Pilot Data Analysis

## Factor analysis

### Anxiety

Factor Analysis using method = minres  
Call: fa(r = anxiety)  
Standardized loadings (pattern matrix) based upon correlation matrix  
 MR1 h2 u2 com  
GAD1 0.65 0.42 0.58 1  
GAD2 0.61 0.38 0.62 1  
GAD3 0.73 0.53 0.47 1  
GAD4 0.63 0.39 0.61 1  
GAD5 0.51 0.26 0.74 1  
GAD6 0.58 0.34 0.66 1  
GAD7 0.40 0.16 0.84 1  
  
 MR1  
SS loadings 2.49  
Proportion Var 0.36  
  
Mean item complexity = 1  
Test of the hypothesis that 1 factor is sufficient.  
  
df null model = 21 with the objective function = 2.17 with Chi Square = 359.55  
df of the model are 14 and the objective function was 0.63   
  
The root mean square of the residuals (RMSR) is 0.13   
The df corrected root mean square of the residuals is 0.16   
  
The harmonic n.obs is 170 with the empirical chi square 115.32 with prob < 5.2e-18   
The total n.obs was 170 with Likelihood Chi Square = 103.7 with prob < 9.2e-16   
  
Tucker Lewis Index of factoring reliability = 0.601  
RMSEA index = 0.194 and the 90 % confidence intervals are 0.161 0.231  
BIC = 31.79  
Fit based upon off diagonal values = 0.88  
Measures of factor score adequacy   
 MR1  
Correlation of (regression) scores with factors 0.90  
Multiple R square of scores with factors 0.81  
Minimum correlation of possible factor scores 0.61

Reliability analysis   
Call: psych::alpha(x = anxiety)  
  
 raw\_alpha std.alpha G6(smc) average\_r S/N ase mean sd median\_r  
 0.78 0.79 0.8 0.35 3.7 0.026 1.2 0.42 0.33  
  
 95% confidence boundaries   
 lower alpha upper  
Feldt 0.73 0.78 0.83  
Duhachek 0.73 0.78 0.83  
  
 Reliability if an item is dropped:  
 raw\_alpha std.alpha G6(smc) average\_r S/N alpha se var.r med.r  
GAD1 0.75 0.75 0.76 0.34 3.1 0.030 0.017 0.36  
GAD2 0.76 0.76 0.76 0.35 3.2 0.029 0.018 0.36  
GAD3 0.74 0.74 0.75 0.32 2.9 0.031 0.018 0.30  
GAD4 0.75 0.75 0.76 0.33 3.0 0.031 0.028 0.29  
GAD5 0.76 0.77 0.77 0.35 3.3 0.028 0.025 0.33  
GAD6 0.76 0.76 0.77 0.34 3.1 0.030 0.029 0.30  
GAD7 0.78 0.79 0.79 0.38 3.7 0.026 0.021 0.37  
  
 Item statistics   
 n raw.r std.r r.cor r.drop mean sd  
GAD1 170 0.68 0.68 0.64 0.54 1.35 0.62  
GAD2 170 0.66 0.66 0.60 0.50 1.35 0.65  
GAD3 170 0.73 0.73 0.70 0.60 1.54 0.64  
GAD4 169 0.70 0.71 0.64 0.58 1.11 0.57  
GAD5 170 0.64 0.64 0.55 0.48 0.74 0.66  
GAD6 170 0.68 0.67 0.59 0.52 1.26 0.68  
GAD7 170 0.56 0.55 0.43 0.37 0.78 0.66  
  
Non missing response frequency for each item  
 0 1 2 3 miss  
GAD1 0.05 0.59 0.34 0.03 0.00  
GAD2 0.06 0.57 0.34 0.04 0.00  
GAD3 0.03 0.45 0.47 0.05 0.00  
GAD4 0.09 0.74 0.15 0.02 0.01  
GAD5 0.35 0.58 0.05 0.02 0.00  
GAD6 0.10 0.56 0.31 0.03 0.00  
GAD7 0.33 0.58 0.08 0.02 0.00

Split half reliabilities   
Call: splitHalf(r = anxiety)  
  
Maximum split half reliability (lambda 4) = 0.84  
Guttman lambda 6 = 0.8  
Average split half reliability = 0.8  
Guttman lambda 3 (alpha) = 0.79  
Guttman lambda 2 = 0.8  
Minimum split half reliability (beta) = 0.56  
Average interitem r = 0.35 with median = 0.33

## Precipitating factors

Factor Analysis using method = minres  
Call: fa(r = PGAD, check.keys = TRUE)  
Standardized loadings (pattern matrix) based upon correlation matrix  
 MR1 h2 u2 com  
Uncertainty 0.66 0.4386 0.56 1  
Homesickness 0.48 0.2347 0.77 1  
Lacking basic needs 0.52 0.2727 0.73 1  
Relationships lack 0.22 0.0464 0.95 1  
immigration issues 0.70 0.4916 0.51 1  
improper documentation 0.39 0.1486 0.85 1  
insecurity 0.33 0.1069 0.89 1  
residence lack 0.67 0.4497 0.55 1  
discrimination -0.08 0.0058 0.99 1  
Language barrier 0.15 0.0214 0.98 1  
Lack refugee solutions 0.72 0.5254 0.47 1  
no income 0.62 0.3863 0.61 1  
  
 MR1  
SS loadings 3.13  
Proportion Var 0.26  
  
Mean item complexity = 1  
Test of the hypothesis that 1 factor is sufficient.  
  
df null model = 66 with the objective function = 3.56 with Chi Square = 583.75  
df of the model are 54 and the objective function was 1.37   
  
The root mean square of the residuals (RMSR) is 0.11   
The df corrected root mean square of the residuals is 0.12   
  
The harmonic n.obs is 170 with the empirical chi square 284.23 with prob < 5.4e-33   
The total n.obs was 170 with Likelihood Chi Square = 224.63 with prob < 1.1e-22   
  
Tucker Lewis Index of factoring reliability = 0.595  
RMSEA index = 0.136 and the 90 % confidence intervals are 0.118 0.156  
BIC = -52.7  
Fit based upon off diagonal values = 0.84  
Measures of factor score adequacy   
 MR1  
Correlation of (regression) scores with factors 0.92  
Multiple R square of scores with factors 0.84  
Minimum correlation of possible factor scores 0.68

Reliability analysis   
Call: psych::alpha(x = PGAD, check.keys = TRUE)  
  
 raw\_alpha std.alpha G6(smc) average\_r S/N ase mean sd median\_r  
 0.76 0.75 0.81 0.2 3.1 0.027 2.8 0.41 0.19  
  
 95% confidence boundaries   
 lower alpha upper  
Feldt 0.70 0.76 0.81  
Duhachek 0.71 0.76 0.81  
  
 Reliability if an item is dropped:  
 raw\_alpha std.alpha G6(smc) average\_r S/N alpha se var.r  
Uncertainty 0.72 0.71 0.77 0.18 2.5 0.031 0.037  
Homesickness 0.73 0.73 0.79 0.20 2.7 0.029 0.041  
Lacking basic needs 0.73 0.73 0.78 0.20 2.7 0.029 0.038  
Relationships lack 0.76 0.76 0.81 0.22 3.2 0.026 0.040  
immigration issues 0.71 0.71 0.77 0.18 2.4 0.032 0.035  
improper documentation 0.75 0.74 0.80 0.21 2.9 0.027 0.040  
insecurity 0.75 0.75 0.80 0.21 3.0 0.027 0.037  
residence lack 0.72 0.72 0.77 0.19 2.5 0.031 0.036  
discrimination- 0.78 0.78 0.82 0.25 3.6 0.025 0.026  
Language barrier 0.77 0.77 0.81 0.23 3.4 0.026 0.034  
Lack refugee solutions 0.72 0.71 0.77 0.18 2.5 0.031 0.033  
no income 0.73 0.72 0.78 0.19 2.6 0.030 0.037  
 med.r  
Uncertainty 0.19  
Homesickness 0.19  
Lacking basic needs 0.19  
Relationships lack 0.22  
immigration issues 0.18  
improper documentation 0.19  
insecurity 0.19  
residence lack 0.19  
discrimination- 0.22  
Language barrier 0.23  
Lack refugee solutions 0.19  
no income 0.19  
  
 Item statistics   
 n raw.r std.r r.cor r.drop mean sd  
Uncertainty 170 0.69 0.70 0.686 0.587 2.8 0.78  
Homesickness 170 0.58 0.57 0.502 0.448 2.5 0.82  
Lacking basic needs 170 0.57 0.58 0.540 0.451 2.7 0.75  
Relationships lack 170 0.34 0.34 0.228 0.189 1.9 0.75  
immigration issues 170 0.72 0.72 0.719 0.628 3.0 0.82  
improper documentation 169 0.52 0.48 0.410 0.352 2.8 0.98  
insecurity 170 0.45 0.43 0.363 0.300 1.9 0.84  
residence lack 170 0.68 0.68 0.668 0.576 3.3 0.77  
discrimination- 170 0.13 0.14 0.031 -0.017 3.6 0.70  
Language barrier 170 0.25 0.26 0.149 0.113 1.9 0.66  
Lack refugee solutions 170 0.69 0.69 0.691 0.599 3.3 0.70  
no income 170 0.63 0.65 0.624 0.529 3.3 0.73  
  
Non missing response frequency for each item  
 1 2 3 4 miss  
Uncertainty 0.04 0.28 0.48 0.19 0.00  
Homesickness 0.08 0.48 0.32 0.12 0.00  
Lacking basic needs 0.03 0.39 0.44 0.14 0.00  
Relationships lack 0.34 0.46 0.19 0.01 0.00  
immigration issues 0.04 0.21 0.44 0.32 0.00  
improper documentation 0.09 0.34 0.27 0.30 0.01  
insecurity 0.30 0.54 0.08 0.08 0.00  
residence lack 0.03 0.09 0.40 0.48 0.00  
discrimination 0.69 0.22 0.07 0.02 0.00  
Language barrier 0.24 0.61 0.14 0.02 0.00  
Lack refugee solutions 0.01 0.11 0.45 0.43 0.00  
no income 0.02 0.11 0.44 0.44 0.00

Split half reliabilities   
Call: splitHalf(r = PGAD, check.keys = TRUE)  
  
Maximum split half reliability (lambda 4) = 0.87  
Guttman lambda 6 = 0.81  
Average split half reliability = 0.75  
Guttman lambda 3 (alpha) = 0.75  
Guttman lambda 2 = 0.78  
Minimum split half reliability (beta) = 0.59  
Average interitem r = 0.2 with median = 0.19

## Couselling

Factor Analysis using method = minres  
Call: fa(r = CBI, check.keys = TRUE)  
Standardized loadings (pattern matrix) based upon correlation matrix  
 MR1 h2 u2 com  
Individual counselling 0.61 0.373 0.63 1  
Group counselling 0.41 0.168 0.83 1  
Psychological trainings 0.63 0.403 0.60 1  
Leader's Guidance 0.51 0.262 0.74 1  
Handicraft tailoring training 0.34 0.113 0.89 1  
Skills talent development 0.29 0.086 0.91 1  
Food basic needs 0.27 0.072 0.93 1  
fees uniforms 0.42 0.177 0.82 1  
Visitor's Social support 0.37 0.138 0.86 1  
job opportunities 0.57 0.321 0.68 1  
  
 MR1  
SS loadings 2.11  
Proportion Var 0.21  
  
Mean item complexity = 1  
Test of the hypothesis that 1 factor is sufficient.  
  
df null model = 45 with the objective function = 2.75 with Chi Square = 452.76  
df of the model are 35 and the objective function was 1.63   
  
The root mean square of the residuals (RMSR) is 0.16   
The df corrected root mean square of the residuals is 0.18   
  
The harmonic n.obs is 170 with the empirical chi square 387.78 with prob < 4.4e-61   
The total n.obs was 170 with Likelihood Chi Square = 268.34 with prob < 9.2e-38   
  
Tucker Lewis Index of factoring reliability = 0.261  
RMSEA index = 0.198 and the 90 % confidence intervals are 0.177 0.221  
BIC = 88.58  
Fit based upon off diagonal values = 0.63  
Measures of factor score adequacy   
 MR1  
Correlation of (regression) scores with factors 0.86  
Multiple R square of scores with factors 0.75  
Minimum correlation of possible factor scores 0.50

Reliability analysis   
Call: psych::alpha(x = CBI, check.keys = TRUE)  
  
 raw\_alpha std.alpha G6(smc) average\_r S/N ase mean sd median\_r  
 0.71 0.71 0.77 0.2 2.4 0.034 1.1 0.55 0.22  
  
 95% confidence boundaries   
 lower alpha upper  
Feldt 0.64 0.71 0.77  
Duhachek 0.64 0.71 0.77  
  
 Reliability if an item is dropped:  
 raw\_alpha std.alpha G6(smc) average\_r S/N  
Individual counselling 0.66 0.67 0.72 0.18 2.0  
Group counselling 0.70 0.70 0.75 0.20 2.3  
Psychological trainings 0.66 0.67 0.72 0.18 2.0  
Leader's Guidance 0.68 0.68 0.76 0.19 2.1  
Handicraft tailoring training 0.70 0.70 0.77 0.21 2.4  
Skills talent development 0.71 0.70 0.77 0.21 2.4  
Food basic needs 0.70 0.71 0.75 0.21 2.4  
fees uniforms 0.69 0.69 0.76 0.20 2.2  
Visitor's Social support 0.68 0.69 0.74 0.20 2.2  
job opportunities 0.66 0.66 0.74 0.18 2.0  
 alpha se var.r med.r  
Individual counselling 0.040 0.030 0.21  
Group counselling 0.035 0.025 0.22  
Psychological trainings 0.039 0.030 0.19  
Leader's Guidance 0.037 0.034 0.21  
Handicraft tailoring training 0.034 0.036 0.24  
Skills talent development 0.033 0.034 0.23  
Food basic needs 0.035 0.024 0.24  
fees uniforms 0.036 0.033 0.22  
Visitor's Social support 0.037 0.027 0.19  
job opportunities 0.038 0.037 0.16  
  
 Item statistics   
 n raw.r std.r r.cor r.drop mean sd  
Individual counselling 170 0.65 0.61 0.60 0.49 1.61 1.23  
Group counselling 170 0.42 0.47 0.41 0.29 0.35 0.84  
Psychological trainings 170 0.65 0.62 0.60 0.50 1.21 1.14  
Leader's Guidance 170 0.56 0.56 0.48 0.39 0.94 1.09  
Handicraft tailoring training 170 0.46 0.45 0.33 0.27 1.07 1.15  
Skills talent development 170 0.44 0.44 0.34 0.24 0.91 1.16  
Food basic needs 170 0.43 0.42 0.36 0.28 2.21 0.96  
fees uniforms 170 0.46 0.52 0.44 0.35 0.29 0.70  
Visitor's Social support 170 0.55 0.53 0.49 0.39 1.99 1.07  
job opportunities 170 0.62 0.63 0.57 0.49 0.71 0.96  
  
Non missing response frequency for each item  
 0 1 2 3 miss  
Individual counselling 0.33 0.04 0.34 0.30 0  
Group counselling 0.84 0.02 0.08 0.05 0  
Psychological trainings 0.44 0.03 0.41 0.12 0  
Leader's Guidance 0.55 0.02 0.36 0.06 0  
Handicraft tailoring training 0.51 0.04 0.33 0.12 0  
Skills talent development 0.60 0.01 0.27 0.12 0  
Food basic needs 0.11 0.04 0.38 0.47 0  
fees uniforms 0.85 0.02 0.12 0.01 0  
Visitor's Social support 0.18 0.03 0.41 0.38 0  
job opportunities 0.63 0.04 0.32 0.01 0

Split half reliabilities   
Call: splitHalf(r = CBI, check.keys = TRUE)  
  
Maximum split half reliability (lambda 4) = 0.84  
Guttman lambda 6 = 0.77  
Average split half reliability = 0.71  
Guttman lambda 3 (alpha) = 0.71  
Guttman lambda 2 = 0.73  
Minimum split half reliability (beta) = 0.4  
Average interitem r = 0.2 with median = 0.22