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# Efficacy and cost-effectiveness of therapist-guided internet cognitive behavioural therapy for paediatric anxiety disorders : a single-centre, single-blind, randomised controlled trial

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## Supplementary materials

### **Supplement to: Efficacy and cost-effectiveness of therapist-guided internet cognitive behaviour therapy for paediatric anxiety disorders: a single-blind randomised controlled trial**

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**Supplemental Table 1: Treatment content of BiP Anxiety and Internet-delivered Child-directed Play**

| Module/<br>session | BiP Anxiety, Parent  | BiP Anxiety, Child   | Internet-delivered<br>Child-Directed Play                 |
|--------------------|--|--|---|
| 1.                 | Psychoeducation and rationale for exposure, functional analysis, identify own negative beliefs | Psychoeducation and rationale for exposure, functional analysis                            | Introducing ICDP  |
| 2.                 | Goals and hierarchies  | Coping strategies (“worry versus problems” for GAD)  | What to do when engaging in ICDP                          |
| 3.                 | Reward systems, managing obstacles, decreasing demands   | Goals and hierarchies  | What not to do when engaging in ICDP, start practicing    |
| 4.                 | Start exposure practice and plan exposure tasks  | Start exposure practice (social awareness training for SAD, interoceptive exposure for PD) | Follow up, praise and communication                       |
| 5.                 | Follow up, parental behaviours   | Follow up, repetition of rationale for gradual exposure                                    | Follow up, handling obstacles                             |
| 6.                 | Follow up, handling obstacles, problem solving   | Follow up, repetition of coping strategies to use during exposure                          | Follow up, handling unwanted behaviours/mischief          |
| 7.                 | Follow up, communication skills  | Follow up, cognitive techniques (imaginal exposure for GAD)                                | Follow up, repetition of how to handle obstacles          |
| 8.                 | Follow up, keeping motivation  | Follow up, problem solving   | Follow up, repetition of what to do and not to do in ICDP |
| 9.                 | Follow up, engaging others (e.g., school)  | Follow up, repetition of coping strategies   | Follow up, repetition of communication skills             |
| 10.                | Follow up, increase exposure practice  | Follow up, repetition of cognitive techniques  | Follow up, repetition of how to handle obstacles          |
| 11.                | Follow up  | Follow up, increase exposure practice  | Follow up, repetition of how to praise during ICDP        |
| 12.                | Follow-up, maintenance and relapse prevention  | Follow-up, maintenance and relapse prevention  | Summary, reflection and maintenance                       |

*Abbreviations.* ICDP=Internet-delivered Child-directed Play; GAD=Generalized Anxiety Disorder; SAD=Social Anxiety Disorder; PD=Panic Disorder. *Note.* ICDP directed to the parent only; Follow-up involves following up on homework assignments and symptom monitoring; Week 5 - 11 in both ICBT and ICDP focus mainly on repetition of the main therapeutic component, i.e., gradual exposure for ICBT and parental behaviours during child-directed play in ICDP.

**Supplemental Table 2: Timing of measures by blind rater (B), unblinded rater (U), child (C) and parent (P) through the trial**

| Measure            | Pre  | Week 3 | Week 6 | Week 9 | Post | Follow-up |
|--------------------|------|--------|--------|--------|------|-----------|
| CSR                | B    |        |        |        | B    | U         |
| CGAS               | B    |        |        |        | B    | U         |
| CGI-I              |      |        |        |        | B    | U         |
| RCADS-C/P          | C, P | C, P   | C, P   | C, P   | C, P | C, P      |
| EWSAS-C/P          | C, P |        | C, P   |        | C, P | C, P      |
| KIDSCREEN-10 – C/P | C, P |        |        |        | C, P | C, P      |
| TiC-P              | P    |        |        |        | P    |           |

*Abbreviation.* B=blinded rater; U=unblinded rater; C=child rated; P=parent rated; CSR=Clinician Severity Rating; CGAS=Children’s Global Assessment Scale; CGI-I=Clinical Global Impression Scale – improvement; RCADS-C/P=The Revised Children’s Anxiety and Depression Scale – child and parent versions; EWSAS-C/P=Education, Work and Social Adjustment Scale – child and parent versions; KIDSCREEN C/P=KIDSCREEN-10 – child and parent versions; TiC-P=Trimbos/iMTA questionnaire for Costs associated with Psychiatric Illness. *Note.* Follow-up data only available for ICBT; The parent reports costs for both parent and child in TiC-P.

**Supplemental Table 3: Random effects and covariance structures included in the final linear mixed model analyses for each outcome measure**

|                    | <b>Between group</b>                                    | <b>Within group ICBT</b>   | <b>Within group cross-over ICBT</b>  |
|--------------------|---|--|--|
| <b>CSR</b>         | Random intercept<br>Random slope<br>Variance components | Random intercept<br>Random slope<br>Variance components                            | Random intercept<br>Random slope<br>Diagonal covariance                            |
| <b>CGAS</b>        | Random intercept<br>Random slope<br>Variance components | Random intercept<br>Random slope<br>Diagonal covariance                            | Random intercept<br>Random slope<br>Diagonal covariance                            |
| <b>RCADS-C</b>     | Random intercept<br>Random slope<br>Diagonal covariance | Random intercept<br>Random slope<br>Diagonal covariance<br>Unstructured covariance | Random intercept<br>Random slope<br>Diagonal covariance<br>Unstructured covariance |
| <b>RCADS-P</b>     | Random intercept<br>Random slope<br>Diagonal covariance | Random intercept<br>Random slope<br>Diagonal covariance                            | Random intercept<br>Random slope<br>Diagonal covariance type                       |
| <b>EWSAS-C</b>     | Random intercept<br>Random slope<br>Variance components | Random intercept<br>Random slope<br>Diagonal covariance                            | Random intercept<br>Random slope<br>Diagonal covariance<br>Unstructured covariance |
| <b>EWSAS-P</b>     | Random intercept<br>Random slope<br>Variance components | Random intercept<br>Random slope<br>Variance components                            | Random intercept<br>Random slope<br>Diagonal covariance                            |
| <b>KIDSCREEN-C</b> | Random intercept<br>Random slope<br>Variance components | Random intercept<br>Random slope<br>Variance components                            | Random intercept<br>Random slope<br>Diagonal covariance                            |
| <b>KIDSCREEN-P</b> | Random intercept<br>Random slope<br>Variance components | Random intercept<br>Random slope<br>Diagonal covariance                            | Random intercept<br>Random slope<br>Variance components                            |

*Abbreviations.* ICBT=Internet-delivered Cognitive Behaviour Therapy; CSR=Clinician Severity Rating; CGAS= Children’s Global Assessment Scale; CGI-I=Clinical Global Impression Scale – improvement; RCADS-C/P=The Revised Children’s Anxiety and Depression Scale – child and parent versions; EWSAS-C/P=Education, Work and Social Adjustment Scale – child and parent versions; KIDSCREEN C/P=KIDSCREEN-10 – child and parent versions. *Note.* Between group models based on change from pre- to post treatment; Within group models includes follow-up data.

**Supplemental Table 4: Resource unit costs**

| Type of cost             | Resource                                | Cost, €           | Source of cost   |
|--------------------------|---|-------------------|--|
| <b>Healthcare visits</b> | General practitioner                    | 356.7             | 2016 price list for healthcare within Stockholm county council ( <a href="http://www.sthlm-gotland.se/2016-2/">http://www.sthlm-gotland.se/2016-2/</a> ) |
|                          | Nurse                                   | 192.6             |  |
|                          | Social worker                           | 203.9             |  |
|                          | Physiotherapist                         | 152.9             |  |
|                          | Specialized physician                   | 356.7             |  |
|                          | Chiropractor / osteopath                | 152.9             |  |
|                          | Psychologist / psychotherapist          | 322.8             |  |
| <b>Support</b>           | Study / homework help (hours)           | 47.5              | Market price (average price of five Swedish tutoring services)   |
|                          | Support of friends & family (hours)     | 15.5              | Average hourly salary minus 30% tax ( <a href="http://www.scb.se/en/">http://www.scb.se/en/</a> )  |
| <b>Medicines</b>         | Medicines (per pill / dosage)           | Individual prices | Swedish Dental and Pharmaceutical Benefits Agency, TLV ( <a href="https://www.tlv.se/in-english.html">https://www.tlv.se/in-english.html</a> )           |
| <b>Supplements</b>       | Dietary supplements (per pill / dosage) | Individual prices | According to Swedish online pharmacy price lists   |
| <b>Absenteeism</b>       | Absence from work (parents, days)       | 177.1             | Average daily salary in Sweden, Statistics Sweden ( <a href="http://www.scb.se/en/">http://www.scb.se/en/</a> )  |
|                          | Absence from school (child, days)       | 61.2              | Cost per school day, National Agency for Education ( <a href="https://www.skolverket.se/">https://www.skolverket.se/</a> )                               |
| <b>Presenteeism</b>      | Working when feeling ill (% of days)    | 177.1             | Average daily salary in Sweden, Statistics Sweden ( <a href="http://www.scb.se/en/">http://www.scb.se/en/</a> )  |
|                          | In school when feeling ill (% of days)  | 61.2              | Cost per school day, National Agency for Education ( <a href="https://www.skolverket.se/">https://www.skolverket.se/</a> )                               |

**Supplemental Table 5: Within-group effects of ICBT**

|                    | Observed data |                        | Linear mixed model |                 | Within-group effect size<br>Cohen's <i>d</i> (95% CI) |                      |
|--------------------|---------------|------------------------|--------------------|-----------------|---|----------------------|
|                    | n             | <i>M</i> ( <i>SD</i> ) | Estimated mean     | <i>p</i> -value | Per protocol  | Intent-to-treat      |
| <b>CSR</b>         |               |                        |                    |                 |   |                      |
| Pre                | 66            | 4.73 (0.73)            | 4.73               |                 |   |                      |
| Post               | 60            | 3.55 (1.14)            | 3.54               | <0.001          | 1.21 (0.78 to 1.65)                                   | 1.23 (0.79 to 1.66)  |
| FU                 | 57            | 2.86 (1.19)            | 2.98               | <0.001          | 0.59 (0.38 to 0.81)                                   | 0.48 (0.27 to 0.69)  |
| <b>CGAS</b>        |               |                        |                    |                 |   |                      |
| Pre                | 66            | 57.18 (5.98)           | 58.18              |                 |   |                      |
| Post               | 59            | 63.14 (7.97)           | 62.96              | <0.001          | 0.83 (0.50 to 1.17)                                   | 0.81 (0.48 to 1.14)  |
| FU                 | 56            | 65.62 (9.97)           | 65.32              | 0.027           | 0.27 (0.04 to 0.50)                                   | 0.26 (0.02 to 0.49)  |
| <b>RCADS-C</b>     |               |                        |                    |                 |   |                      |
| Pre                | 66            | 34.67 (15.38)          | 34.61              |                 |   |                      |
| Post               | 54            | 26.41 (14.42)          | 25.73              | <0.001          | 0.55 (0.31 to 0.79)                                   | 0.59 (0.35 to 0.84)  |
| FU                 | 50            | 20.50 (11.63)          | 21.89              | 0.015           | 0.44 (0.19 to 0.69)                                   | 0.29 (0.04 to 0.53)  |
| <b>RCADS-P</b>     |               |                        |                    |                 |   |                      |
| Pre                | 66            | 39.46 (12.53)          | 39.55              |                 |   |                      |
| Post               | 56            | 26.25 (10.75)          | 27.19              | <0.001          | 1.12 (0.80 to 1.45)                                   | 1.05 (0.73 to 1.37)  |
| FU                 | 51            | 23.75 (12.21)          | 26.11              | 0.467           | 0.22 (-0.05 to 0.48)                                  | 0.09 (-0.17 to 0.36) |
| <b>EWSAS-C</b>     |               |                        |                    |                 |   |                      |
| Pre                | 66            | 12.70 (7.86)           | 12.73              |                 |   |                      |
| Post               | 54            | 8.30 (6.08)            | 8.17               | <0.001          | 0.62 (0.30 to 0.93)                                   | 0.64 (0.32 to 0.96)  |
| FU                 | 50            | 6.28 (5.91)            | 6.73               | 0.036           | 0.34 (0.09 to 0.61)                                   | 0.24 (-0.01 to 0.49) |
| <b>EWSAS-P</b>     |               |                        |                    |                 |   |                      |
| Pre                | 66            | 17.00 (7.37)           | 16.72              |                 |   |                      |
| Post               | 56            | 11.41 (7.27)           | 11.08              | <0.001          | 0.76 (0.44 to 1.08)                                   | 0.77 (0.45 to 1.09)  |
| FU                 | 51            | 9.00 (6.79)            | 9.16               | 0.022           | 0.34 (0.11 to 0.57)                                   | 0.27 (0.05 to 0.50)  |
| <b>KIDSCREEN-C</b> |               |                        |                    |                 |   |                      |
| Pre                | 66            | 39.47 (4.87)           | 39.47              |                 |   |                      |
| Post               | 54            | 39.98 (5.13)           | 39.52              | 0.939           | 0.10 (-0.17 to 0.37)                                  | 0.01 (-0.26 to 0.28) |
| FU                 | 50            | 40.62 (5.32)           | 39.91              | 0.468           | 0.12 (-0.09 to 0.33)                                  | 0.07 (-0.13 to 0.28) |
| <b>KIDSCREEN-P</b> |               |                        |                    |                 |   |                      |
| Pre                | 66            | 36.45 (4.10)           | 36.45              |                 |   |                      |
| Post               | 56            | 37.68 (3.89)           | 37.41              | 0.050           | 0.31 (0.06 to 0.55)                                   | 0.24 (0.00 to 0.48)  |
| FU                 | 51            | 38.31 (4.56)           | 37.95              | 0.836           | 0.15 (-0.16 to 0.46)                                  | 0.13 (-0.18 to 0.44) |

*Abbreviations.* ICBT=Internet-delivered Cognitive Behaviour Therapy; CSR=Clinician Severity Rating; CGAS= Children's Global Assessment Scale; CGI-I=Clinical Global Impression Scale – improvement; RCADS-C/P=The Revised Children's Anxiety and Depression Scale – child and parent versions; EWSAS-C/P=Education, Work and Social Adjustment Scale – child and parent versions; KIDSCREEN C/P=KIDSCREEN-10 – child and parent versions. *Note.* The within-group effect size is based on changes from pre to post, and from post to follow-up; Only the Total Anxiety Scale from RCADS-C/P is presented; The intent-to-treat within-group effect size is based on estimated means derived from the linear mixed models and the observed pooled standard deviation.



**Supplemental Table 6: Per protocol analysis of between- and within-group effects at primary endpoint**

|                    | Between-group effect size |                           | Within-group effect size |                                   |          |                                   |
|--------------------|---------------------------|---------------------------|--------------------------|-----------------------------------|----------|-----------------------------------|
|                    | <i>n</i>                  | Cohen's <i>d</i> (95% CI) | <i>n</i>                 | ICBT<br>Cohen's <i>d</i> (95% CI) | <i>n</i> | ICDP<br>Cohen's <i>d</i> (95% CI) |
| <b>CSR</b>         | 121                       | 0.75 (0.37 to 1.12)       | 60                       | 1.21 (0.78 to 1.65)               | 61       | 0.74 (0.46 to 1.02)               |
| <b>CGAS</b>        | 120                       | 0.54 (0.17 to 0.90)       | 59                       | 0.83 (0.50 to 1.17)               | 61       | 0.43 (0.22 to 0.63)               |
| <b>RCADS-C</b>     | 110                       | 0.07 (-0.30 to 0.45)      | 54                       | 0.55 (0.31 to 0.79)               | 56       | 0.50 (0.28 to 0.72)               |
| <b>RCADS-P</b>     | 116                       | 0.38 (0.00 to 0.75)       | 56                       | 1.12 (0.80 to 1.45)               | 60       | 0.49 (0.24 to 0.49)               |
| <b>EWSAS-C</b>     | 110                       | 0.29 (-0.09 to 0.67)      | 54                       | 0.62 (0.30 to 0.93)               | 56       | 0.35 (0.09 to 0.61)               |
| <b>EWSAS-P</b>     | 115                       | 0.37 (-0.01 to 0.74)      | 56                       | 0.76 (0.44 to 1.08)               | 59       | 0.42 (0.14 to 0.70)               |
| <b>KIDSCREEN-C</b> | 109                       | 0.37 (0.02 to 0.72)       | 54                       | 0.10 (-0.17 to 0.37)              | 55       | 0.42 (0.13 to 0.72)               |
| <b>KIDSCREEN-P</b> | 115                       | 0.31 (-0.06 to 0.69)      | 56                       | 0.31 (0.06 to 0.55)               | 59       | 0.29 (0.07 to 0.51)               |

*Abbreviations.* ICBT=Internet-delivered Cognitive Behaviour Therapy; ICDP=Internet-delivered Child-directed Play; CSR=Clinician Severity Rating; CGAS= Children's Global Assessment Scale; CGI-I=Clinical Global Impression Scale – improvement; RCADS-C/P=The Revised Children's Anxiety and Depression Scale – child and parent versions; EWSAS-C/P=Education, Work and Social Adjustment Scale – child and parent versions; KIDSCREEN C/P=KIDSCREEN-10 – child and parent versions. *Note.* The within-group effect size is based on changes from pre to post; Only the Total Anxiety Scale from RCADS-C/P is presented; primary endpoint is at post treatment.

**Supplemental Table 7: Response and remission rates at post-treatment and 3-months follow-up**

|                  | <i>n</i> | ICBT, <i>n</i> (%) | <i>n</i> | ICDP, <i>n</i> (%) | Odds ratio (95% CI)  | $\chi^2$ | <i>p</i> -value |
|------------------|----------|--------------------|----------|--------------------|----------------------|----------|-----------------|
| <b>Responder</b> |          |                    |          |                    |                      |          |                 |
| <b>Post</b>      | 59       | 30 (50.8)          | 61       | 10 (16.4)          | 5.28 (2.26 to 13.33) | 16.02    | <0.001          |
| <b>FU</b>        | 54       | 38 (70.4)          |          |                    |                      |          |                 |
| <b>Remission</b> |          |                    |          |                    |                      |          |                 |
| <b>Post</b>      | 60       | 29 (48.3)          | 61       | 9 (14.8)           | 5.41 (2.26 to 12.90) | 15.83    | <0.001          |
| <b>FU</b>        | 57       | 40 (70.2)          |          |                    |                      |          |                 |

*Abbreviations.* ICBT=Internet-delivered Cognitive Behaviour Therapy; ICDP=Internet-delivered Child-directed Play. *Note.* Remission=not fulfilling criteria for principal diagnosis; responder=<3 on Clinical Global Impression Scale – improvement.

**Supplemental Table 8: Primary- and secondary outcome measures for patients who crossed over to ICBT after ICDP**

|                    | Observed data |                        | Linear mixed model |                 | Within-group effect size<br>Cohen's <i>d</i> (95% CI) |                       |
|--------------------|---------------|------------------------|--------------------|-----------------|---|-----------------------|
|                    | n             | <i>M</i> ( <i>SD</i> ) | Estimated mean     | <i>p</i> -value | Per protocol  | Intent-to-treat       |
| <b>CSR</b>         |               |                        |                    |                 |   |                       |
| Pre                | 61            | 4.31 (0.87)            | 4.31               |                 |   |                       |
| Post               | 52            | 3.27 (1.01)            | 3.25               | <0.001          | 0.77 (0.50 to 1.04)                                   | 1.11 (0.81 to 1.42)   |
| FU                 | 53            | 2.91 (1.40)            | 2.85               | 0.001           | 0.56 (0.36 to 0.75)                                   | 0.31 (0.12 to 0.49)   |
| <b>CGAS</b>        |               |                        |                    |                 |   |                       |
| Pre                | 61            | 58.97 (7.61)           | 58.97              |                 |   |                       |
| Post               | 52            | 64.16 (10.15)          | 64.19              | <0.001          | 0.51 (0.30 to 0.71)                                   | 0.55 (0.34 to 0.75)   |
| FU                 | 53            | 64.96 (10.76)          | 65.69              | 0.041           | 0.46 (0.32 to 0.60)                                   | 0.14 (0.01 to 0.28)   |
| <b>RCADS-C</b>     |               |                        |                    |                 |   |                       |
| Pre                | 56            | 27.50 (15.37)          | 27.77              |                 |   |                       |
| Post               | 46            | 23.33 (14.26)          | 22.73              | 0.001           | 0.24 (0.06 to 0.41)                                   | 0.33 (0.15 to 0.51)   |
| FU                 | 41            | 21.61 (14.10)          | 20.81              | 0.062           | 0.24 (0.10 to 0.39)                                   | 0.13 (-0.01 to 0.27)  |
| <b>RCADS-P</b>     |               |                        |                    |                 |   |                       |
| Pre                | 60            | 30.98 (14.13)          | 31.39              |                 |   |                       |
| Post               | 53            | 24.57 (13.97)          | 24.55              | <0.001          | 0.36 (0.19 to 0.53)                                   | 0.47 (0.30 to 0.65)   |
| FU                 | 48            | 22.73 (12.69)          | 22.03              | 0.064           | 0.37 (0.16 to 0.57)                                   | 0.18 (-0.02 to 0.37)  |
| <b>EWSAS-C</b>     |               |                        |                    |                 |   |                       |
| Pre                | 56            | 10.25 (7.32)           | 10.59              |                 |   |                       |
| Post               | 46            | 8.72 (6.68)            | 8.55               | 0.011           | 0.29 (0.07 to 0.52)                                   | 0.29 (0.07 to 0.51)   |
| FU                 | 41            | 7.07 (5.78)            | 6.27               | 0.004           | 0.32 (0.06 to 0.58)                                   | 0.35 (0.09 to 0.61)   |
| <b>EWSAS-P</b>     |               |                        |                    |                 |   |                       |
| Pre                | 60            | 14.32 (8.56)           | 14.72              |                 |   |                       |
| Post               | 53            | 10.42 (8.00)           | 10.16              | <0.001          | 0.29 (0.04 to 0.53)                                   | 0.55 (0.29 to 0.80)   |
| FU                 | 48            | 9.81 (6.93)            | 9.20               | 0.270           | 0.31 (0.09 to 0.54)                                   | 0.12 (-0.09 to 0.34)  |
| <b>KIDSCREEN-C</b> |               |                        |                    |                 |   |                       |
| Pre                | 56            | 39.67 (4.60)           | 39.60              |                 |   |                       |
| Post               | 46            | 39.74 (4.62)           | 39.59              | 0.983           | -0.04 (-0.27 to 0.19)                                 | 0.00 (-0.23 to 0.24)  |
| FU                 | 41            | 39.17 (5.91)           | 39.17              | 0.503           | -0.03 (-0.25 to 0.19)                                 | -0.07 (-0.29 to 0.15) |
| <b>KIDSCREEN-P</b> |               |                        |                    |                 |   |                       |
| Pre                | 60            | 36.41 (4.18)           | 36.34              |                 |   |                       |
| Post               | 53            | 37.91 (4.87)           | 37.88              | 0.014           | 0.12 (-0.11 to 0.35)                                  | 0.24 (0.10 to 0.58)   |
| FU                 | 48            | 37.17 (5.83)           | 37.27              | 0.253           | 0.10 (-0.11 to 0.31)                                  | -0.11 (-0.32 to 0.09) |

*Abbreviations.* ICBT=Internet-delivered Cognitive Behaviour Therapy; ICDP=Internet-delivered Child-directed Play; CSR=Clinician Severity Rating; CGAS=Children's Global Assessment Scale; CGI-I=Clinical Global Impression Scale – improvement; RCADS-C/P=The Revised Children's Anxiety and Depression Scale – child and parent versions; EWSAS-C/P=Education, Work and Social Adjustment Scale – child and parent versions; KIDSCREEN C/P=KIDSCREEN-10 – child and parent versions. *Note.* The within-group effect size is based on changes from pre to post, and from post to follow-up; Only the Total Anxiety Scale from RCADS-C/P is presented; Within-group effect sizes are based on estimated means derived from the linear mixed models combined with the observed pooled standard deviation.

**Supplemental Table 9: Post-hoc analyses of the primary outcome measure, excluding  $n=14$  participants who inadvertently revealed their treatment condition to blind assessors**

|             | <i>M</i><br>( <i>SD</i> ) |             | Within group effect size (95% CI) |             | Between group       |                     | Linear mixed model       |                      |              |                 |
|-------------|---------------------------|-------------|-----------------------------------|-------------|---------------------|---------------------|--------------------------|----------------------|--------------|-----------------|
|             | <i>n</i>                  | ICBT        | <i>n</i>                          | ICDP        | ICBT                | ICDP                | Mean difference (95% CI) | Effect size (95% CI) | Effect       | <i>p</i> -value |
| <b>CSR</b>  |                           |             |                                   |             |                     |                     |                          |                      |              |                 |
| <b>Pre</b>  | 54                        | 4.74 (0.76) | 63                                | 4.94 (0.76) |                     |                     |                          |                      | Group        | 0.163           |
| <b>Post</b> | 48                        | 3.60 (1.16) | 59                                | 4.31 (0.90) | 1.16 (0.66 to 1.66) | 0.75 (0.47 to 1.04) | 0.53 (0.13 to 0.94)      | 0.49 (0.12 to 0.87)  | Time         | < 0.001         |
|             |                           |             |                                   |             |                     |                     |                          |                      | Group x Time | 0.010           |

*Abbreviations.* ICBT=Internet-delivered Cognitive Behaviour Therapy; ICDP=Internet-delivered Child-directed Play; CSR=Clinician Severity Rating. *Note.* Mean and standard deviation are based on observed data; Within- and between group effects (effect sizes and mean differences) are based on estimates derived from the linear mixed model.

**Supplemental Table 10: Post-hoc analyses of response- and remission rates at post-treatment, excluding  $n=14$  participants who inadvertently revealed their treatment condition to blind assessors**

|                  | <i>n</i> | ICBT, <i>n</i> (%) | <i>n</i> | ICDP, <i>n</i> (%) | Odds ratio (95% CI)  | $\chi^2$ | <i>p</i> -value |
|------------------|----------|--------------------|----------|--------------------|----------------------|----------|-----------------|
| <b>Responder</b> | 47       | 24 (51.10)         | 59       | 10 (16.90)         | 5.11 (2.10 to 12.43) | 13.97    | <0.001          |
| <b>Remission</b> | 48       | 24 (50.00)         | 59       | 9 (15.30)          | 5.57 (2.24 to 13.77) | 14.98    | <0.001          |

*Abbreviations.* ICBT=Internet-delivered Cognitive Behaviour Therapy; ICDP=Internet-delivered Child-directed Play.  
*Note.* Remission=not fulfilling principal diagnosis post treatment; responder= $\leq 3$  on Clinical Global Impression Scale – improvement.

**Supplemental Table 11: Association between treatment credibility at week 3 and treatment response, remission, adherence and clinician-rated engagement**

|                   | <i>n</i> | Credible  | Not credible | $\chi^2$ | <i>p</i> -value |
|-------------------|----------|-----------|--------------|----------|-----------------|
| <b>Responder</b>  | 115      |           |              | 0.34     | 0.563           |
| <b>Yes, n (%)</b> |          | 30 (26.1) | 8 (7.0)      |          |                 |
| <b>No, n (%)</b>  |          | 57 (49.6) | 20 (17.4)    |          |                 |
| <b>Remission</b>  | 116      |           |              | 0.11     | 0.746           |
| <b>Yes, n (%)</b> |          | 28 (24.1) | 8 (6.9)      |          |                 |
| <b>No, n (%)</b>  |          | 60 (51.7) | 20 (17.2)    |          |                 |
| <b>Adherence</b>  | 114      |           |              | 1.10     | 0.297           |
| <b>Yes, n (%)</b> |          | 78 (68.4) | 21 (18.4)    |          |                 |
| <b>No, n (%)</b>  |          | 10 (8.8)  | 5 (4.4)      |          |                 |
| <b>Engagement</b> | 116      |           |              | 0.42     | 0.516           |
| <b>Yes, n (%)</b> |          | 51 (44.0) | 15 (12.9)    |          |                 |
| <b>No, n (%)</b>  |          | 35 (31.0) | 14 (12.1)    |          |                 |

*Abbreviations.* CSR=Clinician Severity Rating. *Note.* Post-hoc analysis; Adherence=completed at least four modules in the treatment.

**Supplemental Table 12: The effect of ICBT, compared to ICDP, based on whether patients rated the treatments as credible or not credible (see also Supplemental Figure 3)**

|   | <i>n</i> | Mixed effect     | <i>t</i> -value | <i>p</i> -value |
|---|----------|------------------|-----------------|-----------------|
| <b>Total sample</b>                       | 131      | Credibility*Time | 0.79            | 0.431           |
| <b>Treatment reported as credible</b>     | 99       | Condition*Time   | 2.62            | 0.010           |
| <b>Treatment reported as not credible</b> | 41       | Condition*Time   | 2.66            | 0.012           |

*Abbreviations.* ICBT=Internet-delivered Cognitive Behaviour Therapy; ICDP=Internet-delivered Child-directed Play.

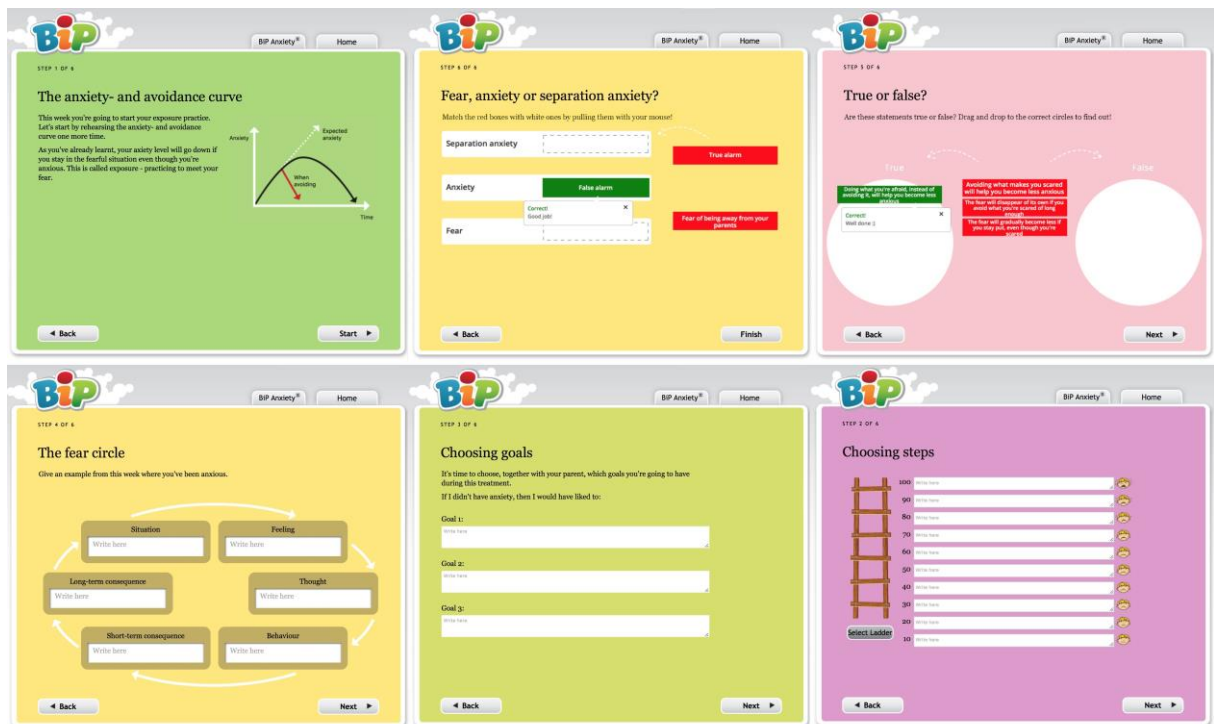
*Note.* Post-hoc analysis; Intent-to-treat analysis including all participants.

**Supplemental Table 13: Average resource use frequencies at pre- and post-treatment and mean costs accumulated over a 12 week time period**

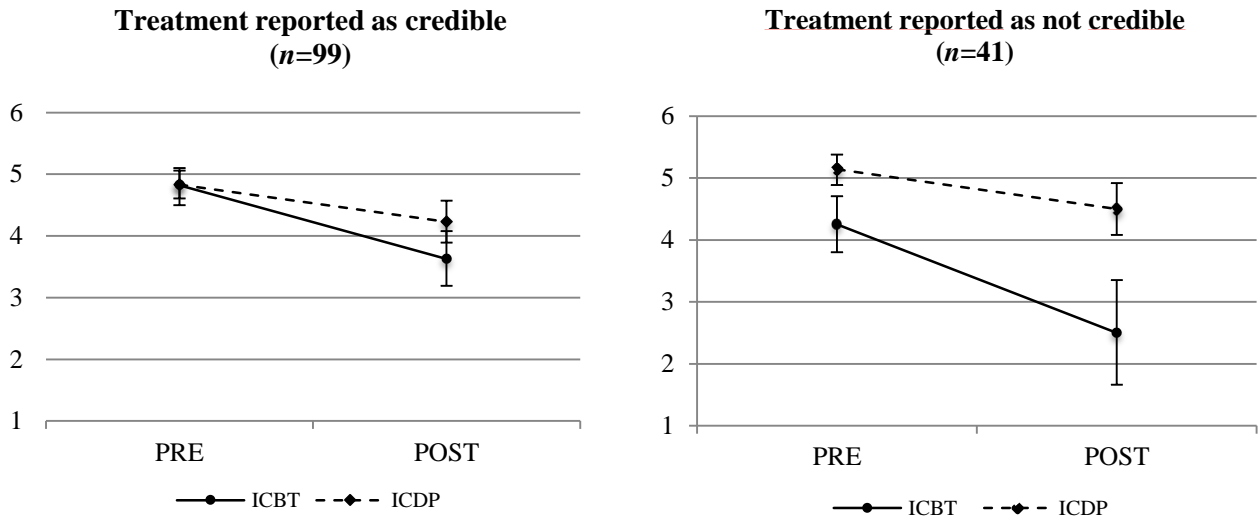
|  | Pre-treatment resource use |                     | Post-treatment resource use |                     | Costs (EURO)               |                            |
|--|----------------------------|---------------------|-----------------------------|---------------------|----------------------------|----------------------------|
|  | ICBT, <i>M</i> (SD)        | ICDP, <i>M</i> (SD) | ICBT, <i>M</i> (SD)         | ICDP, <i>M</i> (SD) | ICBT, <i>M</i> (95% CI)    | ICDP, <i>M</i> (95% CI)    |
| <b>Healthcare (visits)</b>                 |                            |                     |                             |                     | 1994.41 (1986.55; 2002.27) | 2342.86 (2334.57; 2351.16) |
| General practitioner                       | 0.74 (1.15)                | 0.88 (1.07)         | 0.63 (1.15)                 | 0.68 (1.01)         |                            |                            |
| Nurse                                      | 0.33 (0.69)                | 0.29 (0.65)         | 0.36 (0.75)                 | 0.34 (0.80)         |                            |                            |
| Social worker                              | 0.20 (0.66)                | 0.54 (1.69)         | 0.13 (0.51)                 | 0.34 (1.67)         |                            |                            |
| Physiotherapist                            | 0.15 (0.50)                | 0.18 (0.50)         | 0.29 (0.80)                 | 0.10 (0.40)         |                            |                            |
| Specialized medical doctor (hospital)      | 0.29 (0.82)                | 0.28 (0.77)         | 0.29 (0.62)                 | 0.44 (1.04)         |                            |                            |
| Chiropractor / osteopath                   | 0.27 (0.80)                | 0.12 (0.33)         | 0.14 (0.44)                 | 0.25 (0.76)         |                            |                            |
| Psychologist / psychotherapist             | 0.65 (1.20)                | 0.78 (1.30)         | 0.23 (1.04)                 | 0.34 (0.88)         |                            |                            |
| <b>Support (hours)</b>                     |                            |                     |                             |                     | 251.39 (250.17; 252.62)    | 338.42 (336.11; 340.72)    |
| Study / homework help                      | 0.02 (0.12)                | 0.11 (0.62)         | 0.11 (0.56)                 | 0.24 (1.29)         |                            |                            |
| Support of friends & family                | 4.90 (9.81)                | 3.74 (9.40)         | 4.98 (10.74)                | 7.66 (20.46)        |                            |                            |
| <b>Medicines (pills/dosages)</b>           |                            |                     |                             |                     | 13.27 (13.20; 13.35)       | 14.57 (14.48; 14.65)       |
| Medicines                                  | 15.41 (20.59)              | 16.09 (18.51)       | 11.82 (13.94)               | 11.29 (12.66)       |                            |                            |
| <b>Supplements (pills/dosages)</b>         |                            |                     |                             |                     | 5.65 (5.62; 5.68)          | 12.41 (12.33; 12.49)       |
| Dietary supplements                        | 14.44 (32.96)              | 20.49 (38.53)       | 8.93 (20.47)                | 10.542 (19.21)      |                            |                            |
| <b>Absenteeism (days)</b>                  |                            |                     |                             |                     | 1212.79 (1207.06; 1218.52) | 1350.76 (1344.60; 1356.92) |
| Absence from work (parents)                | 2.30 (4.33)                | 2.78 (5.31)         | 1.71 (4.30)                 | 2.01 (4.07)         |                            |                            |
| Absence from school (child)                | 1.23 (1.89)                | 1.85 (2.65)         | 0.93 (1.45)                 | 1.31 (2.10)         |                            |                            |
| <b>Presenteeism (days)</b>                 |                            |                     |                             |                     | 337.47 (335.85; 339.10)    | 411.24 (408.98; 413.49)    |
| Productivity loss at work due to illness   | 2.85 (4.34)                | 3.33 (4.63)         | 2.27 (6.97)                 | 2.07 (3.93)         |                            |                            |
| Productivity loss at school due to illness | 1.08 (2.65)                | 1.76 (3.68)         | 1.23 (3.48)                 | 1.35 (3.12)         |                            |                            |
| <b>Internet treatment (min)</b>            |                            |                     |                             |                     | 158.89 (140.50; 177.28)    | 75.69 (68.58; 82.79)       |
| Therapist time                             | -                          | -                   | 321.22 (170.03)             | 108.95 (67.86)      |                            |                            |
| <b>Total costs</b>                         |                            |                     |                             |                     | 4192.72 (4179.56; 4205.88) | 4684.25 (4671.02; 4697.47) |

*Abbreviations:* ICBT=Internet-delivered Cognitive Behaviour Therapy; ICDP=Internet-delivered Child-directed Play. *Note:* Subtotal cost values do not add up to total costs due to individually estimated means; Treatment time for ICBT includes therapist time spent on both child and parent whereas treatment time for ICDP includes time spent on parent only; Therapist time includes time spent online and via telephone.



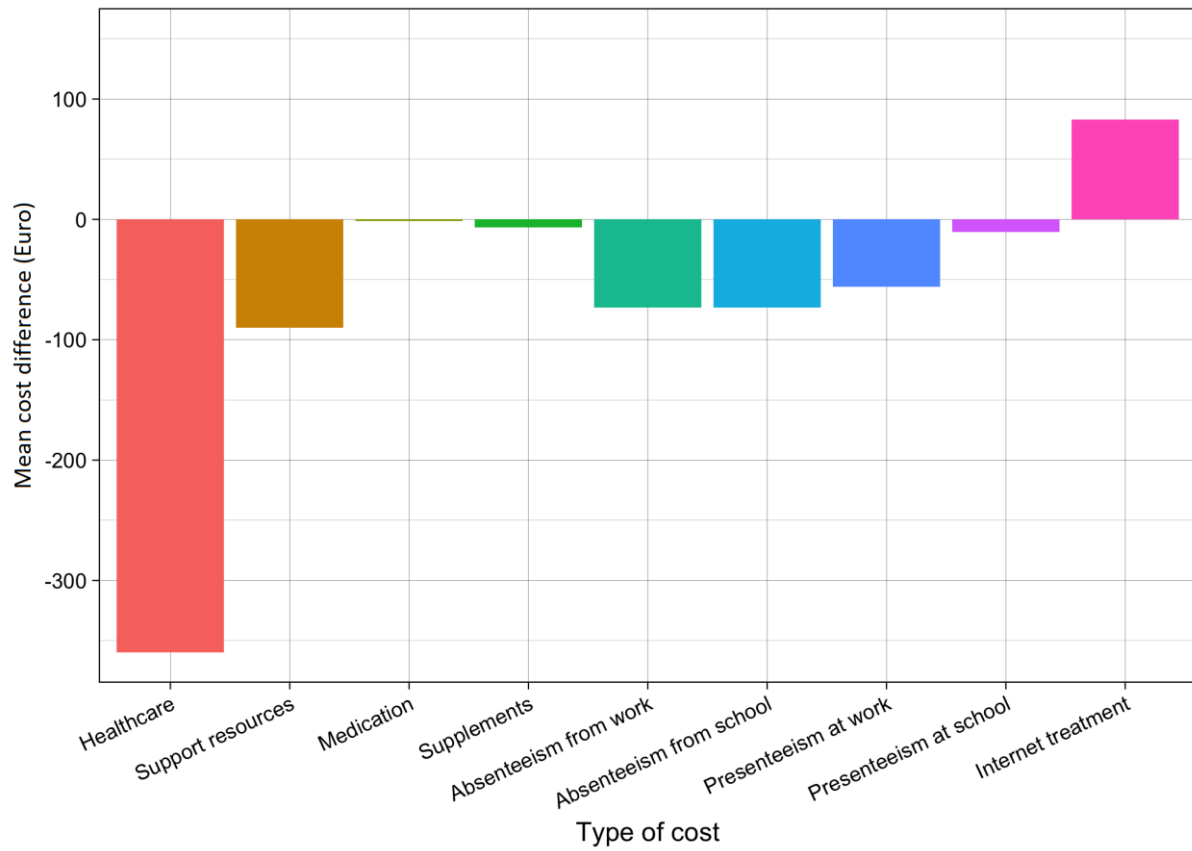


**Supplemental Figure 1: Screenshots from the ICBT treatment BiP Anxiety**  
*Note.* Translated from Swedish.



**Supplemental Figure 2: The effect of ICBT, compared to ICDP, based on whether patients rated the treatments as credible or as not credible**

*Abbreviations.* ICBT=Internet-delivered Cognitive Behavior Therapy; ICDP=Internet-delivered Child-directed Play. *Note.* Post-hoc analysis on primary outcome measure Clinician Severity Rating (CSR); based on estimated means derived from the linear mixed model (i.e., no cases excluded).



**Supplemental Figure 3: Total cost differences between ICBT and ICDP**

*Abbreviations.* ICBT=Internet-delivered Cognitive Behaviour Therapy; ICDP=Internet-delivered Child-directed Play. *Note.* Negative values indicate savings in favour of ICBT, positive values indicate savings in favour of ICDP.