|                                       | Ν       | Measure            | Method  | Class size (SE) | Class size (95% Cl) |
|---------------------------------------|---------|--------------------|---------|-----------------|---------------------|
| /oungest group                        |         |                    |         |                 |                     |
| Audrain-McGovern, 2012                | 1,429   | MVPA               | SR      | 0.05 (0.01)     | •                   |
| Parooq 2017: Females                  | 283     | Total PA volume    | OBM     |                 |                     |
| Farooq 2017: Males                    | 262     | Total PA volume    | OBM     |                 |                     |
| Farooq 2017: Females                  | 283     | MVPA               | OBM     |                 |                     |
| Farooq 2017: Males                    | 262     | MVPA               | OBM     |                 |                     |
| Findlay, 2009: Females                | 4,497   | Organized PA       | PR + SR |                 |                     |
| Findlay, 2009: Males                  | 4,320   | Organized PA       | PR + SR |                 |                     |
| Findlay, 2010: Females                | 4,489   | Unorganized PA     | PR + SR |                 |                     |
| Findlay, 2010: Males                  | 4,489   | Unorganized PA     | PR + SR |                 |                     |
| 0 Howie, 2016: Females                | 823     | Organized SP       | PR      |                 |                     |
| 1 Howie, 2016: Males                  | 856     | Organized SP       | PR      | 0.08 (0.01)     | •                   |
| 2 Janz, 2014: Females                 | 265     | MVPA               | OBM     |                 |                     |
| 3 Janz, 2014: Males                   | 265     | MVPA               | OBM     | 0.23 (0.03)     |                     |
| 4 Kwon, 2015a*                        | 537     | MVPA               | OBM     |                 |                     |
| 5 Kwon, 2015a*                        | 537     | SP                 | SR      |                 |                     |
| 6 Kwon, Lee, Carnethon, 2015: Females | 3 2,155 | PA                 | SR      |                 |                     |
| 7 Rodriguez, 2004                     | 1,098   | Team participation | SR      | 0.07 (0.01)     | •                   |
| Aiddle group                          |         |                    |         |                 |                     |
| 8 Barnett, 2008                       | 884     | LTPA               | SR      | 0.25 (0.01)     | -                   |
| 9 Dishman, 2010                       | 497     | MVPA               | SR      | 0.19 (0.02)     | +                   |
| 20 Kaseva, 2016                       | 3,564   | LTPA               | SR      |                 |                     |
| 1 Kim, 2016: Females                  | 669     | PA                 | OBM     |                 |                     |
| 22 Kiviniemi*, 2016: Females          | 1,776   | LTPA               | SR      |                 |                     |
| 23 Kiviniemi*, 2016: Males            | 1,286   | LTPA               | SR      |                 |                     |
| 24 Laddu, 2017a                       | 3,175   | LTPA               | SR      |                 |                     |
| 25 Rovio, 2017                        | 2,841   | LTPA               | SR      | 0.14 (0.01)     | •                   |
| Didest group                          |         |                    |         |                 |                     |
| e Aggio, 2018: Males                  | 4,952   | PA                 | SR      | 0.24 (0.01)     | •                   |
| 27 Artaud, 2016                       | 10,205  | PA                 | SR      | 0.23 (0.00)     | •                   |
| 8 Gabriel, 2017: Females              | 1,771   | Sport and exercise | SR      | 0.13 (0.01)     | •                   |
| 9 Hsu, 2013: Females                  | 2,256   | Regular exercise   | SR      | 0.19 (0.01)     | -                   |
| 0 Hsu, 2013: Males                    | 2,544   | Regular exercise   | SR      | 0.23 (0.01)     | •                   |
| 1 Laddu, 2017b: Males                 | 5,964   | PA                 | SR      |                 |                     |
| 2 Nguyen, 2013: Females               | 92,629  | PA                 | SR      |                 |                     |
| 33 Pan, 2015                          | 4,018   | PA                 | SR      | 0.23 (0.01)     | •                   |
| 4 Xue, 2012: Females                  | 433     | PA                 | SR      |                 |                     |

## A) From increaser to decreaser / Increaser \*\*

|          | B) Highly active |                     | C) Active       |                     | D) Inactive |                 |                     |
|----------|------------------|---------------------|-----------------|---------------------|-------------|-----------------|---------------------|
|          | Class size (SE)  | Class size (95% CI) | Class size (SE) | Class size (95% Cl) |             | Class size (SE) | Class size (95% Cl) |
| Youngest |                  |                     |                 |                     |             |                 |                     |
| 1        | 0.21 (0.01)      | • 1                 | 0.15 (0.01)     | •                   | 1           |                 |                     |
| 2        |                  | 2                   |                 |                     | 2           |                 |                     |
| 3        |                  | 3                   |                 |                     | 3           |                 |                     |
| 4        |                  | 4                   |                 |                     | 4           |                 |                     |
| 5        |                  | 5                   | 0.19 (0.02)     | +                   | 5           |                 |                     |
| 6        |                  | 6                   | 0.24 (0.01)     | •                   | 6           |                 |                     |
| 7        | 0.26 (0.01)      | • 7                 |                 |                     | 7           |                 |                     |
| 8        |                  | 8                   | 0.57 (0.01)     | •                   | 8           |                 |                     |
| 9        |                  | 9                   | 0.69 (0.01)     | •                   | 9           |                 |                     |
| 10       |                  | 10                  | 0.48 (0.02)     | +                   | 10          | 0.18 (0.01)     | •                   |
| 11       |                  | 11                  | 0.55 (0.02)     | +                   | 11          |                 |                     |
| 12       |                  | 12                  |                 |                     | 12          | 0.50 (0.03)     | -•-                 |
| 13       |                  | 13                  |                 |                     | 13          | 0.40 (0.03)     | -                   |
| 14       |                  | 14                  | 0.18 (0.02)     | +                   | 14          | 0.15 (0.02)     | +                   |
| 15       |                  | 15                  | 0.46 (0.02)     | +                   | 15          | 0.14 (0.01)     | •                   |
| 16       | 0.06 (0.01)      | • 16                | 0.32 (0.01)     | •                   | 16          |                 |                     |
| 17       |                  | 17                  | 0.41 (0.01)     | •                   | 17          |                 |                     |
|          |                  |                     |                 |                     |             |                 |                     |
| Middle   |                  |                     |                 |                     |             |                 |                     |
| 18       |                  | 18                  | 0.12 (0.01)     | •                   | 18          | 0.56 (0.02)     | +                   |
| 19       |                  | 19                  | 0.23 (0.02)     | +                   | 19          | 0.24 (0.02)     | +                   |
| 20       | 0.04 (0.00) •    | 20                  | 0.86 (0.01)     | •                   | 20          |                 |                     |
| 21       | 0.12 (0.01)      | • 21                | 0.41 (0.02)     | +                   | 21          |                 |                     |
| 22       | 0.23 (0.01)      | • 22                | 0.51 (0.01)     | •                   | 22          | 0.26 (0.01)     | •                   |
| 23       | 0.28 (0.01)      | • 23                | 0.43 (0.01)     | •                   | 23          | 0.29 (0.01)     | •                   |
| 24       | 0.08 (0.00)      | • 24                | 0.35 (0.01)     | •                   | 24          |                 |                     |
| 25       |                  | 25                  | 0.07 (0.00)     | •                   | 25          | 0.15 (0.01)     | •                   |
|          |                  |                     |                 |                     |             |                 |                     |
| Oldest   |                  |                     |                 |                     |             |                 |                     |
| 26       |                  | 26                  | 0.51 (0.01)     | •                   | 26          |                 |                     |
| 27       |                  | 27                  | 0.27 (0.00)     | •                   | 27          | 0.15 (0.00)     | •                   |
| 28       | 0.14 (0.01)      | • 28                | 0.24 (0.01)     | •                   | 28          |                 |                     |
| 29       |                  | 29                  | 0.14 (0.01)     | •                   | 29          | 0.49 (0.01)     | •                   |
| 30       |                  | 30                  | 0.21 (0.01)     | •                   | 30          | 0.44 (0.01)     | •                   |
| 31       | 0.07 (0.00)      | • 31                |                 |                     | 31          |                 |                     |
| 32       | 0.04 (0.00) •    | 32                  | 0.24 (0.00)     | •                   | 32          |                 |                     |
| 33       |                  | 33                  | 0.17 (0.01)     | •                   | 33          | 0.48 (0.01)     | •                   |
| 34       | 0.17 (0.02)      | <b>-</b> 34         | 0.32 (0.02)     | +                   | 34          | 0.32 (0.02)     | +                   |
|          |                  |                     |                 |                     |             |                 |                     |
|          | ı<br>0           | 0.2 0.4 0.6 0.8 1   | 0               | 0.2 0.4 0.6 0.8 1   |             | 0               | 0.2 0.4 0.6 0.8 1   |

|          | E) Decreaser of high PA |                     | F) Decrea       | F) Decreaser of moderate PA |    | G) Decreaser of low PA / Low-a |                   |
|----------|-------------------------|---------------------|-----------------|-----------------------------|----|--------------------------------|-------------------|
|          | Class size (SE)         | Class size (95% Cl) | Class size (SE) | Class size (95% Cl)         | 1  | Class size (SE)                | Class size (95% C |
| Youngest |                         |                     |                 |                             |    |                                |                   |
| 1        | 0.12 (0.01)             | • 1                 |                 |                             | 1  | 0.47 (0.01)                    | •                 |
| 2        |                         | 2                   | 1.00 (0.00)     | •                           | 2  |                                |                   |
| 3        | 0.10 (0.02)             | • 3                 | 0.36 (0.03)     | -•-                         | 3  | 0.54 (0.03)                    | -                 |
| 4        | 0.19 (0.02)             | <b>-</b> 4          | 0.62 (0.03)     | -•-                         | 4  | 0.19 (0.02)                    | +                 |
| 5        | 0.17 (0.02)             | <b>-</b> 5          | 0.62 (0.03)     | -•-                         | 5  | 0.03 (0.01) •                  |                   |
| 6        | 0.37 (0.01)             | • 6                 |                 |                             | 6  | 0.39 (0.01)                    | •                 |
| 7        | 0.32 (0.01)             | • 7                 |                 |                             | 7  | 0.42 (0.01)                    | •                 |
| 8        |                         | 8                   |                 |                             | 8  | 0.43 (0.01)                    | •                 |
| 9        |                         | 9                   |                 |                             | 9  | 0.31 (0.01)                    | •                 |
| 10       |                         | 10                  | 0.34 (0.02)     | +                           | 10 |                                |                   |
| 11       |                         | 11                  | 0.37 (0.02)     | +                           | 11 |                                |                   |
| 12       | 0.06 (0.01) •           | 12                  | 0.45 (0.03)     |                             | 12 |                                |                   |
| 13       |                         | 13                  | 0.37 (0.03)     | -                           | 13 |                                |                   |
| 14       | 0.14 (0.01)             | • 14                | 0.53 (0.02)     | +                           | 14 |                                |                   |
| 15       |                         | 15                  | 0.40 (0.02)     | +                           | 15 |                                |                   |
| 16       | 0.09 (0.01)             | • 16                | 0.53 (0.01)     | •                           | 16 |                                |                   |
| 17       |                         | 17                  | 0.13 (0.01)     | •                           | 17 | 0.39 (0.01)                    | •                 |
| Middle   |                         |                     |                 |                             |    |                                |                   |
| 18       |                         | 18                  | 0.07 (0.01)     | •                           | 18 |                                |                   |
| 19       |                         | 19                  | 0.34 (0.02)     | +                           | 19 |                                |                   |
| 20       |                         | 20                  |                 |                             | 20 | 0.10 (0.01)                    | •                 |
| 21       |                         | 21                  |                 |                             | 21 | 0.47 (0.02)                    | +                 |
| 22       |                         | 22                  |                 |                             | 22 |                                |                   |
| 23       |                         | 23                  |                 |                             | 23 |                                |                   |
| 24       |                         | 24                  |                 |                             | 24 | 0.57 (0.01)                    | •                 |
| 25       |                         | 25                  | 0.14 (0.01)     | •                           | 25 | 0.51 (0.01)                    | •                 |
| Oldest   |                         |                     |                 |                             |    |                                |                   |
| 26       |                         | 26                  |                 |                             | 26 | 0.25 (0.01)                    | •                 |
| 27       |                         | 27                  | 0.36 (0.00)     | •                           | 27 |                                |                   |
| 28       |                         | 28                  | 0.22 (0.01)     | •                           | 28 | 0.26 (0.01)                    | •                 |
| 29       |                         | 29                  | 0.17 (0.01)     | •                           | 29 |                                |                   |
| 30       |                         | 30                  | 0.11 (0.01)     | •                           | 30 |                                |                   |
| 31       |                         | 31                  | 0.50 (0.01)     | •                           | 31 | 0.43 (0.01)                    | •                 |
| 32       |                         | 32                  |                 |                             | 32 | 0.72 (0.00)                    | •                 |
| 33       |                         | 33                  | 0.12 (0.01)     | •                           | 33 |                                |                   |
| 34       |                         | 34                  | 0.19 (0.02)     | +                           | 34 |                                |                   |

0 0.2 0.4 0.6 0.8 1

0 0.2 0.4 0.6 0.8 1

0 0.2 0.4 0.6 0.8 1

Abbreviations: N = sample size of the study population; SE = standard error; CI = confidence interval; PA = physical activity; MVPA = moderate to vigorous intensity physical activity; LTPA = leisure-time physical activity; SP = sport participation; OBM = objectively measured; SR = self-reported; PR = parent-reported.

\*These exact same trajectories were reported in other study / other studies as well. The duplicates were omitted from the figure.

\*\*The From increaser to decreaser category applies to the youngest group while the Increaser category applies to the middle and the oldest group.