**Supplementary Table 1. Full set of features included in the machine learning models predicting non-response to an Internet-based Intervention**

**Baseline/ Pre-treatment**

Prior to the intervention, the Structured Clinical interview for DSM-IV (SCID-I, sections A through F; Wittchen, Zaudig, & Fydrich, 1997) was conducted per telephone to check the presence of clinical diagnoses. Subsequently, patients completed a comprehensive set of questionnaires online.

Categorical features with no clear ordering (e.g., assigned counselor, recruitment strategy) were one-hot encoded, creating binary variables that indicate the presence or absence of a certain category. Features representing clinical symptom scale items were re-polarized and/or aggregated if indicated by the respective questionnaire manual. Continuous features (e.g., age, internet-usage) were centered and scaled. High feature cardinality was reduced by aggregating categories. This concerned marital status, highest educational level, occupational status, living situation and residence size.

Self-report variables were included as single items and as aggregated scores where indicated. The following features were included in our analyses:

*Sociodemographic:*

* Age (registration year – birth year)
* Sex (male/ female)
* Marital status (single/ married or registered partnership/ divorced or widowed)
* Highest educational level (Certificate of Secondary Education or no school leaving certificate/ General Certificate of Secondary Education/ Higher education entrance qualification/ Polytechnic school degree /University degree)
* Occupational status (Employed worker/ Student or pupil or trainee/ Retired or currently unemployed/ Self-employed or other)
* Living situation (Alone/ With partner only/ With partner and children/ With other people or with children only)
* Residence size (Big city/ Outskirts or suburb of a big city/ Medium or small town/ Village, farmstead, or detached house)
* Internet usage (min per day)
* Body-mass-index

*Process:*

* Registration year (2016-2020)
* Treatment affected by the corona pandemic, i.e., started after the 15.01.2020 (yes/no)
* Study variant: *cognitive restructuring* modules first or *positive activities* modules first

*Healthcare system usage*

* Previous psychotherapeutic treatment (yes/no)
* Other professional help: “Are you currently receiving any other professional help for your symptoms (e.g., counseling services, medication)?” (yes/no)
* Preference for conventional face-to-face therapy: “You have registered for online counseling. Alternatively, could you have imagined using classical psychotherapy (regular face-to-face conversations) to deal with your complaints?” (yes/no)
* Healthcare system usage during the last 4 weeks (yes/no):
  + “In the last 4 weeks have you been so ill that you could not work or perform general duties and tasks (e.g., household, family, caring for friends)?”
  + “Were you on sick leave from a doctor during this time?”
  + “Examination/treatment by my family doctor/internist/other doctor”
  + “Examination/treatment by a psychiatrist/neurologist/nervous doctor”
  + “Visit a self-help group”
  + “Use of (psychological) counseling services”
  + “Outpatient psychotherapy”
  + “Taking medication”
  + “Admission to a psychiatric hospital or to a psychiatric or psychosomatic department of a general hospital (also day clinic)”

*Clinical features assessed during the telephone interview:*

* Sum of the first 9 symptoms of the current MDE recorded in the SCID telephone interview.
* Presence of a current MDE (yes/no)
* Presence of a current dysthymia (yes/no)
* Previous MDE, fully remitted (yes/no)
* Previous MDE, partially remitted (yes/no)
* Change in medication during the last 6 weeks (yes/no)

*Clinical self-report features:*

* Depression: *Beck Depression Inventory* (BDI-II; Hautzinger et al., 2006),
* Patient Health Questionnaire – depression subscale (PHQ-D; Löwe et al., 2002)
* Cognitive Distortions: Cognitive Styles Assessment (COSTA-21; Bohn et al., *in preparation*; single items and total sum)
* Self-efficacy: General Perceived Self-Efficacy Scale (GPSE; Schwarzer & Scholz, 2000)single items and total sum)
* Anxiety: GAD-7 (Spitzer, Kroenke, Williams, & Löwe, 2006) single items and total sum)
* Social support: Berlin Social Support Scales (BSSS; Schwarzer & Schulz, 2003); single items and subscales *perceived social support* and *support seeking*)
* Motivation for therapy: patient questionnaire on therapy expectation and evaluation (PATHEV; (Schulte, 2005); single items; item 11 was missing)
* Illness perception: Illness Perception Questionnaire (Revised) (IPQ-R;Glattacker, Bengel, & Jäckel, 2009; single items and subscales)
* Psychosocial environment: Patient Health Questionnaire – stress subscale (PHQ-S; Löwe et al., 2002),
* Restraints on social participation (IMET; Deck, Mittag, Hüppe, Muche-Borowski, & Raspe, 2011)
* Quality of life: EUROHIS-QOL + WHO-QOL-Environment (Brähler, Mühlan, Albani, & Schmidt, 2007)
* Values: Portrait Value Questionnaire (PVQ;Schmidt, Bamberg, Davidov, Herrmann, & Schwartz, 2007); single items and subscales)

**M3/ Early-Change**

As measured at the beginning of the second week.

*Clinical:*

* PHQ-DM3 (Single Items and sum scores)
* Early change on depressive symptoms: Sum(PHQ-DBaseline) – Sum(PHQ-DM3)
* COSTAM3 (Single Items and sum scores)
* Early change on cognitive distortions: Sum(COSTABaseline) – Sum(COSTAM3)

*Therapy processes:*

* Therapeutic alliance (SEWIP; Mander et al., 2013)

**References for Supplementary Table**

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