**Online supplementary material**

**Materials and Methods**

**Procedure**

The study protocol was approved by the local research ethics committee (CPP Montpellier Sud-Méditérranée IV, CHU Montpellier) and performed according to the tenets of the Declaration of Helsinki. All participants provided a written informed consent.

At inclusion, patients were evaluated by a senior psychiatrist, and filled in a set of self-reported questionnaires. Data on suicidal event (suicide attempt (SA) and hospitalizations for suicidal ideation (SI)) during the 12 months of follow-up were obtained each 6 months during follow-up visits at the department or by phone if patient was not able to come. For patients lost to follow-up, data on suicidal event were collected from the Emergency Department files of the Academic Hospital of Montpellier (the only emergency unit accredited to manage SA in the area). The collection of suicidal event data from the Emergency Department files was limited to the first 12 months following inclusion to have the same length of follow-up for all participants.

A SA was defined as a self-damaging act carried out with certain intention to die, and is distinguished from self-mutilation, the use of substances or non-compliance with medical treatment [1].

For patient who died during the follow-up, the cause (suicide or other) was extracted from the death certificate.

**The Physical and Psychological Pain – Visual Analog Scale (PPP-VAS)**

At inclusion, patients completed the PPP-VAS [2] that assesses six pain dimensions: current, mean (within the last 15 days) and worst (within the last 15 days) psychological pain and physical pain. The six dimensions were visually presented using a horizontal rectangle with a numerical scale (0 – 10) and the following labels: “no pain at all” on the left (0) and “worst possible pain” on the right (10). Instructions were purposely simple “Circle the level from 0 to 10 that better define your psychological (or physical) pain”.

**Clinical assessment**

During the baseline interview, data on demographic characteristics, educational level, employment status, marital status, medication and tobacco use were collected. Psychiatric disorders and suicidal behavior were diagnosed by senior psychiatrists using the French version of the Mini International Neuropsychiatric Interview (MINI 5.0) [3].The number of current psychiatric comorbidities was determined according to the information provided by the MINI 5.0. Depressive symptomatology was evaluated using the Beck Depression Inventory short-form (BDI-SH) [4]. History of childhood trauma, comprising history of abuse or neglect, was assessed using the Childhood Trauma Questionnaire (CTQ) [5].

**Medication load**

Using the data on medication intake at inclusion, a general medication load index was computed for each participant. This index is based on the sum of the dosage of the different psychopharmacological medications. First, the dosage for each drug was coded from 0 to 4, based on a previously described approach [6]. Then, the total medication load was computed by adding all the individual medication codes for each medication category and for each individual participant. Analgesics were excluded from the load calculation.

**Statistical analyses**

Baseline (at inclusion) sociodemographic and clinical variables were compared with the Chi-square test (for qualitative variables) and the *t-*test(for quantitative variables) between patients who had and who did not have a suicidal event during the follow-up.

To predict suicidal events during the follow-up, multivariate logistic regression analyses were performed using depressive symptomatology, medication load, current comorbidity and history of past SA (step 1); psychological, physical pain (PPP-VAS) or suicidal ideation (item 7 of the BDI) at inclusion (step 2). A logistic regression analysis for each category of pain or suicidal ideation was performed to predict suicidal events during the 12 months of follow-up.

An exploratory network analysis was performed using suicidal events, all the BDI items and worst psychological pain. A network consists in the visualization of the associations among symptoms. Given the ordinal structure of BDI items, the cor\_auto function in R was used to compute the appropriate correlation matrix. As in psychiatry there are many spurious relationships among symptoms, some form of control for these false associations was needed. Therefore, a threshold in the EBICglasso estimation was used to obtain the optimal balance between model sparsity and goodness of fit [7]. The network analysis was performed using the qgraph package [8] in R. The main interest of this analysis was to determine the key relationships between psychological pain/BDI items and the occurrence of a suicidal event. For this reason, the recently developed “flow” diagram function from the qgraph package was used for network visualization. Generally, the visual interpretation of networks is limited [9]; however, the “flow” diagram allows placing one node to the left of the network and seeing the variables connected with that node by placing the other variables at different edge levels depending on the connections between them. Here, strength (sum of the magnitude of all edges connected with each node), betweenness (number of times that a node lies on the shortest paths to other nodes), and closeness (the mean shortest distance from the node to all other nodes) were used as centrality estimates [10]. The edge-weight accuracy was checked by estimating the mean and 95% CI using bootstrapping, and the centrality stability was assessed, using the bootnet package to check the network stability [11].

The alpha significance level was fixed at 0.05. All statistical analyses were performed with R.

**Demographic and clinical variables of the patients with follow-up data:**

The sociodemographic and clinical characteristics of the 372 patients with follow-up information and of the 471 patients without follow-up information are in Supplementary material Table 2.

In the group with follow-up data, patients who reported a suicidal event during the follow-up (N=86) were younger (*t360* = 4.15, *p* < .001) and were more frequently childless (*Χ 2* = 4.37, *p* < .037) than patients without suicidal event (N=286) (Supplementary material Table 1). In comparison with patients without suicidal event during the follow-up, the percentage of patients with an anxiety disorder (*Χ 2* = 9.01, *p* < .003), post-traumatic stress disorder (*Χ 2* = 8.83, *p* < .003), and past history of suicide attempt (*Χ 2* = 24.67, *p* < .001) was higher in the group with suicidal events during the follow-up. Similarly, the number of past SA (*t88.8* = − 2.63, *p* < .010) and of current comorbidities (*t360* = − 2.42, *p* < .016) as well as the BDI score (*t360* = − 2.59, *p* < .010), the level of SI measured by BDI item 7 (*t133.5* = − 3.09, *p* < .002), the level of mean psychological pain (*t359* = − 3.06, *p* < .002) and the level of worst psychological pain (*t247.3* = − 5.09, *p* < .001) at baseline were higher in the group with suicidal events. Moreover, treatment with anxiolytics (*Χ 2* = 7.22, *p* < .007) and anticonvulsant drugs (*Χ 2* = 6.65, *p* < .010) was more common among patients with a suicidal event during the follow-up. Finally, patients with suicidal events during the follow-up had higher total CTQ score (*t311* = − 2.89, *p* < .004) with more frequent history of childhood physical abuse (*Χ 2* = 4.75, *p* < .029), physical neglect (*Χ 2* = 3.97, *p* < .046), emotional abuse (*Χ 2* = 4.15, *p* < .042), and sexual abuse (*Χ 2* = 4.04, *p* < .044) (Supplementary material Table 1).

**Prediction of suicidal events during 6 first months of follow-up:**

Complementary analysis were performed using the visit at 6 months. We obtained follow-up data for 364 patients among those 61 had at least one suicidal event: SI (N=36) and /or SA (N=33), but no death by suicide. Seven patients were hospitalized for both SI and SA during this period.

Multivariate logistic regression analyses adjusted for medication load, psychiatric comorbidities, depressive symptomatology, and history of past suicide attempts showed that patients with higher worst psychological pain (last 15 days) at inclusion had higher odds to report suicidal events during the 6 months of follow-up (OR = 1.35, 95% CI [1.09, 1.66], p < .005). It remained significant when considering only risk of SA during the first 6 months of follow-up (OR = 1.37, 95% CI [1.03, 1.80], p < .028).

**Network of depressive symptomatology, psychological pain and suicidal events:**

The resulting network (Supplementary material Fig. 1A) showed that worst psychological pain and feelings of failure were connected with the occurrence of a suicidal event during the 12 months of follow-up. Worst psychological pain was also connected with SI, sadness and lack of appetite, while feelings of failure were connected with pessimism, culpability and self-hate. The most distant nodes were fatigue and loss of energy. The centrality indices showed that pessimism was the most central symptom, followed by culpability, psychological pain, and self-hate (Supplementary material Fig. 1B). The mean and SD of all items used in the network, the correlation matrix, the edge-weight accuracy plot, and the centrality stability plot are in supplementary material tables 4-5 and figures 2-3.

**References**

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**Supplementary material table 1: Description of baseline sociodemographic and clinical variables**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Suicidal event | | Suicide attempt | | Suicidal ideation | | No suicidal event | | *p-values for SE vs NSE* |
| N = | 86 | | 45 | | 54 | | 286 | |  |
| ***Sociodemographic data*** |  | |  | |  | |  | |  |
| Age | 37.59 ± 1.38 | | 39.79 ± 2.04 | | 36.49 ± 1.66 | | 44.04 ± .75 | | *p <* .001 |
| Level of education (years) | 13.14 ± .27 | | 13.22 ± .38 | | 13.31 ± .35 | | 13.55 ± .16 | | NS |
| Female, n (%) | 62 (72.1 %) | | 33 (73.3 %) | | 39 (72.2 %) | | 184 (66.7 %) | | NS |
| Current smoker, n (%) | 47 (54.7 %) | | 25 (55.6 %) | | 29 (53.7 %) | | 126 (46.5 %) | | NS |
| Sep./Div./Wid., n (%) | 18 (20.9 %) | | 9 (20.0 %) | | 12 (22.2 %) | | 53 (19.3 %) | | NS |
| Children, n (%) | 44 (51.2 %) | | 26 (57.8 %) | | 27 (50.0 %) | | 176 (63.8 %) | | *p <* .037 |
| ***Psychiatric Comorbidity*** |  | |  | |  | |  | |  |
| Bipolar disorder, n (%) | 4 (4.7 %) | | 2 (4.4 %) | | 4 (7.4 %) | | 18 (6.5 %) | | NS |
| Anxiety disorder, n (%) | 30 (35.3 %) | | 22 (50.0 %) | | 12 (22.2 %) | | 54 (19.6 %) | | *p <* .003 |
| Eating disorder, n (%) | 10 (11.5 %) | | 4 (8.9 %) | | 8 (14.8 %) | | 30 (10.9 %) | | NS |
| PTSD, n (%) | 16 (18.8 %) | | 9 (20.5 %) | | 7 (20.6 %) | | 21 (7.6 %) | | *p <* .003 |
| Drug Abuse/Dep., n (%) | 10 (11.6 %) | | 4 (8.9 %) | | 8 (14.8 %) | | 40 (14.5 %) | | NS |
| Alcohol Abuse/Dep., n (%) | 41 (47.7 %) | | 17 (37.8 %) | | 31 (57.4 %) | | 125 (45.3 %) | | NS |
| Psychiatric comorb., n (%) | 67 (77.9 %) | | 36 (80.0 %) | | 41 (75.9 %) | | 195 (70.7 %) | | NS |
| N comorbidities | 1.86 ± .17 | | 2.00 ± .25 | | 1.72 ± .22 | | 1.43 ± .08 | | *p <* .016 |
| ***Clinical and suicidal history*** | | |  | |  | |  | |  |
| BDI score | 18.99 ± .89 | | 17.40 ± 1.18 | | 20.24 ± 1.13 | | 16.38 ± .49 | | *p <* .010 |
| Suicidal ideation (BDI 7) | 1.36 ± .12 | | 1.27 ± .15 | | 1.41 ± .15 | | .94 ± .06 | | *P* < .002 |
| N past hospitalizations | 2.36 ± .42 | | 2.36 ± .54 | | 2.35 ± .54 | | 2.59 ± .72 | | NS |
| History of SA, n (%) | 74 (86.0 %) | | 43 (95.6 %) | | 43 (79.6 %) | | 156 (56.5 %) | | *p <* .001 |
| N of past SAs | 3.46 ± .62 | | 2.63 ± .51 | | 4.17 ± .94 | | 1.77 ± .17 | | *p <* .010 |
| Current psychological pain | 5.81 ± .32 | | 5.78 ± .46 | | 5.89 ± .39 | | 5.37 ± .17 | | NS |
| Mean Psychological pain | 7.28 ± .25 | | 7.33 ± .35 | | 7.11 ± .32 | | 6.33 ± .16 | | *p <* .002 |
| Worst psychological pain | 8.88 ± .16 | | 8.89 ± .21 | | 8.89 ± .23 | | 7.73 ± .16 | | *p <* .001 |
| Current physical pain | 3.24 ± .17 | | 3.49 ± .52 | | 3.44 ± .47 | | 2.80 ± .17 | | NS |
| Mean physical pain | 4.06 ± .37 | | 4.30 ± .53 | | 4.19 ± .46 | | 3.38 ± .18 | | NS |
| Worst physical pain | 5.19 ± .39 | | 5.27 ± .57 | | 5.62 ± .49 | | 4.33 ± .19 | | *p <* .043 |
| ***Medication*** |  | |  | |  | |  | |  |
| Antidepressants, n (%) | 61 (70.9 %) | | 33 (73.3 %) | | 37 (68.5 %) | | 171 (62.0 %) | | NS |
| Anxiolytics, n (%) | 73 (84.9 %) | | 40 (88.9 %) | | 44 (81.5 %) | | 194 (70.3 %) | | *p <* .007 |
| Antipsychotics, n (%) | 51 (59.3 %) | | 29 (64.4 %) | | 30 (55.6 %) | | 146 (52.9 %) | | NS |
| Antiepileptics, n (%) | 11 (12.8 %) | | 6 (13.3 %) | | 8 (14.8 %) | | 72 (26.1 %) | | *p <* .010 |
| Lithium, n (%) | 7 (8.1 %) | | 0 (0 %) | | 7 (9.6 %) | | 35 (12.7 %) | | NS |
| Medication load | 3.77 ± .22 | | 3.60 ± .29 | | 3.79 ± .28 | | 3.39 ± .13 | | NS |
| Analgesics, n (%) | 4 (4.7 %) | | 3 (6.7 %) | | 1 (5.0 %) | | 9 (3.3 %) | | NS |
| ***Childhood trauma moderate/severe*** | |  | |  | |  | |
| Physical Abuse, n (%) | 28 (48.3 %) | | 14 (40.0 %) | | 16 (51.6 %) | | 46 (31.9 %) | | *p <* .029 |
| Physical Neglect, n (%) | 34 (59.6 %) | | 18 (54.5 %) | | 17 (54.8 %) | | 63 (44.1 %) | | *p <* .046 |
| Emotional Abuse, n (%) | 44 (74.6 %) | | 23 (67.6 %) | | 26 (78.8 %) | | 85 (59.4 %) | | *p <* .042 |
| Emotional Neglect, n (%) | 46 (80.7 %) | | 28 (82.4 %) | | 23 (76.7 %) | | 106 (76.8 %) | | NS |
| Sexual Abuse, n (%) | 25 (45.5 %) | | 8 (25.8 %) | | 17 (53.1 %) | | 43 (30.3 %) | | *p <* .044 |
| CTQ total score | 55.60 ± 2.25 | | 54.89 ± 3.31 | | 55.92 ± 2.73 | | 48.67 ± 1.12 | | *p <* .004 |

Note: SE = Suicidal event, NSE = No suicidal event, Sep./Div./Wid. = Separated, Divorced, or Widowed; PTSD = Post-traumatic stress disorder; comorb. = comorbidity; BDI = Beck Depression Inventory; SA = Suicide attempt; CTQ = Childhood Trauma Questionnaire; N = number; Dep. = Dependence.

**Supplementary material table 2: Description of the baseline sociodemographic and clinical variables of patients with and without follow-up data on suicidal event(s)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | With follow-up data | | Without follow-up data | *p-values* |
| N = | 372 | | 471 |  |
| ***Sociodemographic*** |  | |  |  |
| Age | 42.38 ± .67 | | 41.90 ± .67 | NS |
| Level of education (years) | 13.42 ± .14 | | 12.95 ± .14 | *p <* .014 |
| Female, n (%) | 254 (68.1 %) | | 320 (68.1 %) | NS |
| Current smoker, n (%) | 180 (48.9 %) | | 240 (51.9 %) | NS |
| Sep./Div./Wid., n (%) | 74 (19.9 %) | | 126 (27.2 %) | *p <* .015 |
| Children, n (%) | 227 (60.9 %) | | 290 (61.8 %) | NS |
| ***Psychiatric Comorbidity*** |  | |  |  |
| Bipolar disorder, n (%) | 22 (5.9 %) | | 38 (8.2 %) | NS |
| Anxiety disorder, n (%) | 84 (22.6 %) | | 154 (33.1 %) | *p <* .001 |
| Eating disorder, n (%) | 41 (11.0 %) | | 37 (7.9 %) | NS |
| PTSD, n (%) | 38 (10.2 %) | | 56 (12.0 %) | NS |
| Drug Abuse/Dep., n (%) | 52 (13.6 %) | | 75 (16.2 %) | NS |
| Alcohol Abuse/Dep., n (%) | 169 (45.3 %) | | 180 (38.8 %) | NS |
| Psychiatric comorb., n (%) | 267 (71.6 %) | | 339 (73.2 %) | NS |
| N comorbidities | 1.51 ± .08 | | 1.63 ± .07 | NS |
| ***Clinical dimensions*** | | |  |  |
| Baseline BDI score | 17.12 ± .43 | | 17.80 ± .45 | NS |
| Suicidal ideation (BDI 7) | 1.04 ± .06 | | 1.05 ± .05 | NS |
| N Past Hospitalizations | 2.50 ± .49 | | 5.17 ± .90 | *p <* .009 |
| History of SA, n (%) | 74 (86.0 %) | | 156 (56.5 %) | NS |
| N of past SA | 2.25 ± .21 | | 2.15 ± .19 | NS |
| Current Psychological pain | 5.49 ± .15 | | 5.88 ± .13 | *p <* .049 |
| Mean Psychological pain | 6.57 ± .13 | | 7.11 ± .11 | *p <* .002 |
| Worst Psychological pain | 8.00 ± .13 | | 8.22 ± .11 | NS |
| Current Physical pain | 2.96 ± .15 | | 3.14 ± .14 | NS |
| Mean Physical pain | 3.61 ± .16 | | 3.80 ± .14 | NS |
| Worst Physical pain | 4.60 ± .18 | | 4.72 ± .16 | NS |
| ***Medication*** |  | |  |  |
| Antidepressants, n (%) | 237 (63.5 %) | | 300 (65.4 %) | NS |
| Anxiolytics, n (%) | 278 (74.5 %) | | 363 (79.1 %) | NS |
| Antipsychotics, n (%) | 207 (55.5 %) | | 254 (55.3 %) | NS |
| Antiepileptics, n (%) | 84 (22.5 %) | | 94 (20.5 %) | NS |
| Lithium, n (%) | 42 (11.3 %) | | 28 (6.1 %) | *p <* .008 |
| Medication load | 3.45 ± .11 | | 3.42 ± .09 | NS |
| Analgesics, n (%) | 13 (3.5 %) | | 37 (8.1 %) | *p <* .006 |
| ***Childhood trauma moderate/severe*** | |
| Physical Abuse, n (%) | 81 (38.0 %) | | 99 (34.4 %) | NS |
| Physical Neglect, n (%) | 105 (49.8 %) | | 141 (50.2 %) | NS |
| Emotional Abuse, n (%) | 139 (65.3 %) | | 183 (63.8 %) | NS |
| Emotional Neglect, n (%) | 162 (78.6 %) | | 207 (73.7 %) | NS |
| Sexual Abuse, n (%) | 71 (34.5 %) | | 99 (34.7 %) | NS |
| Total CTQ score | 50.87 ± 1.03 | | 49.49 ± 1.02 | NS |

Note: Sep./Div./Wid. = Separated, Divorced or Widowed; PTSD = Post-traumatic stress disorder; comorb. = comorbidity; BDI = Beck Depression Inventory; SA = Suicide attempt; CTQ = Childhood Trauma Questionnaire, Dep. = Dependence.

**Supplementary material table 3: Analysis of the scores of each BDI items in the whole group of patients with follow-up data (n=372), in patients with suicidal event(s) (n=86) and in patients without suicidal event(s) (n=286) (scores used in the network analysis) with the Wilconxon-Rank sum test**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable | Total  M (SD) | Suicidal event  M (SD) | No Suicidal event  M (SD) | *P value* |
| Psy | 8.00 (2.44) | 8.88 (1.52) | 7.73 (2.60) | .001 |
| Sad | 1.43 (1.06) | 1.53 (1.10) | 1.39 (1.05) | .298 |
| Pes | 1.29 (1.07) | 1.40 (1.08) | 1.25 (1.06) | .261 |
| Fai | 1.44 (1.02) | 1.85 (1.05) | 1.31 (.98) | .001 |
| Ple | 1.30 (.86) | 1.42 (0.90) | 1.26 (.84) | .182 |
| Cul | 1.89 (1.11) | 2.10 (1.05) | 1.82 (1.13) | .035 |
| Hat | 1.29 (.91) | 1.45 (1.03) | 1.24 (.87) | .095 |
| Sui | 1.04 (1.07) | 1.36 (1.12) | .94 (1.03) | .001 |
| Rel | .72 (.83) | .88 (.99) | .66 (.77) | .137 |
| Ind | 1.48 (.98) | 1.51 (.97) | 1.46 (.99) | .601 |
| Bod | 1.29 (1.13) | 1.50 (1.19) | 1.22 (1.10) | .054 |
| Ene | 1.51 (.91) | 1.50 (.89) | 1.51 (.91) | .859 |
| Fat | 1.39 (.83) | 1.42 (.85) | 1.37 (.82) | .690 |
| App | .97 (1.05) | 1.06 (1.08) | .94 (1.05) | .344 |

Note: Psy = worst psychological pain; Sad = Sadness; Pes = Pessimism; Fai = Past failure; Ple = Loss of Pleasure; Cul = Culpability; Hat = Self-Hate; Sui = Suicidal ideation; Rel = Loss interest in relations; Ind = Indecisiveness; Bod = Distorted body image; Ene = Loss of energy; Fat = Fatigue; App = Lack of appetite.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Psy | Sad | Pes | Fai | Ple | Cul | Hat | Sui | Rel | Ind | Bod | Ene | Fat | App | SE |
| Psy | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sad | .49 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Pes | .36 | .67 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |
| Fai | .36 | .50 | .51 | 1 |  |  |  |  |  |  |  |  |  |  |  |
| Ple | .31 | .54 | .53 | .54 | 1 |  |  |  |  |  |  |  |  |  |  |
| Cul | .39 | .48 | .60 | .54 | .48 | 1 |  |  |  |  |  |  |  |  |  |
| Hat | .39 | .53 | .60 | .58 | .52 | .71 | 1 |  |  |  |  |  |  |  |  |
| Sui | .49 | .56 | .57 | .45 | .44 | .47 | .53 | 1 |  |  |  |  |  |  |  |
| Rel | .17 | .39 | .48 | .31 | .54 | .19 | .27 | .32 | 1 |  |  |  |  |  |  |
| Ind | .31 | .52 | .59 | .39 | .50 | .50 | .47 | .37 | .35 | 1 |  |  |  |  |  |
| Bod | .24 | .35 | .45 | .43 | .30 | .47 | .59 | .40 | .18 | .39 | 1 |  |  |  |  |
| Ene | .30 | .46 | .53 | .32 | .44 | .41 | .44 | .34 | .37 | .62 | .29 | 1 |  |  |  |
| Fat | .33 | .48 | .45 | .32 | .46 | .35 | .43 | .37 | .36 | .58 | .30 | .72 | 1 |  |  |
| App | .38 | .34 | .32 | .22 | .32 | .31 | .35 | .31 | .28 | .24 | .26 | .32 | .34 | 1 |  |
| SE | .36 | .09 | .09 | .32 | .12 | .17 | .13 | .26 | .15 | .03 | .15 | -.01 | .04 | .09 | 1 |

**Supplementary material table 4: Correlation matrix between BDI items, worst psychological pain and suicide event(s) used for the network analysis.**

Note: Psy = worst psychological pain; Sad = Sadness; Pes = Pessimism; Fai = Past failure; Ple = Loss of Pleasure; Cul = Culpability; Hat = Self-Hate; Sui = Suicidal ideation; Rel = Loss interest in relations; Ind = Indecisiveness; Bod = Distorted body image; Ene = Loss of energy; Fat = Fatigue; App = Lack of appetite; SE = Suicide event

**Supplementary material Figure 1:** **(a) Flow diagram to visualize the network of baseline depression symptomatology (BDI items) and worst psychological pain with suicidal events during the 12-month follow-up; blue edges show positive relationships and yellow edges show negative relationships. (b) Centrality indices of symptoms.**



**Supplementary material Figure 2: Edge-weight accuracy plot for network analysis**



**Supplementary material Figure 3: Centrality stability plot for network analysis**

