**Appendix**

1. Coding of predictors variables and description of scales

Gender was coded as 0=male and 1=female. Age was included as a metric variable. Housing was dichotomized to obtain the categories 0=Refugee accommodation and 1=Other accommodation (consisting of response options “Private flat”, “Shared flat”, “Assisted living”, and “Other” ). Marital status was obtained by recoding part of the response options, resulting in 0=Single, 1=Married and 2=Post-relationship (made up of “Divorced / Separated” and “Widowed”) as factor levels. Occupation was dichotomized as a variable with the levels 0=Unemployed and 1=Employed (including response options “Protected employment”, “Employee”, “Retirement/Pension”, “Military service/Community”, “Self-employed”). Last residence country was obtained by retaining the four most represented countries across the analysis sample, i.e. 1=Afghanistan, 2=Iran, 3=Syria, 4=Turkey, and summarizing the remaining response options under the level 0=Other. Both variables medication and psychotherapy were coded as binary, with the level 0=”No” and 1=”Yes” (indicating the participant was/was not currently receiving psychotherapy or medication). Years of schooling was included as a metric variable. Change in social status was calculated by subtracting “Social status after migration” from “Social status before migration”. Specifically, each item was rated on a 5-point Likert scale ranging from upper social status (1) to lower social status (5). Consequently, negative change scores represented a decline in social status and vice versa. Intervention level was coded as 0=No intervention, 1=Non-expert intervention, 2=Group intervention and 3=Individual expert intervention. Migrant identity was assessed using the item with “Would you call yourself a migrant?”, with response options ranging from 1=”Yes”, definitely” to 5=”No, definitely not”. The migrant identity variable used in analysis was dichotomized due to sparsity of responses on some levels, resulting in 0=Not yes (Consisting of “No, definitely not”, “Rather not”, “Undecided”) and 1=Yes (“Yes, definitely”, “Rather yes”). Cultural belonging was assessed using the item “Think about your cultural values and traditions: Towards which culture do you feel the strongest sense of belonging?” The cultural belonging variable used in analysis was dichotomized due to sparsity of responses on some levels; as a result, the factor levels were 0=Not culture of country of origin (consisting of original response options “German culture”, “Other culture”, “No culture”) and 1=Culture of your country of origin. Means of flight was coded as 0=”Alone” and 1=”Not alone”. Residence status was also used a dichotomized variable with levels 0=Insecure (“Temporary residence permit”, “No residence permit”, “Other”) and 1=Secure (“Permanent residence permit”, “Permit for permanent residence in the EU”). The Brief Resilience Scale (BRS) - a six-item scale with each idem ranging from 1 (Strongly disagree) to 5 (Strongly agree) - was used to measure resilience, where increasing sum scores indicate higher resilience. Reliability for this scale is acceptable with Cronbach’s alpha ranging from .80 to .91 and test-retest-reliability at .69 and .62 for one month and three months intervals, respectively (Smith et al., 2008). The General Self-Efficacy Scale (GSE) was used to measure perceived self-efficacy. Specifically, this scale consists of 10 which are rated on a 4-point Likert scale ranging from 1 (Not at all true) to 4 (Exactly true), where higher sum scores indicate higher levels of self-efficacy. In terms of reliability the GSE showed acceptable scores, with Cronbach’s alpha values ranging from .76 to .90 and the majority of values in the high .80s (Schwarzer, 1995). The Strength and Difficulties Questionnaire (SDQ) measures a range of emotional and social problems and resources, with 25 items (from 0 (Not true) to 2 (Certainly true)) covering emotional symptoms, conduct problems, hyperactivity/inattention, peer problems, and prosocial behavior (Goodman, 1997). Subscales for each of these aspects were used in analysis. A brief version of the World Health Organization - Quality of Life (WHOQOL) questionnaire was used to measure different aspects of quality of life. The instrument covers the aspects physical health, psychological health, social relationships and environment using 26 questions on a 5-point Likert scale. Subscales physical health, psychological health and social relationships were used as separate predictors in analysis, having shown at least marginally acceptable scores of internal consistency in previous studies (Cronbach’s alpha of .82, .75, and .66, respectively; (The WHOQOL Group, 1998). The Harvard Trauma Questionnaire (HTQ) was employed to assess trauma symptom load on a metric scale. Specifically, participants responded to 40 items with response options ranging 1 (Not at all) to 4 (Extremely); responses were then summed up and divided by the number of items. The scale has shown good reliability with a Cronbach’s alpha of .96 and a test-retest reliability of .92 (Mollica et al., 1992). Flight reasons were assessed through the item “Why did you migrate?”, with multiple responses possible (including “War”, “Natural disaster”, “Economic crisis”, “Individual reasons”, “Political and religious persecution”, “Social reasons”, “Other”). The variable was dichotomized with levels 0=One reasons, and 1=Multiple reasons. Means of flight was also dichotomized with levels 0=”Alone” and1=”Not alone”. Lastly, sense of disconnect was assessed by using the four items from the Challenged Sense of Belonging Scale (CSBS) (Fuchs et al., 2021) in addition to two further items, namely “I have a sense of belonging” and “I am comfortable that my background and experiences are so different from those who are usually around me”. Participants were asked to indicate whether they identify with the statements, responding on a binary yes/no-scale. The last two items were inverted, and all affirming responses were summed and divided by the number of items, resulting in a metric sense of belonging score for each participant.

2. Secondary analysis

To receive tentative evidence on dropout characteristics within intervention groups, per variable, dropout vs. no dropout comparisons were performed per variable, per intervention group. These analyses were computed using the non-imputed data set. The results for the first two intervention groups - the “no intervention” and the “non-expert intervention” groups - are shown in Table 1. Results for the groups “group intervention” and “individual expert intervention” are shown in Table 2.

**Table 1**

*Per-variable, within-intervention group comparisons for non-imputed data – “no intervention” and “non-expert intervention” groups*

|  | **No intervention** | | | **Non-expert intervention** | | |
| --- | --- | --- | --- | --- | --- | --- |
| **Variable** | **Dropout**, N = 4a | **No dropout**, N = 22a | **p-value**b | **Dropout**, N = 12a | **No dropout**, N = 29a | **p-value**c |
| Gender |  |  | 0.6 |  |  | >0.9 |
| Male | 3 (75%) | 12 (55%) |  | 9 (75%) | 22 (76%) |  |
| Female | 1 (25%) | 10 (45%) |  | 3 (25%) | 7 (24%) |  |
| Age | 30.00 (11.78) | 29.77 (11.55) | >0.9 | 27.75 (7.65) | 27.31 (8.90) | 0.9 |
| Housing |  |  | 0.6 |  |  | 0.5 |
| Other accommodation | 4 (100%) | 17 (77%) |  | 9 (75%) | 18 (62%) |  |
| Refugee accommodation | 0 (0%) | 5 (23%) |  | 3 (25%) | 11 (38%) |  |
| Residence status |  |  | >0.9 |  |  | 0.7 |
| Insecure | 0 (0%) | 1 (4.5%) |  | 1 (8.3%) | 5 (17%) |  |
| Secure | 4 (100%) | 21 (95%) |  | 11 (92%) | 24 (83%) |  |
| Marital status |  |  | >0.9 |  |  | 0.7 |
| Post-relationshipd | 0 (0%) | 0 (0%) |  | 0 (0%) | 3 (10%) |  |
| Single | 2 (50%) | 9 (41%) |  | 8 (67%) | 16 (55%) |  |
| Married | 2 (50%) | 13 (59%) |  | 4 (33%) | 10 (34%) |  |
| MADRS score | 17.00 (13.08) | 12.43 (7.81) | 0.6 | 20.45 (8.51) | 14.75 (6.72) | 0.065 |
| HTQ score | 1.57 (0.33) | 1.89 (0.40) | 0.2 | 2.30 (0.62) | 2.21 (0.50) | 0.7 |
| BRS score | 3.21 (0.70) | 3.12 (0.68) | 0.8 | 2.83 (0.66) | 2.81 (0.58) | >0.9 |
| GSE score | 27.25 (5.12) | 27.18 (6.76) | >0.9 | 24.18 (4.33) | 25.54 (6.19) | 0.4 |
| Social status difference | -0.25 (0.96) | 0.27 (1.32) | 0.4 | -1.25 (0.97) | -0.63 (0.93) | 0.075 |
| WHOQOL-Social scale | 3.00 (0.72) | 3.65 (0.71) | 0.2 | 3.15 (1.12) | 3.10 (0.88) | 0.9 |
| WHOQOL-Physical health scale | 3.41 (0.86) | 3.37 (0.58) | >0.9 | 3.20 (0.75) | 3.17 (0.77) | >0.9 |
| WHOQOL-Psychological health scale | 3.50 (0.76) | 3.39 (0.62) | 0.8 | 2.92 (0.50) | 3.01 (0.58) | 0.7 |
| SDQ-Emotional problem scale | 2.05 (0.25) | 2.01 (0.48) | 0.8 | 2.05 (0.55) | 2.25 (0.50) | 0.3 |
| SDQ-Conductance problem scale | 1.30 (0.12) | 1.54 (0.45) | 0.046 | 1.42 (0.16) | 1.67 (0.34) | 0.002 |
| SDQ-Hyperactivity scale | 1.45 (0.30) | 1.72 (0.48) | 0.2 | 2.02 (0.48) | 2.18 (0.33) | 0.3 |
| SDQ-Prosocial scale | 2.75 (0.30) | 2.69 (0.35) | 0.7 | 2.53 (0.34) | 2.60 (0.47) | 0.6 |
| SDQ-Peer problem scale | 1.90 (0.35) | 1.63 (0.33) | 0.2 | 1.93 (0.40) | 1.92 (0.39) | >0.9 |
| Medication |  |  | 0.2 |  |  | >0.9 |
| Yes | 1 (25%) | 0 (0%) |  | 3 (25%) | 7 (25%) |  |
| No | 3 (75%) | 22 (100%) |  | 9 (75%) | 21 (75%) |  |
| Psychotherapy |  |  | >0.9 |  |  | 0.2 |
| Yes | 0 (0%) | 1 (4.5%) |  | 4 (33%) | 4 (14%) |  |
| No | 4 (100%) | 21 (95%) |  | 8 (67%) | 24 (86%) |  |
| Migrant identity |  |  | >0.9 |  |  | 0.7 |
| Not yese | 1 (25%) | 8 (36%) |  | 1 (8.3%) | 6 (21%) |  |
| Yes | 3 (75%) | 14 (64%) |  | 11 (92%) | 22 (79%) |  |
| Last residence country |  |  | 0.6 |  |  | 0.11 |
| Afghanistan | 0 (0%) | 0 (0%) |  | 0 (0%) | 10 (36%) |  |
| Iran | 0 (0%) | 4 (18%) |  | 3 (25%) | 5 (18%) |  |
| Syria | 1 (25%) | 9 (41%) |  | 4 (33%) | 5 (18%) |  |
| Turkey | 1 (25%) | 2 (9.1%) |  | 1 (8.3%) | 3 (11%) |  |
| Other | 2 (50%) | 7 (32%) |  | 4 (33%) | 5 (18%) |  |
| Years of schooling | 10.50 (2.38) | 10.09 (4.02) | 0.8 | 10.00 (3.05) | 7.22 (4.94) | 0.039 |
| Occupation |  |  | 0.6 |  |  | 0.7 |
| Unemployed | 2 (50%) | 15 (71%) |  | 10 (83%) | 21 (72%) |  |
| Employed | 2 (50%) | 6 (29%) |  | 2 (17%) | 8 (28%) |  |
| Sense of cultural belonging |  |  | 0.6 |  |  | 0.4 |
| Culture of country of origin | 3 (75%) | 12 (55%) |  | 5 (42%) | 15 (56%) |  |
| Not culture of origin | 1 (25%) | 10 (45%) |  | 7 (58%) | 12 (44%) |  |
| Sense of disconnect | 0.42 (0.22) | 0.41 (0.21) | >0.9 | 0.50 (0.25) | 0.55 (0.26) | 0.6 |
| Flight reason |  |  | >0.9 |  |  | >0.9 |
| One reason | 3 (75%) | 15 (68%) |  | 9 (75%) | 21 (72%) |  |
| More than one reason | 1 (25%) | 7 (32%) |  | 3 (25%) | 8 (28%) |  |
| Means of flight |  |  | 0.072 |  |  | 0.5 |
| Alone | 3 (75%) | 5 (23%) |  | 5 (42%) | 15 (54%) |  |
| Not alone | 1 (25%) | 17 (77%) |  | 7 (58%) | 13 (46%) |  |
| *Note*. n = Number, SD = Standard deviation, MADRS = Montgomery Asberg Depression Rating Scale, HTQ = Harvard Trauma Questionnaire, BRS = Brief Resilience Scale, GSE = Generalized Self-Efficacy Scale, SDQ = Strengths and Difficulties Questionnaire, WHOQOL = World Health Organisation Quality of Life. Number of observations does not add up to overall sample size for all variables since statistics are computed for non-imputed data. | | | | | | |
| an (%) for categorical variables; Mean (SD) for metric variables. bFisher's exact test for categorical variables; Welch Two Sample t-test for metric variables. cFisher's exact test or Pearson's Chi-squared test for categorical variables; Welch Two Sample t-test for metric variables. dIncludes response options “divorced/separated” and “widowed”. eContains the response options “No”, “Rather not”, and “Undecided”. | | | | | | |

**Table 2**

*Per-variable, within-intervention group comparisons for non-imputed data – “group intervention” and “individual expert intervention” groups*

|  | **Group intervention** | | | **Individual expert intervention** | | |
| --- | --- | --- | --- | --- | --- | --- |
| **Variable** | **Dropout**, N = 52a | **No dropout**, N = 33a | **p-value**b | **Dropout**, N = 22a | **No dropout**, N = 45a | **p-value** |
| Gender |  |  | 0.7 |  |  | 0.2 |
| Male | 32 (62%) | 19 (58%) |  | 16 (73%) | 26 (58%) |  |
| Female | 20 (38%) | 14 (42%) |  | 6 (27%) | 19 (42%) |  |
| Age | 30.65 (8.79) | 30.73 (9.31) | >0.9 | 29.23 (11.44) | 34.71 (11.43) | 0.072 |
| Housing |  |  | 0.4 |  |  | 0.082 |
| Other accommodation | 29 (56%) | 15 (45%) |  | 14 (64%) | 18 (41%) |  |
| Refugee accommodation | 23 (44%) | 18 (55%) |  | 8 (36%) | 26 (59%) |  |
| Residence status |  |  | 0.7 |  |  | 0.5 |
| Insecure | 5 (9.6%) | 2 (6.3%) |  | 2 (9.1%) | 8 (18%) |  |
| Secure | 47 (90%) | 30 (94%) |  | 20 (91%) | 37 (82%) |  |
| Marital status |  |  | 0.8 |  |  | 0.7 |
| Post-relationshipc | 6 (12%) | 5 (15%) |  | 2 (9.1%) | 6 (13%) |  |
| Single | 23 (44%) | 16 (48%) |  | 11 (50%) | 17 (38%) |  |
| Married | 23 (44%) | 12 (36%) |  | 9 (41%) | 22 (49%) |  |
| MADRS score | 24.06 (9.92) | 22.91 (9.02) | 0.6 | 26.86 (10.89) | 27.27 (8.87) | 0.9 |
| HTQ score | 2.49 (0.61) | 2.53 (0.52) | 0.8 | 2.84 (0.58) | 2.85 (0.56) | >0.9 |
| BRS score | 2.69 (0.71) | 2.87 (0.94) | 0.3 | 2.47 (0.69) | 2.70 (0.93) | 0.3 |
| GSE score | 24.33 (7.27) | 23.79 (7.13) | 0.7 | 23.00 (6.90) | 22.89 (8.78) | >0.9 |
| Social status difference | -1.12 (1.24) | -0.85 (1.20) | 0.3 | -1.71 (1.19) | -1.05 (1.41) | 0.054 |
| WHOQOL-Social scale | 2.87 (0.87) | 2.69 (0.70) | 0.3 | 2.75 (1.24) | 2.46 (0.97) | 0.4 |
| WHOQOL-Physical health scale | 2.92 (0.68) | 2.95 (0.62) | 0.8 | 2.94 (0.86) | 2.86 (0.69) | 0.7 |
| WHOQOL-Psychological health scale | 2.55 (0.55) | 2.74 (0.60) | 0.2 | 2.52 (0.70) | 2.18 (0.66) | 0.078 |
| SDQ-Emotional problem scale | 2.33 (0.43) | 2.53 (0.44) | 0.059 | 2.52 (0.48) | 2.66 (0.38) | 0.2 |
| SDQ-Conductance problem scale | 1.58 (0.32) | 1.67 (0.30) | 0.2 | 1.62 (0.33) | 1.69 (0.36) | 0.5 |
| SDQ-Hyperactivity scale | 2.04 (0.38) | 1.99 (0.36) | 0.6 | 2.18 (0.46) | 2.15 (0.41) | 0.8 |
| SDQ-Prosocial scale | 2.69 (0.36) | 2.74 (0.29) | 0.5 | 2.70 (0.39) | 2.77 (0.27) | 0.4 |
| SDQ-Peer problem scale | 2.01 (0.39) | 1.86 (0.33) | 0.070 | 1.93 (0.43) | 1.96 (0.43) | 0.8 |
| Medication |  |  | 0.4 |  |  | 0.2 |
| Yes | 17 (33%) | 14 (42%) |  | 9 (43%) | 26 (59%) |  |
| No | 35 (67%) | 19 (58%) |  | 12 (57%) | 18 (41%) |  |
| Psychotherapy |  |  | 0.7 |  |  | 0.7 |
| Yes | 11 (22%) | 6 (18%) |  | 3 (15%) | 9 (20%) |  |
| No | 40 (78%) | 27 (82%) |  | 17 (85%) | 35 (80%) |  |
| Migrant identity |  |  | 0.7 |  |  | 0.7 |
| Not yesd | 8 (15%) | 6 (18%) |  | 3 (15%) | 10 (23%) |  |
| Yes | 44 (85%) | 27 (82%) |  | 17 (85%) | 34 (77%) |  |
| Last residence country |  |  | >0.9 |  |  | 0.2 |
| Afghanistan | 11 (22%) | 10 (30%) |  | 10 (45%) | 12 (27%) |  |
| Iran | 9 (18%) | 4 (12%) |  | 2 (9.1%) | 8 (18%) |  |
| Syria | 14 (27%) | 8 (24%) |  | 2 (9.1%) | 13 (29%) |  |
| Turkey | 6 (12%) | 4 (12%) |  | 2 (9.1%) | 2 (4.4%) |  |
| Other | 11 (22%) | 7 (21%) |  | 6 (27%) | 10 (22%) |  |
| Years of schooling | 9.22 (4.33) | 7.91 (4.03) | 0.2 | 8.70 (4.11) | 9.35 (3.64) | 0.5 |
| Occupation |  |  | 0.7 |  |  | 0.8 |
| Unemployed | 46 (90%) | 27 (87%) |  | 18 (82%) | 33 (75%) |  |
| Employed | 5 (9.8%) | 4 (13%) |  | 4 (18%) | 11 (25%) |  |
| Sense of cultural belonging |  |  | 0.8 |  |  | 0.8 |
| Culture of country of origin | 27 (53%) | 16 (50%) |  | 10 (50%) | 23 (53%) |  |
| Not culture of origin | 24 (47%) | 16 (50%) |  | 10 (50%) | 20 (47%) |  |
| Sense of disconnect | 0.57 (0.18) | 0.62 (0.19) | 0.2 | 0.65 (0.17) | 0.63 (0.21) | 0.8 |
| Flight reason |  |  | 0.8 |  |  | 0.5 |
| One reason | 33 (63%) | 20 (61%) |  | 14 (64%) | 25 (56%) |  |
| More than one reason | 19 (37%) | 13 (39%) |  | 8 (36%) | 20 (44%) |  |
| Means of flight |  |  | >0.9 |  |  | 0.5 |
| Alone | 23 (44%) | 15 (45%) |  | 10 (48%) | 17 (39%) |  |
| Not alone | 29 (56%) | 18 (55%) |  | 11 (52%) | 27 (61%) |  |
| *Note*. n = Number, SD = Standard deviation, MADRS = Montgomery Asberg Depression Rating Scale, HTQ = Harvard Trauma Questionnaire, BRS = Brief Resilience Scale, GSE = Generalized Self-Efficacy Scale, SDQ = Strengths and Difficulties Questionnaire, WHOQOL = World Health Organisation Quality of Life. Number of observations does not add up to overall sample size for all variables since statistics are computed for non-imputed data. | | | | | | |
| an (%) for categorical variables; Mean (SD) for metric variables. bFisher's exact test or Pearson's Chi-squared test for categorical variables; Welch Two Sample t-test for metric variables. cIncludes response options “divorced/separated” and “widowed”. dContains the response options “No”, “Rather not”, and “Undecided”. | | | | | | |

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