Supplementary figure 1.



Median and interquartile range (%) for all four dimensions of the Work Productivity and Activity Impairment questionnaire: Irritable bowel syndrome for women and men in cohort 1. No significant differences in scores between the two groups were found (p=0.052-0.64).

Supplementary figure 2.



Median and interquartile range (%) for all four dimensions of the Work Productivity and Activity Impairment questionnaire: Irritable bowel syndrome for different subtypes of IBS in cohort 1. No significant differences in scores between the subtypes were found (p=0.32-0.64).

**Supplementary table 1. Correlations between IBSQOL and VSI and the four dimensions of WPAI:IBS for both cohort 1 and 2. The mean scores and standard deviations are also reported for the two cohorts.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Absenteeism | Presenteeism | Overall work impairment | Activity impairment | Mean (SD) |
| IBSQOL Emotional health Cohort 1 Cohort 2 Mental health Cohort 1 Cohort 2 Sleep Cohort 1 Cohort 2 Energy Cohort 1 Cohort 2 Physical functioning Cohort 1 Cohort 2 Diet Cohort 1 Cohort 2 Social role Cohort 1 Cohort 2 Physical role Cohort 1 Cohort 2 Sexual relations Cohort 1 Cohort 2 | -0.290\*\*\*-0.390\*\*\*-0.275\*\*\*-0.315\*-0.097-0.319\*-0.209\*-0.411\*\*\*-0.276\*\*\*-0.299\*-0.276\*\*\*-0.178-0.321\*\*\*-0.267\*-0.442\*\*\*-0.427\*\*\*-0.083-0.044 | -0.514\*\*\*-0.526\*\*\*-0.518\*\*\*-0.335\*-0.275\*\*\*-0.439\*\*\*-0.574\*\*\*-0.556\*\*\*-0.359\*\*\*-0.556\*\*\*-0.388\*\*\*-0.364\*\*\*-0.502\*\*\*-0.368\*\*\*-0.563\*\*\*-0.531\*\*\*-0.231\*-0.321\* | -0.521\*\*\*-0.546\*\*\*-0.524\*\*\*-0.364\*\*\*-0.280\*\*\*-0.501\*\*\*-0.573\*\*\*-0.602\*\*\*-0.420\*\*\*-0.575\*\*\*-0.410\*\*\*-0.380\*\*\*-0.537\*\*\*-0.407\*\*\*-0.636\*\*\*-0.564\*\*\*-0.211\*-0.287\* | -0.540\*\*\*-0.428\*\*\*-0.461\*\*\*-0.357\*\*\*-0.335\*\*\*-0.409\*\*\*-0.574\*\*\*-0.494\*\*\*-0.520\*\*\*-0.558\*\*\*-0.463\*\*\*-0.433\*\*\*-0.527\*\*\*-0.366\*\*\*-0.636\*\*\*-0.564\*\*\*-0.320\*\*\*-0.397\*\*\* | 43.4 (21.0)47.7 (23.8)66.1 (22.7)67.3 (25.5)70.9 (23.3)71.2 (23.7)47.4 (26.0)53.2 (28.9)68.0 (26.0)68.9 (26.0)58.2 (19.7)59.8 (22.7)57.0 (24.0)62.1 (25.2)53.5 (29.0)53.0 (31.6)57.8 (24.7)61.6 (27.6) |
| VSI Visceral sensitivity index Cohort 1 Cohort 2 | 0.237\*\*\*0.408\*\*\* | 0.458\*\*\*0.334\* | 0.489\*\*\*0.424\*\*\* | 0.557\*\*\*0.228\* | 41.8 (16.4)42.8 (16.0) |

Spearman’s rho for all four dimensions of the Work Productivity and Activity Impairment: Irritable Bowel Syndrome and the irritable bowel syndrome quality of life questionnaire for patients in cohort 1 and cohort 2. Mean scores and standard deviations are also reported. IBSQOL, the Irritable Bowel Syndrome Quality of Life Questionnaire; VSI, Visceral Sensitivity Index.

\*\*\*p<0.0001

\*\*p=0.003

\*p<0.05

Supplementary figure 3.



Median and interquartile range (%) of all four dimensions of the Work Productivity and Activity Impairment questionnaire: Irritable bowel syndrome for patients with depression scores ≥8 (possible or probable depression) and patients with scores ≤7 (no depression) measured with The Hospital Anxiety and Depression scale in cohort 2. The p-values indicates significant differences in scores between the two groups.

Supplementary figure 4.



Median and interquartile range (%) of all four dimensions of the Work Productivity and Activity Impairment questionnaire: Irritable bowel syndrome for patients with anxiety scores ≥8 (possible or probable anxiety) and patients with scores ≤7 (no anxiety) measured with The Hospital Anxiety and Depression scale in cohort 2. No significant differences in scores between the two groups were found (p= 0.1-0.14).

Supplementary figure 5.



Median and interquartile range (%) of all four dimensions of the Work Productivity and Activity Impairment questionnaire: Irritable bowel syndrome for patients with no/low, medium or high symptom severity measured with Patient Health Questionnaire 15 (PHQ-15) in cohort 2. The brackets and p-values indicates significant differences in scores between different groups.