I want to go back to that!"
Increased motivation for PA [9]
"I am more motivated to stay healthy"
Increased enjoyment of PA [4]
"I enjoy it more. Will make more time to exercise"
More time available for PA [4]
"It's given me time to spend on myself"
Increased PA as a result of coronavirus [7]
"I never exercised or stay fit. Now I am"
PA was perceived to be beneficial for mental health [16]
"It's good for my mental health as well as my physical health to try and get out for a walk every day"
PA was also perceived to be directly beneficial in preventing or mitigating the coronavirus [15]
"I feel it is more important to stay fit in order to be able to better cope with any possible infections"
Value PA and perceive it to be important/more important in light of Coronavirus [61]
Coronavirus served as a reminder of the importance of PA [15]
"It just underlines how important it is to stay fit and well…"
Coronavirus has increased the perceived importance of PA [15]
"I feel like it is more important now, compared to before the outbreak"
Changes in the perception of PA [90]
Respondents expressed a desire to engage in more PA [29]
Demonstrating an awareness that they should engage in more PA [6]
"I know I should be doing more"
"I don't enjoy exercise, but the virus has made me realise the importance of exercising and keeping fit"
Stating a 'need' to engage in more PA [10]
"I feel like I need to do more for my health"
"I've realised how lazy I am and I realise I need to change"
As well as a desire to engage in more PA [13]
"Made me want to look after my physical health much more"