

Supplementary materials Table S1: Between groups post intervention effect sizes.

| Author                      | Duration       | Social context       | Natural setting           | Anxiety                | Tension / anxiety / nervousness | Anxiety & Depression   | Depression / sadness    | Anger / Hostility       | Fatigue / Physical Exhaustion | Vigour | Rejuvenation          | Energy                | Vitality                | Total Mood Disturbance | Positive Engagement    | Attentiveness          | Happiness               |
|-----------------------------|----------------|----------------------|---------------------------|------------------------|---------------------------------|------------------------|-------------------------|-------------------------|-------------------------------|--------|-----------------------|-----------------------|-------------------------|------------------------|------------------------|------------------------|-------------------------|
| Bodin (men)                 | 14km (approx 1 | Alone                | Park                      |                        |                                 | d = -0.70 <sup>8</sup> |                         | d = -1.22 <sup>8</sup>  |                               |        | d = 0.21 <sup>4</sup> |                       |                         |                        |                        |                        |                         |
| Bodin (women)               | 14km           | Alone                | Park                      |                        |                                 | d = 0.04 <sup>8</sup>  |                         | d = 0.11 <sup>8</sup>   |                               |        | d = 0.16 <sup>4</sup> |                       |                         |                        |                        |                        |                         |
| Bratman                     | 50 min         | Unspecified          | Park                      | d = -0.06 <sup>1</sup> |                                 |                        |                         |                         |                               |        |                       |                       |                         |                        |                        |                        |                         |
| Butryn                      | 4 miles        | Alone                | Park                      |                        |                                 |                        |                         |                         |                               |        | d = 0.08 <sup>4</sup> |                       |                         | d = 0.10 <sup>3</sup>  | d = 0.09 <sup>4</sup>  |                        |                         |
| DeBrito                     | 50 min         | Alone                | Forest                    | d = -0.31 <sup>1</sup> |                                 |                        |                         |                         |                               |        |                       |                       |                         |                        |                        |                        |                         |
| Gidlow                      | 30 min         | Alone (researcher tr | Park                      |                        |                                 |                        |                         |                         |                               |        |                       |                       | 0.05 <sup>5</sup>       |                        |                        |                        |                         |
| Han <sup>a</sup>            | 15 min         | Not specified        | Path through natural area |                        | d = -3.67 <sup>3</sup>          |                        |                         |                         | d = -3.36 <sup>3</sup>        |        |                       |                       |                         |                        |                        |                        |                         |
| Hartig 2003 (no task group) | 50 min         | With assistant       | Park inc. wooded area     |                        |                                 |                        | d = -0.08 <sup>13</sup> | d = -1.05 <sup>13</sup> |                               |        |                       |                       |                         |                        |                        | d = 0.03 <sup>13</sup> | d = 0.77 <sup>14</sup>  |
| Hartig 2003 (task group)    | 50 min         | With assistant       | Park inc. wooded area     |                        |                                 |                        | d = 0.17 <sup>13</sup>  | d = -0.13 <sup>13</sup> |                               |        |                       |                       |                         |                        |                        | d = 0.29 <sup>13</sup> | d = -0.34 <sup>14</sup> |
| Hassan                      | 15 min         | Alone                | Bamboo forest             | d = -0.80 <sup>1</sup> |                                 |                        |                         |                         |                               |        |                       |                       |                         |                        |                        |                        |                         |
| Johansson (alone)           | 40 min         | Alone                | Park                      |                        |                                 | d = 0.02 <sup>8</sup>  |                         | d = -0.10 <sup>8</sup>  | d = 0.05 <sup>4</sup>         |        | d = 0.36 <sup>4</sup> |                       |                         |                        | d = 0.35 <sup>4</sup>  |                        |                         |
| Johansson (with friend)     | 40 min         | With friend          | Park                      |                        |                                 | d = -0.05 <sup>8</sup> |                         | d = -0.25               | d = 0.08 <sup>4</sup>         |        | d = 0.26 <sup>5</sup> |                       |                         |                        | d = 0.35 <sup>5</sup>  |                        |                         |
| Kinnafick                   | 15 min         | Alone                | Park inc. wooded area     |                        | d = -0.64 <sup>9</sup>          |                        |                         |                         | d = 0.13 <sup>9</sup>         |        |                       | d = 0.34 <sup>9</sup> |                         |                        |                        |                        |                         |
| Ojala                       | 30 min         | Groups of up to 4    | Forest                    |                        |                                 |                        |                         |                         |                               |        |                       |                       | d = 0.68 <sup>10</sup>  |                        |                        |                        |                         |
| Ojala                       | 30 min         | Groups of up to 4    | Park                      |                        |                                 |                        |                         |                         |                               |        |                       |                       | d = 0.62 <sup>10</sup>  |                        |                        |                        |                         |
| Roe                         | 60 min         | Group of approx 10   | Park                      |                        | d = -0.27 <sup>15</sup>         |                        |                         |                         |                               |        |                       |                       | d = -0.20 <sup>15</sup> |                        | d = 0.79 <sup>15</sup> |                        |                         |
| Song 2019 x 6 sites         | 15 min         | Alone                | Forest x 6 sites          | d = -1.47 <sup>1</sup> | d = -0.76 <sup>3</sup>          | d = -0.18 <sup>3</sup> | d = -0.50 <sup>3</sup>  | d = -0.83 <sup>3</sup>  | d = 0.98 <sup>3</sup>         |        |                       |                       |                         |                        |                        |                        |                         |
| Song 2018 x 52 sites        | 15 min         | Alone                | Forest                    |                        | d = -0.78 <sup>3</sup>          | d = -0.25 <sup>3</sup> | d = -0.37 <sup>3</sup>  | d = -0.72 <sup>3</sup>  | d = 0.85 <sup>3</sup>         |        |                       |                       |                         |                        |                        |                        |                         |
| Song 2015                   | 15 min         | Alone                | urban park                | d = -1.40 <sup>1</sup> | d = -1.00 <sup>3</sup>          | d = -0.47 <sup>3</sup> | d = -0.67 <sup>3</sup>  | d = -0.97 <sup>3</sup>  | d = 0.72 <sup>3</sup>         |        |                       |                       |                         |                        |                        |                        |                         |
| Song 2014                   | 15 min         | Alone                | urban park                | d = -1.05 <sup>1</sup> | d = -0.59 <sup>3</sup>          | d = -0.58 <sup>3</sup> | d = -0.55 <sup>3</sup>  | d = -0.49 <sup>3</sup>  | d = 0.51 <sup>3</sup>         |        |                       |                       |                         |                        |                        |                        |                         |
| Song 2013                   | 15 min         | Alone                | urban park                | d = -1.10 <sup>1</sup> | d = -0.94 <sup>3</sup>          | d = 0 <sup>3</sup>     | d = -0.39 <sup>3</sup>  | d = -0.37 <sup>3</sup>  | d = 0.77 <sup>3</sup>         |        |                       |                       |                         |                        |                        |                        |                         |
| Stigsdotter                 | 15 min         | Groups of 4-5        | urban park                |                        | d = -1.11 <sup>3</sup>          | d = -0.11 <sup>3</sup> | d = -0.47 <sup>3</sup>  | d = -0.16 <sup>3</sup>  | d = 0.37 <sup>3</sup>         |        |                       |                       |                         | d = -0.53 <sup>3</sup> |                        |                        |                         |
| Tyrväinen                   | 30 min         | Groups of up to 4    | Park                      |                        |                                 |                        |                         |                         |                               |        |                       |                       | d = 0.64 <sup>10</sup>  |                        |                        |                        |                         |
| Tyrväinen                   | 30 min         | Groups of up to 4    | Forest                    |                        |                                 |                        |                         |                         |                               |        |                       |                       | d = 0.70 <sup>10</sup>  |                        |                        |                        |                         |

1 = State Trait Anxiety Index; 2= Postive and Negative Affect Schedule; 3 = Profile of Mood States; 4 = Exercise Feeling Inventory; 5 = BRUMS; 6= Feeling Scale; 7 = Affect Grid; 8 =Negative Mood Scale; 9 = Activation-Deactivation Adjective Check List; 10 = Subjective Vitality Scale; 11 = Rosenberg Self-Esteem Scale; 12 = Mood Adjective Checklist; 13 = Inventory of Personal Reactions (ZIPERS); 14 = Overall Happiness Scale; 15= Mood Adjective Checklist, 16 = Felt Arousal Scale; 17 = Perceived Restorativeness Scale, 18 = Restoration Outcome Scale.  
a = Includes walking and jogging conditions.

Large effect in favour of natural environment (d= >0.80)  
 Moderate effect in favour of natural environment (d=0.50)  
 Small effect in favour of natural environment (d =0.20)  
 No difference between enviroments  
 Small effect in favour of urban environment (d=0.20)  
 Moderate effect in favour of the urban environment (d=0.50)

Means and standard deviations (SD) were unavailable in Geniole (2016), Hartig (1991), Perkins (2011), Lyu (2019) & Tyrväinen (2014). Han (2017) only reports means and SD for significant outcomes. Means and SDs published within the individual studies are available upon request from the first author.

| Author                      | Duration             | Social context           | Natural setting           | Tranquility / calmness | Positive Affect        | Negative Affect        | Affective valence (pleasure/displeasure) | Arousal                 | Restoration (extent from PRS) | Fear (arousal)         | Confusion               | Self-esteem |
|-----------------------------|----------------------|--------------------------|---------------------------|------------------------|------------------------|------------------------|--|-------------------------|-------------------------------|------------------------|-------------------------|-------------|
| Bodin (men)                 | 14km (approx 1 hour) | Alone                    | Park                      | d = 0.24 <sup>4</sup>  |                        |                        |  |                         |                               |                        |                         |             |
| Bodin (women)               | 14km                 | Alone                    | Park                      | d = 0.28 <sup>4</sup>  |                        |                        |  |                         |                               |                        |                         |             |
| Bratman                     | 50 min               | Unspecified              | Park                      |                        | d=0.52 <sup>2</sup>    | d=-0.08 <sup>2</sup>   |  |                         |                               |                        |                         |             |
| Butryn                      | 4 miles              | Alone                    | Park                      | d = 0.42 <sup>4</sup>  |                        |                        |  |                         |                               |                        |                         |             |
| DeBrito                     | 50 min               | Alone                    | Forest                    |                        | d = 0.27 <sup>2</sup>  | d = -0.36 <sup>2</sup> |  |                         |                               |                        |                         |             |
| Gidlow                      | 30 min               | Alone (researcher trail) | Park                      |                        |                        |                        |  |                         |                               |                        |                         |             |
| Han <sup>a</sup>            | 15 min               | Not specified            | Path through natural area |                        |                        |                        |  |                         |                               |                        |                         |             |
| Hartig 2003 (no task group) | 50 min               | With assistant           | Park inc. wooded area     |                        | d = 1.43 <sup>13</sup> |                        |  |                         |                               | d = 0.26 <sup>13</sup> |                         |             |
| Hartig 2003 (task group)    | 50 min               | With assistant           | Park inc. wooded area     |                        | d = 0.60 <sup>13</sup> |                        |  |                         |                               | d = 0.17 <sup>13</sup> |                         |             |
| Hassan                      | 15 min               | Alone                    | Bamboo forest             |                        |                        |                        |  |                         |                               |                        |                         |             |
| Johansson (alone)           | 40 min               | Alone                    | Park                      | d = 0.38 <sup>4</sup>  |                        |                        |  |                         |                               |                        |                         |             |
| Johansson (with friend)     | 40 min               | With friend              | Park                      | d = 0.60 <sup>5</sup>  |                        |                        |  |                         |                               |                        |                         |             |
| Kinnafick                   | 15 min               | Alone                    | Park inc. wooded area     | d = 0.84 <sup>9</sup>  | d = 0.55 <sup>2</sup>  | d = -0.64 <sup>2</sup> | d = 1.02 <sup>8</sup>                    | d = -0.37 <sup>16</sup> |                               |                        |                         |             |
| Ojala                       | 30 min               | Groups of up to 4        | Forest                    |                        |                        |                        |  |                         | d = 1.01 <sup>18</sup>        |                        |                         |             |
| Ojala                       | 30 min               | Groups of up to 4        | Park                      |                        |                        |                        |  |                         | d = 0.83 <sup>18</sup>        |                        |                         |             |
| Roe                         | 60 min               | Group of approx 10       | Park                      |                        |                        |                        |  |                         |                               |                        | d = -0.24 <sup>11</sup> |             |
| Song 2019 x 6 sites         | 15 min               | Alone                    | Forest x 6 sites          |                        |                        |                        |  |                         |                               | d = -0.45 <sup>3</sup> |                         |             |
| Song 2018 x 52 sites        | 15 min               | Alone                    | Forest                    |                        |                        |                        |  |                         |                               | d = -0.41 <sup>3</sup> |                         |             |
| Song 2015                   | 15 min               | Alone                    | urban park                |                        |                        |                        |  |                         |                               | d = -0.86 <sup>3</sup> |                         |             |
| Song 2014                   | 15 min               | Alone                    | urban park                |                        |                        |                        |  |                         |                               | d = -0.40 <sup>3</sup> |                         |             |
| Song 2013                   | 15 min               | Alone                    | urban park                |                        |                        |                        |  |                         |                               | d = -0.43 <sup>3</sup> |                         |             |
| Stigsdotter                 | 15 min               | Groups of 4-5            | urban park                |                        |                        |                        |  |                         |                               | d = -0.55 <sup>3</sup> |                         |             |
| Tyrväinen                   | 30 min               | Groups of up to 4        | Park                      |                        | d = 0.67 <sup>2</sup>  | d = -0.18 <sup>2</sup> |  |                         | d = 0.87 <sup>18</sup>        |                        |                         |             |
| Tyrväinen                   | 30 min               | Groups of up to 4        | Forest                    |                        | d = 0.72 <sup>2</sup>  | d = -0.48 <sup>2</sup> |  |                         | d = 1.07 <sup>18</sup>        |                        |                         |             |

1 = State Trait Anxiety Index; 2= Postive and Negative Affect Schedule; 3 = Profile of Mood States; 4 = Exercise Feeling Inventory; 5 = BRUMS; 6= Feeling Scale; 7 = Affect Grid; 8 =Negative Mood Scale; 9 = Activation-Deactivation Adjective Check List; 10 = Subjective Vitality Scale; 11 = Rosenberg Self-Esteem Scale; 12 = Mood Adjective Checklist; 13 = Inventory of Personal Reactions (ZIPERS); 14 = Overall Happiness Scale; 15= Mood Adjective Checklist, 16 = Felt Arousal Scale; 17 = Perceived Restorativeness Scale, 18 = Restoration Outcome Scale.  
a = Including walking and jogging conditions.

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| Large effect in favour of natural environment (d= >0.80)    |
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