

Data supplement to Sanatinia et al. Impact of personality status on the cost and outcomes of cognitive-behavioural therapy for health anxiety. Br J Psychiatry doi: 10.1192/bjp.bp.115.173526

Online supplement DS1

The Quick Personality Assessment Schedule (PAS-Q) was the main personality database used in the CHAMP study and the ICD-11 diagnoses were derived from these data together with assessment of the written notes made for each patient. This online supplement contains relevant information about the PAS-Q and the outcomes in the trial separated by its levels of personality dysfunction.

The PAS-Q is a quick form of the Personality Assessment Schedule (PAS)⁵⁰ that is carried out by assessors who have already been trained in the full PAS. The aim of the PAS and PAS-Q is to identify personality features that are enduring and independent of any current mental illness. The more information that is available about a patient the less likely is the assessment to be distorted by any current mental health problems. If little or no information exists it is suggested that the following probing questions be asked before passing on to the main questions involved in the PAS-Q. The following procedure is suggested but this could be modified and changed under the circumstances of the interview and with the individuals concerned.

I should like to find out what sort of person you were like before your present problems began. Could you tell me in a few words how you would describe yourself in this respect? (record response)

I wonder if you could tell me a bit more information about yourself. Are you married or have you ever been married? Have you any children? Where are they living now?

(elucidate to what extent relationships have been unstable and whether there have been any difficulties in close relationships. This will also determine whether the person has any interest in close relationships)

Are you working at present, if not, when was the last time you were in work?

What are the jobs you have been mainly involved in since leaving school?

What were the circumstances in which you lost your last job(s)?

Have you ever been in trouble with the law? What was the problem? Were you arrested?

Have you ever had any problems with alcohol or drugs?

Have you ever felt that these take over your life and you can't control them?

Do you gamble? Has this been a problem?

How many times have you moved house in the last 10 years?

What were the reasons for moving?

Have you ever been homeless?

PAS-Q Screening Questions: The full PAS includes screening questions which then lead on to other questions which eventually lead to a scoring of the characteristics in question. In the PAS-Q only the screening questions are asked initially, and this shortens the interview to between 20 and 45

minutes. In deciding whether the question is being answered honestly please take into account the information derived from the questions asked above. It is appreciated that on many occasions the screening question may lead to a positive response which then turns out to be negative when further questions are asked, but if the answer is clearly negative the next screening question is asked.

Example:

How well in general do you get on with other people?

Do you normally trust them or are you suspicious of them, at least at first?

How long does it normally take for you to get know people before you trust them?

If any of these answers to these questions suggests abnormal suspiciousness further questions from the full Personality Assessment Schedule are asked. Each main section is scored 0, 1, or 2, with 2 constituting personality disorder. The final assessment of personality level is decided by the following:

0 = all scores zero (no personality dysfunction)

1 = personality difficulty

2 = personality disorder in one personality cluster (equivalent to DSM Clusters A, B and C) only – mild personality disorder

3 = personality disorder in more than one cluster (moderate personality disorder)

For the ICD-11 classification those with a score of 3 who had significant risk of harm to self or others were assessed separately with information derived from the written comments of the assessors. The algorithm for the ICD-11 classification came from the 2011 revision of the classification.²⁸

The main outcomes using the PAS-Q assessments are in Table DS1.

Additional reference

50 Tyrer P, Alexander J. Classification of personality disorder. *Br J Psychiatry* 1979; **135**: 163–7.

PAS-Q Status					
		0 (n=46)	1 (n=246)	2 (n=111)	3&4 (n=41)
HAI scores		Difference [95% CI]	Difference [95% CI]	Difference [95% CI]	Difference [95% CI]
	3 month	0.58 [-3.48 to 4.63]	-1.71 [-3.39 to -0.02]	-2.71 [-5.56 to 0.14]	-3.10 [-8.37 to 2.18]
	6 month	-0.49 [-4.67 to 3.70]	-4.89*** [-6.6 to -3.18]	-5.87*** [-8.74 to -3.00]	-7.25** [-12.54 to -1.95]
	12 month	-1.03 [-5.22 to 3.16]	-3.13*** [-4.86 to -1.41]	-2.96 [†] [-5.86 to -0.05]	-4.1 [-9.41 to 1.21]
	24 month	0.28 [-3.93 to 4.49]	-2.48** [-4.22 to -0.74]	-2.93 [-5.87 to 0.01]	0.93 [-4.51 to 6.38]
	At all time points	-0.16 [-3.46 to 3.13]	-3.05*** [-4.46 to -1.65]	-3.62** [-6.13 to -1.10]	-3.38 [-7.98 to 1.23]
HADS-A scores					
	6 month	1.050 [-1.34 to 3.43]	-1.47** [-2.48 to -0.46]	-1.67 [-3.36 to 0.02]	-1.99 [-4.84 to 0.86]
	12 month	0.59 [-1.80 to 2.98]	-1.16 [†] [-2.18 to -0.14]	-1.52 [-3.24 to 0.20]	-0.95 [-3.82 to 1.92]
	24 month	0.87 [-1.53 to 3.26]	-0.99 [-2.02 to 0.05]	-2.05 [†] [-3.79 to -0.31]	-0.92 [-3.88 to 2.03]
	At all time points	0.83 [-1.03 to 2.70]	-1.21** [-2.05 to -0.36]	-1.75 [†] [-3.23 to -0.27]	-1.29 [-3.80 to 1.23]
HADS-D scores					
	6 month	2.16 [-0.39 to 4.72]	-0.88 [-1.92 to 0.16]	-1.51 [-3.15 to 0.13]	-1.53 [-4.41 to 1.35]
	12 month	1.09 [-1.47 to 3.65]	-0.64 [-1.69 to 0.42]	-1.31 [-2.99 to 0.36]	-1.86 [-4.75 to 1.02]
	24 month	2.5 [-0.07 to 5.07]	-0.52 [-1.58 to 0.54]	-2.03 [†] [-3.72 to -0.33]	-1.43 [-4.43 to 1.57]
	At all time points	1.92 [-0.31 to 4.14]	-0.68 [-1.55 to 0.19]	-1.62 [†] [-3.05 to -0.18]	-1.61 [-4.03 to 0.81]
SFQ scores					
	6 month	2.59 [-0.38 to 5.57]	-0.44 [-1.43 to 0.55]	-0.22 [-1.78 to 1.34]	-1.23 [-4.09 to 1.63]
	12 month	0.86 [-2.13 to 3.85]	0.12 [-0.88 to 1.13]	-0.9 [-2.49 to 0.69]	-1.38 [-4.24 to 1.48]
	24 month	3.59 [†] [0.61 to 6.58]	-0.46 [-1.48 to 0.56]	-1.21 [-2.82 to 0.41]	-0.92 [-3.90 to 2.06]
	At all time points	2.35 [-0.35 to 5.05]	-0.26 [-1.08 to 0.56]	-0.78 [-2.09 to 0.54]	-1.18 [-3.56 to 1.20]

Table DS1. Summary results from mixed model analysis of change in outcome measures from baseline in the CBT-HA group compared to standard care (Analysis by PAS-Q)

+ not significant * P<0.05 ** P<0.01 *** P<0.001

ICD score	Visit	Statistics	Treatment A (N=219)	Treatment B (N=225)	All (N=444)
ICD-11 level	Visit	Statistics	CBT-HA group	Standard Care group	All
0	Baseline	n,mean(SD)	29,24.0(3.6)	34,24.0(3.0)	63,24.0(3.2)
	3 Months	n,mean(SD)	27,21.3(7.5)	31,19.1(5.6)	58,20.1(6.6)
	6 Months	n,mean(SD)	25,19.5(6.8)	29,20.3(6.5)	54,20.0(6.6)
	12 Months	n,mean(SD)	26,20.2(7.8)	29,19.7(6.8)	55,19.9(7.2)
	24 Months	n,mean(SD)	27,19.3(7.2)	28,18.0(7.6)	55,18.6(7.4)
1	Baseline	n,mean(SD)	100,24.6(4.2)	97,24.9(4.9)	197,24.8(4.5)
	3 Months	n,mean(SD)	94,20.5(7.9)	93,22.0(6.6)	187,21.2(7.3)
	6 Months	n,mean(SD)	89,16.8(8.3)	90,21.7(6.7)	179,19.3(7.9)
	12 Months	n,mean(SD)	86,17.6(7.5)	86,21.3(7.4)	172,19.4(7.7)
	24 Months	n,mean(SD)	85,18.2(8.2)	81,21.5(7.4)	166,19.8(8.0)
2	Baseline	n,mean(SD)	68,24.9(4.1)	74,25.5(4.5)	142,25.2(4.3)
	3 Months	n,mean(SD)	63,19.8(7.0)	69,23.9(6.6)	132,21.9(7.1)
	6 Months	n,mean(SD)	63,18.1(7.5)	65,24.0(6.0)	128,21.1(7.3)
	12 Months	n,mean(SD)	62,18.7(8.1)	61,22.5(7.8)	123,20.6(8.1)
	24 Months	n,mean(SD)	60,18.7(7.2)	57,22.5(7.1)	117,20.5(7.4)
3,4	Baseline	n,mean(SD)	22,27.1(5.3)	20,26.7(4.6)	42,26.9(4.9)
	3 Months	n,mean(SD)	21,21.5(8.9)	19,24.2(7.8)	40,22.8(8.4)
	6 Months	n,mean(SD)	20,18.1(9.6)	20,25.7(8.8)	40,21.9(9.9)
	12 Months	n,mean(SD)	20,19.2(9.2)	17,22.6(7.2)	37,20.8(8.4)
	24 Months	n,mean(SD)	18,21.7(9.9)	17,22.3(9.9)	35,22.0(9.7)

Table DS2. Mean scores on the Health Anxiety Inventory (HAI) in CBT-HA and Standard Care groups over 24m separated by ICD-11 personality status
0 = no personality dysfunction, 1 = personality difficulty, 2 = mild personality disorder,
3 = moderate and severe personality disorder

ICD level	Variable	Visit	Statistics	Treatment A (N=219)	Treatment B (N=225)	All (N=444)	
0	Anxiety Total Score	Baseline	n,mean(SD)	29,9.6(3.4)	34,10.6(3.7)	63,10.1(3.6)	
		6 Months	n,mean(SD)	25,10.1(4.3)	29,9.4(4.4)	54,9.7(4.3)	
		12 Months	n,mean(SD)	26,9.9(4.1)	29,8.2(4.4)	55,9.0(4.3)	
		24 Months	n,mean(SD)	26,9.1(4.0)	27,8.3(4.7)	53,8.7(4.3)	
	Depression Total Score	Baseline	n,mean(SD)	29,6.4(3.4)	34,6.9(4.0)	63,6.7(3.7)	
		6 Months	n,mean(SD)	25,7.6(4.6)	29,5.4(3.9)	54,6.4(4.3)	
		12 Months	n,mean(SD)	26,7.7(5.2)	29,6.2(4.6)	55,6.9(4.9)	
		24 Months	n,mean(SD)	26,8.0(5.2)	27,5.7(5.4)	53,6.8(5.4)	
1	Anxiety Total Score	Baseline	n,mean(SD)	100,12.7(3.4)	97,11.5(3.9)	197,12.1(3.7)	
		6 Months	n,mean(SD)	89,9.3(4.7)	90,10.4(4.0)	179,9.8(4.4)	
		12 Months	n,mean(SD)	86,9.0(4.1)	85,10.3(4.0)	171,9.6(4.1)	
		24 Months	n,mean(SD)	85,8.6(4.4)	81,10.1(4.5)	166,9.3(4.5)	
	Depression Total Score	Baseline	n,mean(SD)	100,8.3(3.9)	97,8.1(4.3)	197,8.2(4.1)	
		6 Months	n,mean(SD)	89,6.8(4.4)	90,7.9(4.1)	179,7.4(4.3)	
		12 Months	n,mean(SD)	86,6.7(4.5)	85,7.8(4.5)	171,7.3(4.5)	
		24 Months	n,mean(SD)	85,7.4(5.2)	81,7.9(5.0)	166,7.6(5.1)	
2	Anxiety Total Score	Baseline	n,mean(SD)	68,13.3(3.6)	74,13.4(3.7)	142,13.4(3.6)	
		6 Months	n,mean(SD)	63,10.1(5.0)	65,11.9(3.8)	128,11.0(4.5)	
		12 Months	n,mean(SD)	62,10.7(4.6)	61,11.8(4.2)	123,11.2(4.4)	
		24 Months	n,mean(SD)	60,10.0(4.4)	56,10.7(4.8)	116,10.3(4.6)	
	Depression Total Score	Baseline	n,mean(SD)	68,10.6(4.4)	74,9.6(4.3)	142,10.0(4.4)	
		6 Months	n,mean(SD)	63,9.1(5.0)	65,9.6(5.0)	128,9.3(5.0)	
		12 Months	n,mean(SD)	62,9.3(5.4)	61,9.3(4.7)	123,9.3(5.0)	
		24 Months	n,mean(SD)	60,8.2(5.1)	56,9.3(5.0)	116,8.7(5.1)	
3,4	Anxiety Total Score	Baseline	n,mean(SD)	22,13.7(4.2)	20,14.4(2.9)	42,14.0(3.6)	
		Clinical variable	Visit	Statistics	CBT-HA group	Standard care group	All
		6 Months	n,mean(SD)	20,10.3(4.4)	20,12.8(4.9)	40,11.5(4.7)	
		12 Months	n,mean(SD)	20,10.6(5.5)	17,11.5(4.8)	37,11.0(5.1)	
	Depression Total Score	Baseline	n,mean(SD)	22,11.8(4.3)	20,13.0(5.1)	42,12.4(4.7)	
		6 Months	n,mean(SD)	20,9.2(4.6)	20,11.2(4.9)	40,10.2(4.8)	
		12 Months	n,mean(SD)	20,9.2(5.4)	17,11.9(5.7)	37,10.4(5.7)	
		24 Months	n,mean(SD)	18,8.8(5.1)	17,11.2(5.7)	35,10.0(5.5)	

Table DS3. Mean scores on the Hospital Anxiety and Depression Scale (HADS) in CBT-HA and Standard Care groups over 24m separated by ICD-11 personality status
0 = no personality dysfunction, 1 = personality difficulty, 2 = mild personality disorder,
3 = moderate and severe personality disorder

ICD-11 level	Visit	Statistics	CBT-HA group	Standard care group	All
0	Baseline	n,mean(SD)	29,0.0(0.0)	34,0.0(0.0)	63,0.0(0.0)
	6 Months	n,mean(SD)	25,2.8(4.7)	29,-0.1(3.8)	54,1.3(4.5)
	12 Months	n,mean(SD)	26,1.6(4.5)	29,-0.3(4.0)	55,0.6(4.3)
	24 Months	n,mean(SD)	27,1.9(4.0)	27,-1.4(3.6)	54,0.2(4.1)
1	Baseline	n,mean(SD)	100,0.0(0.0)	97,0.0(0.0)	197,0.0(0.0)
	6 Months	n,mean(SD)	89,-0.7(4.5)	90,-0.5(3.5)	179,-0.6(4.0)
	12 Months	n,mean(SD)	86,-0.5(4.4)	85,-0.7(3.6)	171,-0.6(4.0)
	24 Months	n,mean(SD)	85,-1.0(4.7)	81,-0.9(3.6)	166,-1.0(4.2)
2	Baseline	n,mean(SD)	68,0.0(0.0)	74,0.0(0.0)	142,0.0(0.0)
	6 Months	n,mean(SD)	63,-0.8(3.5)	65,-0.4(3.6)	128,-0.6(3.6)
	12 Months	n,mean(SD)	62,-1.3(4.3)	61,-0.3(3.6)	123,-0.8(4.0)
	24 Months	n,mean(SD)	60,-2.2(4.9)	57,-0.5(4.1)	117,-1.4(4.6)
3,4	Baseline	n,mean(SD)	22,0.0(0.0)	20,0.0(0.0)	42,0.0(0.0)
	6 Months	n,mean(SD)	20,-1.9(4.9)	20,-0.2(4.5)	40,-1.1(4.7)
	12 Months	n,mean(SD)	20,-1.3(4.6)	17,0.6(3.7)	37,-0.4(4.3)
	24 Months	n,mean(SD)	18,-1.7(3.9)	17,-0.7(4.3)	35,-1.2(4.1)

Table DS4. Mean scores on the Social Functioning Questionnaire (SFQ) in CBT-HA and Standard Care groups over 24m separated by ICD-11 personality status
0 = no personality dysfunction, 1 = personality difficulty, 2 = mild personality disorder,
3 = moderate and severe personality disorder