

How did physical activity change among older adults across the COVID-19 pandemic?

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Context

- This work examines the **impact** of the **COVID-19 pandemic** on the level of **physical activity** performed by **TwinsUK** adults.
- TwinsUK is the UK's largest registry of adult twins [1] and collects thousands of biological and behavioural datapoints for each registered individual, allowing researchers to study the influence of genetics in health and disease [2].
- Given that deaths involving COVID-19 were consistently higher for those aged over 85 years [3], this work is necessary to address and potentially account for overrepresentation of this group in COVID-19 hospitalisation and mortality data [3].

Aims

- Describe & plot** changes in physical activity over the pandemic.
- Discuss** impact of the pandemic on physical activity levels & its implications for the health of older people.

Feature	Count	
Sex	Female: 3477	Male: 396
Age	Minimum: 19	Median: 67
	Mean: 64	Maximum: 96
Zygoty (type of twin or sibling)	Dizygotic/fraternal: 1259	Monozygotic/identical: 1766
	Unknown: 12	Non-twin: 1

Table 1 – features of the dataset at timepoint 1.

Methods

The International Physical Activity Questionnaire (**IPAQ**) is a survey used to estimate physical activity [4]. TwinsUK collects IPAQ data (fig 2).

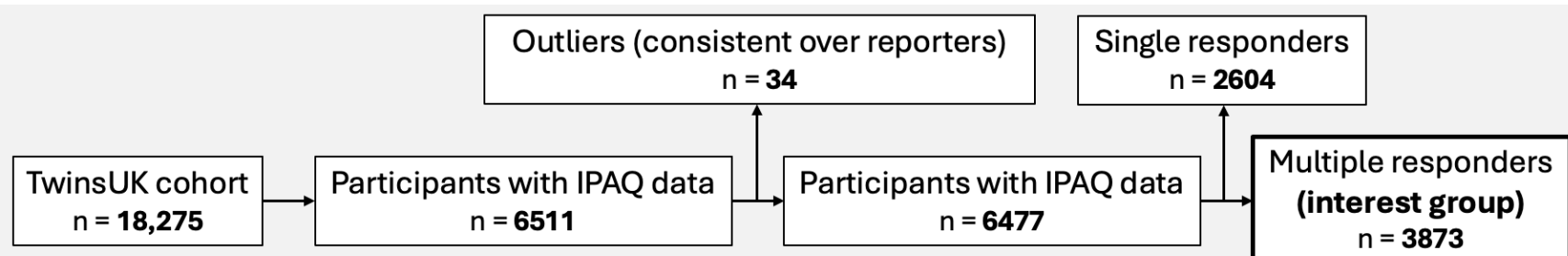


Figure 2

A score of **1**, **2**, and **3** reflect **low**, **moderate**, or **high** levels of physical activity.

Timepoints (**TP**) were defined as:

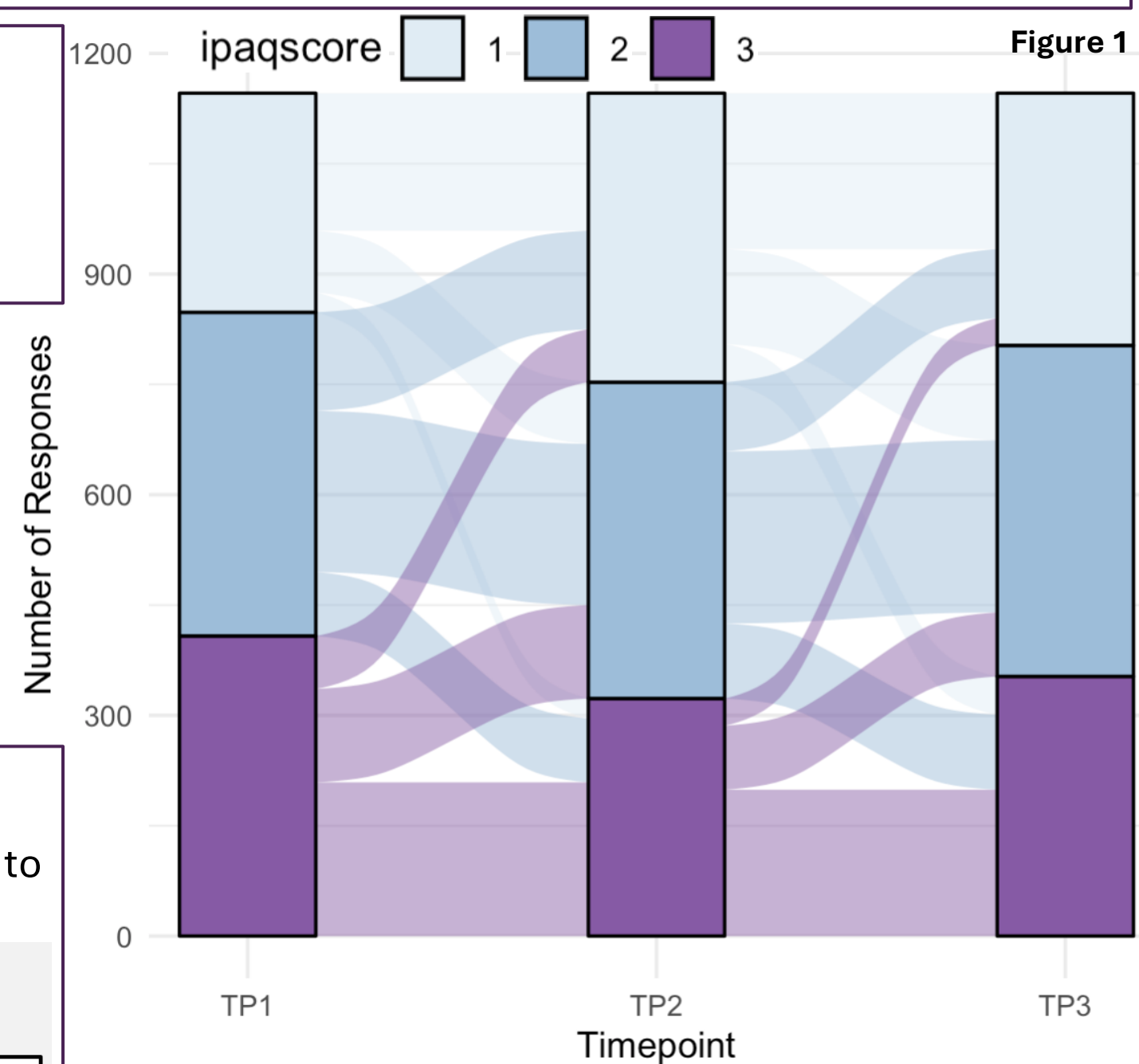
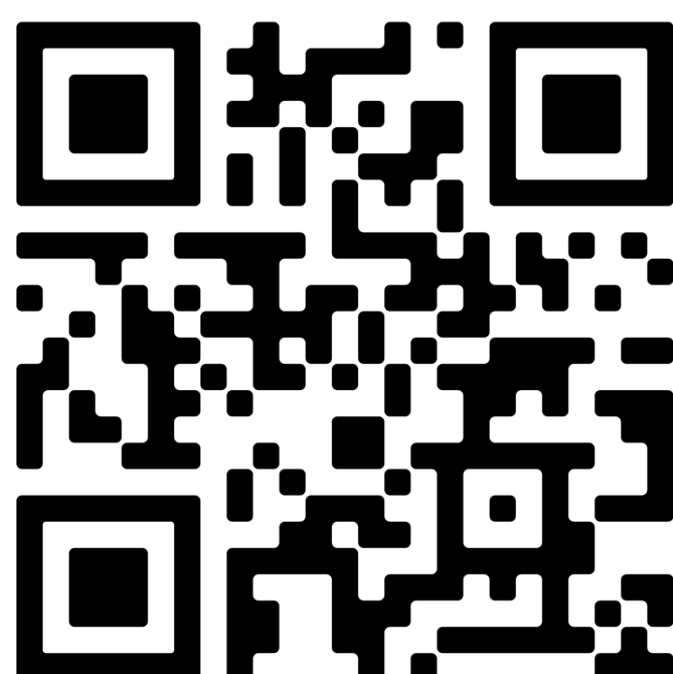
- TP1:** June – July 2017 (**pre-pandemic**)
- TP2:** January 2020 (**pandemic**)
- TP3:** February – March 2022 (**post-pandemic**)

Limitations

- Overwhelmingly White** (92%) ethnic background of participants.
- Predominantly female** participants (89%).

References

Available by scanning QR code:



Findings

Fig. 1 shows the longitudinal flow of IPAQ score across the pandemic:

- Most people maintained** their levels of **physical activity**
- A smaller group **improved** their physical activity,
- An even smaller group became **less active**.
- Some people managed to **recover** from their declined activity.

Future directions

- Identify key indicators** predicting recovery/drop-off in physical activity
- Group findings by:**
 - Environment** (indices of deprivation)
 - Health habits** (smoking, alcohol drinker)
 - Pre-existing **health conditions** (diabetes, respiratory disorders, cancer)

Longitudinal data is key to understanding the wider societal upheaval caused by the COVID-19 pandemic, allowing for better preparedness in the event of another public health emergency.