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Supplementary material

Appendix 1

Table S1- Structure of ePAQ-Vascular before factor analysis and item reduction

Section	Scale (Domain)	Question	Answer Options					
Generic	Pain	<b>Do you suffer with any pain?</b>	Yes			No		
Generic	Pain	<b>Use the below image and click on body parts where you experience pain or discomfort.</b>	Picture item					
Generic	Pain	<b>Please use your own words to describe this problem.</b>	Free text					
Generic	Pain	<b>How often do you experience a significant amount of pain?</b>	Never	Occasionally	Most of the time	All the time		
Generic	Pain	<b>How much do problems caused by pain affect your overall enjoyment of life?</b>	Not at all	A little	Moderately	A lot		
Generic	Sensation	<b>Do you experience any numbness or pins and needles in any part of your body?</b>	Yes			No		
Generic	Sensation	<b>Please use the image below to select where you experience sensation change in your body.</b>	Picture item					
Generic	Sensation	<b>Please use your own words to describe this problem.</b>	Free text					
Generic	Sensation	<b>How often do you experience numbness or pins and needles?</b>	Never	Occasionally	Most of the time	All the time		
Generic	Sensation	<b>How much do problems caused by numbness or pins &amp; needles affect your overall enjoyment of life?</b>	Not at all	A little	Moderately	A lot		
Generic	Weakness	<b>Do you have any loss of strength or weakness in any part of your body?</b>	Yes			No		
Generic	Weakness	<b>Please use the image below to indicate the areas where you experience any physical weakness.</b>	Picture item					
Generic	Weakness	<b>Please use your own words to describe this problem.</b>	Free text					
Generic	Weakness	<b>How often do you experience loss of strength or weakness?</b>	Never	Occasionally	Most of the time	All the time		
Generic	Weakness	<b>How much do problems caused by weakness affect your overall enjoyment of life?</b>	Not at all	A little	Moderately	A lot		
Generic	Body mass index	<b>Please tell us, to the best of your knowledge, your height and weight.</b>	Height			Weight		
Generic	Smoking	<b>Which of the following would best describe your smoking habit?</b>	Never Smoked	Quit more than 5 years ago	Quit more than 1 year ago	Quit more than 3 months ago	Quit less than 3 months ago	Current Smoker
Generic	Smoking	<b>In total, for how many years of your life have you smoked?</b>	Number (Years)					
Generic	Smoking	<b>Over the period that you have been a smoker, on average how many cigarettes a day have you smoked?</b>	Number (Cigarettes / day)			Free text		

Generic	Smoking	<b>Do you regularly use any of the following? (Tick any of these that you have used during the last 3 months)</b>	e-cigarettes	Nicotine containing gum	Nicotine patches	Cigar smoking	Pipe smoking
Generic	Diabetes	<b>Do you have diabetes?</b>	Yes			No	
Generic	Diabetes	<b>How long have you had diabetes?</b>	Less than 1 year	1-2 years	3-5 years	5-10 years	More than 10 years
Generic	Diabetes	<b>What treatment do you have for diabetes? (choose as many options that apply to you)</b>	Diet		Tablets		Insulin
Generic	Regular medications	<b>Do you use any of the following medications? (choose as many options that you know you are taking regularly)</b>	High blood pressure tablets	Aspirin	Water tablets	Blood thinning tablets (warfarin, clopidogrel)	Cholesterol lowering tablets (Statin)
Generic	Stand-alone item	<b>Do you have problems with your sexual life because of your vascular condition?</b>	Never		Occasionally	Most of the time	All the time
Carotid	Screening question	<b>Have you been diagnosed as having narrowing or blockage of carotid artery (blood vessels in your neck that supply the brain)?</b>	Yes			Possibly- I am being tested for this	No
Carotid	Screening question	<b>When did you first experience symptoms associated with carotid artery disease? If you have never experienced any symptoms, when were you first diagnosed with this disease?</b>	Within the past 2 days	Within the past 2 weeks	Within the past 3 months	Within the past year	Over a year ago
Carotid	Screening question	<b>Have you ever had a transient ischaemic attack? (TIA or mini-stroke with symptoms lasting less than 24 hours)</b>	Yes			No	
Carotid	Stand-alone item	<b>How many possible transient ischaemic attacks have you experienced?</b>	1		2 or 3		More than 3
Carotid	Stand-alone item	<b>When was your most recent TIA? (Please estimate if you are not sure of the exact date)</b>	Date				
Carotid	Screening question	<b>Have you ever had a stroke?</b>	Yes			No	
Carotid	Stand-alone item	<b>How many possible strokes have you had in your life?</b>	1		2 or 3		More than 3
Carotid	Stand-alone item	<b>When was your most recent stroke? (Please estimate if you are not sure of the exact date)</b>	Date				
Carotid	Anxiety	<b>Do you worry about having a stroke?</b>	Not at all		A little	Moderately	A lot
Carotid	Anxiety	<b>Does carotid artery disease make you feel anxious?</b>	Not at all		A little	Moderately	A lot
Carotid	Anxiety	<b>Are you worried about your health getting worse because of carotid artery disease?</b>	Not at all		A little	Moderately	A lot
Carotid	Anxiety	<b>Are you worried about losing your independence because of carotid artery disease?</b>	Not at all		A little	Moderately	A lot
Carotid	Symptom	<b>Do you have any problems with maintaining your balance?</b>	Not at all		A little	Moderately	A lot
Carotid	Symptom	<b>Do you suffer with any problems with your memory? (E.g. Forgetting or losing things)</b>	Not at all		A little	Moderately	A lot

Carotid	Symptom	Have you had any problems with your speech? (E.g. Slurring your words or not being able to speak or say things properly)	Not at all	A little	Moderately	A lot	
Carotid	Symptom	Do you have any problems with swallowing food?	Not at all	A little	Moderately	A lot	
Carotid	Symptom	Have you had any problems with partial or complete loss of vision in either of your eyes?	None	Left eye	Right eye	Both	
Carotid	Symptom	How would you describe any loss of vision in your LEFT eye?	Temporary partial loss	Ongoing partial loss	Temporary complete loss	Ongoing complete loss	
Carotid	Symptom	How would you describe any loss of vision in your RIGHT eye?	Temporary partial loss	Ongoing partial loss	Temporary complete loss	Ongoing complete loss	
Carotid	ADL	How much do problems caused by carotid artery disease (anxiety associated with diagnosis or physical symptoms) affect your overall enjoyment of life?	Not at all	A little	Moderately	A lot	
Carotid	ADL	How much do problems caused by carotid artery disease (e.g. mini-stroke or stroke memory balance speech visual or other related issues) affect your physical activities such as exercise walking or running?	Not at all	A little	Moderately	A lot	
Carotid	ADL	How much do problems caused by carotid artery disease (e.g. mini-stroke or stroke memory balance speech visual or other related issues) affect your ability to undertake personal roles and responsibilities such as caring for others study or work?	Not at all	A little	Moderately	A lot	
Carotid	ADL	How much do problems caused by carotid artery disease (e.g. mini-stroke or stroke memory balance speech visual or other related issues) affect your ability to look after yourself?	Not at all	A little	Moderately	A lot	
Carotid	ADL	How much do problems caused by carotid artery disease (e.g. mini-stroke or stroke memory balance speech visual or other related issues) affect your social activities such as visiting friends and family?	Not at all	A little	Moderately	A lot	
Carotid	ADL	How much do problems caused by carotid artery disease visual or other related issues) affect your mood?	Not at all	A little	Moderately	A lot	
AAA	Screening question	Have you ever been diagnosed with or had any treatment for abdominal aortic aneurysm?	Yes	Possibly- I am being tested for this	No		
AAA	Screening question	When did you first become aware that you have an aortic aneurysm?	Within the past 2 weeks	Within the past month	Within the past 6 months	Within the past 1-5 years	Over 5 years ago
AAA	Stand-alone item	Do you know of any family members or friends who have or have had an aortic aneurysm?	Yes	No			
AAA	Stand-alone item	Do you have any abdominal (tummy) pain?	Never	Occasionally	Most of the time	All the time	
AAA	Stand-alone item	Do you experience a throbbing feeling in your abdomen (tummy)?	Never	Occasionally	Most of the time	All the time	
AAA	Anxiety	Do you worry about aortic aneurysm?	Never	Occasionally	Most of the time	All the time	
AAA	Anxiety	Do you worry about any symptoms you experience that may be caused by aortic aneurysm?	Never	Occasionally	Most of the time	All the time	
AAA	Anxiety	Do you worry about possible increase in the size of your aneurysm?	Never	Occasionally	Most of the time	All the time	
AAA	Anxiety	Do you fear sudden death or rupture of your aortic aneurysm?	Never	Occasionally	Most of the time	All the time	
AAA	Anxiety	Do you avoid physical exertion because of having an aortic aneurysm?	Never	Occasionally	Most of the time	All the time	
AAA	Anxiety	Do you avoid travelling independently because of aortic aneurysm?	Never	Occasionally	Most of the time	All the time	

AAA	ADL	How much do problems caused by aortic aneurysm affect your overall enjoyment of life?	Not at all	A little	Moderately	A lot			
AAA	ADL	How much does aortic aneurysm affect your physical activities? (E.g. Exercise walking or going out)	Not at all	A little	Moderately	A lot			
AAA	ADL	How much does aortic aneurysm affect your ability to undertake personal roles and responsibilities? (E.g. Caring for others study or work?)	Not at all	A little	Moderately	A lot			
AAA	ADL	How much do you feel aortic aneurysm affects your ability to look after yourself? (E.g. Rest wash toilet or feed yourself)	Not at all	A little	Moderately	A lot			
AAA	ADL	How much does aortic aneurysm affect your social activities? (E.g. Visiting friends or family)	Not at all	A little	Moderately	A lot			
AAA	ADL	Do you suffer from low mood because of having an aortic aneurysm?	Not at all	A little	Moderately	A lot			
Lower limbs	Screening question	Have you ever been diagnosed or suspected of having any vascular problems affecting your legs or feet, such as poor blood supply, varicose veins or ulcers?	Yes		Possibly- I am being tested for this		No		
Lower limbs	Stand-alone item	When did you first become aware that you might have any vascular problems affecting your legs or feet?	Within the past month	Within the past 3 months	Within the past year	Within the past 1-5 years	Over 5 years ago		
Lower limbs	Stand-alone item	Have you undergone any treatments (including any hospital procedures) to improve the blood supply in your legs?	Yes			No			
Lower limbs	Stand-alone item	What treatments have you had to improve the blood supply in your legs? (Select as many answers as you want)	None	Varicose vein treatment	Bypass graft for a blockage	Stent put in to open a vessel	Balloon stretch of a vessel	Other	
Lower limbs	Screening question	Do you experience any cramping pain in your legs or feet?	Never		Occasionally	Most of the time		All the time	
Lower limbs	Ischaemic Pain	Do you experience cramping pain in your legs or feet when walking?	Never		Occasionally	Most of the time		All the time	
Lower limbs	Ischaemic Pain	How far can you walk before you experience any cramping pain in your legs or feet?	I don't experience pain on walking		More than 200 yards	50-200 yards		Less than 50 yards	
Lower limbs	Ischaemic Pain	Do you walk more slowly than you would to avoid cramping pain in your legs and feet?	Never		Occasionally	Most of the time		All the time	
Lower limbs	Ischaemic Pain	Do you experience cramping pain in your legs or feet when walking uphill?	Never		Occasionally	Most of the time		All the time	
Lower limbs	Ischaemic Pain	Do you experience pain in your legs or feet when you climb stairs?	Never		Occasionally	Most of the time		All the time	
Lower limbs	Ischaemic Pain	Do you experience pain in your feet at night?	Never		Occasionally	Most of the time		All the time	
Lower limbs	Ischaemic Pain	Do you dangle one or both of your legs over the side of the bed to help reduce foot pain?	Never		Occasional days or nights	Most days and nights		Every day or night	
Lower limbs	Ischaemic Pain	Do you experience severe pain in your legs or feet when you are resting or sitting?	Never		Occasionally	Most of the time		All the time	
Lower limbs	Ischaemic Pain	Are you troubled by cold feet?	Never		Occasionally	Most of the time		All the time	
Lower limbs	Screening question	Have you ever had any ulcers on your legs or feet now or at any time in the past?	No			Yes			
Lower limbs	Ulcer	When was the first time you had any leg ulcers?	Within the last 3 months	3 months to a year	1-2 years	3-5 years		5 or more years	

Lower limbs	Picture item	<b>Please use the image below to show where you currently have any leg or foot ulcers.</b>	Picture item			
Lower limbs	Ulcer	<b>Are you concerned about the smell of your leg ulcers?</b>	Not at all	A little	Moderately	A lot
Lower limbs	Ulcer	<b>Are you concerned about the appearance of your leg ulcers?</b>	Not at all	A little	Moderately	A lot
Lower limbs	Ulcer	<b>Do you have leg ulcers that leak fluid (watery liquid)?</b>	Never	Occasionally	Most of the time	All the time
Lower limbs	Ulcer	<b>Do you experience infections in your leg ulcers? (E.g. foul smell or pus)</b>	Never	Occasionally	Most of the time	All the time
Lower limbs	Ulcer	<b>Do you experience repeated leg ulcers?</b>	No	Yes, twice	Yes, 3 or 4 times	Yes, 5 or more
Lower limbs	Ulcer	<b>Do you worry about your leg ulcers? (E.g. Not healing becoming infected losing part of your leg or foot).</b>	Not at all	A little	Moderately	A lot
Lower limbs	Screening question	<b>Do you have any varicose veins in either of your legs or feet?</b>	No	Mild	Moderate	Severe
Lower limbs	Picture item	<b>Please use the image below to show where you presently have any varicose veins in your legs or feet.</b>	Picture item			
Lower limbs	VVs	<b>Do you experience any bleeding from veins in your legs or feet?</b>	Never	Occasionally	Most days	Every day
Lower limbs	VVs	<b>Do you have any problems with the skin over your varicose veins?</b>	Not at all	A little	Moderately	A lot
Lower limbs	VVs	<b>Do varicose veins make you feel self-conscious or embarrassed?</b>	Never	Occasionally	Most of the time	All the time
Lower limbs	VVs	<b>Do leg or foot problems affect what clothing or shoes you can wear?</b>	Not at all	A little	Moderately	A lot
Lower limbs	VVs	<b>Do you experience any swelling in your legs or feet?</b>	Never	Occasionally	Most of the time	All the time
Lower limbs	VVs	<b>Do you experience itching in your legs or feet?</b>	Never	Occasionally	Most of the time	All the time
Lower limbs	VVs	<b>Do you wear compression stockings or tights for your legs?</b>	Never	Occasionally	Most days	Everyday
Lower limbs	Stand-alone item	<b>Have you lost any part of your legs or feet through amputation or gangrene?</b>	Yes		No	
Lower limbs	Stand-alone item	<b>What was the cause of this?</b>	Free text answer			
Lower limbs	Stand-alone item	<b>Please click on the appropriate part or parts of your legs feet or toes that you have had amputated or have been lost</b>	Picture item			
Lower limbs	ADL	<b>Do you worry about your leg problems getting worse in the future?</b>	Not at all	A little	Moderately	A lot
Lower limbs	ADL	<b>How much do leg or foot problems affect your overall enjoyment of life?</b>	Not at all	A little	Moderately	A lot
Lower limbs	ADL	<b>How much do leg or foot problems affect your ability to carry out physical activities? (E.g. Walking housework or exercise)</b>	Not at all	A little	Moderately	A lot

Lower limbs	ADL	How much do leg or foot problems affect your personal responsibilities? E.g. caring for others study or work	Not at all	A little	Moderately	A lot		
Lower limbs	ADL	How much do leg or foot problems affect your ability to look after yourself? (E.g. Rest wash toilet or feed yourself)	Not at all	A little	Moderately	A lot		
Lower limbs	ADL	How much do leg or foot problems affect your social activities? (E.g. Going out visiting friends or family)	Not at all	A little	Moderately	A lot		
Lower limbs	ADL	Do you suffer from low mood because of leg or foot problems?	Not at all	A little	Moderately	A lot		
Generic	Stand-alone item	Do you rely on any people to help you with your everyday activities?	No, I don't need any help	My spouse or partner	Friends or family members	Carer	Healthcare worker	Other person
Generic	Stand-alone item	Do you feel that you have all the help and support that you need?	Not at all	Somewhat	Mostly	Entirely		
Generic	Stand-alone item	Have you received any help in completing this questionnaire today? If so, who has helped you?	No, I don't need any help	My spouse or partner	Friends or family members	Carer	Healthcare worker	Other person
Generic	Stand-alone item	Have you completed this questionnaire previously?	Yes	No				
Generic	Stand-alone item	Compared with your last questionnaire, how would you rate your overall health?	Very much worse	A little worse	About the same	A little better	Very much better	
Generic	Stand-alone item	Do you experience financial problems because of your vascular condition?	Not at all	A little	Moderately	A lot		
Generic	Stand-alone item	How likely are you to recommend the ward or department to friends and family if they needed similar care or treatment?	Extremely likely	Likely	Neither likely or unlikely	Unlikely	Extremely unlikely	
Generic	Stand-alone item	Are you willing to allow confidential and anonymous use of your questionnaire data in approved and regulated research, audit and service evaluation projects?	Yes	No				
<b>Abbreviations: Abdominal Aortic Aneurysm (AAA), Activity of daily living (ADL), Varicose veins (VV), Venous leg ulcer (VLU), Peripheral arterial disease (PAD), Carotid artery stenosis (CAS).</b>								

Appendix 2

**Table 1 Proposed hypotheses with postulated direction of correlation to examine ePAQ-VAS external construct validity**

Section	Topic	Direction of scale score
CAD	Patient presented with stroke compared with patients with no stroke	Scale scores will be higher in patients with stroke
CAD	Patient presented with multiple TIAs compared to those with single TIA	Scale scores will be higher in patients with multiple TIAs
AAA	Size of the Aneurysm	Scale scores will be higher for patients with larger AAA
AAA	Surveillance versus pre-operative patient	Scale scores will be higher for pre-operative patients



PAD	Patients with rest pain compared to those without rest pain	Scale scores will be higher in patients with rest pain
PAD	Patients with ulcer with compared to those without ulcer	Scale scores will be higher in patients with PAD and ulcer
VLU	Ulcer recurrence	Scale scores will be higher in patients with ulcer recurrence
VV	Varicose vein in both legs versus in one leg	Scale scores will be higher in patients with VV in both legs
VV	VLU presence versus no VLU	Scale scores will be higher in patients with VLU

Appendix 3

Table 1

**Table 1 Confirmatory factor analyses of the ePAQ-Vascular Scales**

Scale	CFA initial model		CFA final model		Items deleted
	RMSEA	CFI	RMSEA	CFI	
<b>CAD related Anxiety</b>	0.156	0.847	0.08	0.980	None
<b>Impact of CAD on ADL</b>					“Impact of CAD on enjoyment of life” & “Low mood caused by CAD” items were deleted. The former had high MI & RC with items in the same domain. The latter had low factor loading.
<b>AAA related Anxiety</b>	0.141	0.957	0.043	0.990	None

Scale	CFA initial model		CFA final model		Items deleted
	RMSEA	CFI	RMSEA	CFI	
<b>Impact of AAA on ADL</b>					“Impact of AAA on enjoyment of life” had high MI & RC with items in the same domain.
<b>PAD symptoms</b>	0.127	0.818	0.077	0.982	“Cold feet” item was deleted because of low factor loading.
<b>VLU symptoms</b>	0.266	0.178	0.080	0.984	“Worry about leg ulcers” had low factor loading.
<b>VV symptoms</b>	0.187	0.801	0.078	0.967	None

Table 2

Table S2A- Short name of items in AAA and CAS ADL sections

Section	Section (Domain)	Question	Short name
Carotid	ADL	How much do problems caused by carotid artery disease (anxiety associated with diagnosis or physical symptoms) affect your overall enjoyment of life?	CENJLIF
Carotid	ADL	How much do problems caused by carotid artery disease (e.g. mini-stroke or stroke memory balance speech visual or other related issues) affect your physical activities such as exercise walking or running?	CPhyAct
Carotid	ADL	How much do problems caused by carotid artery disease (e.g. mini-stroke or stroke memory balance speech visual or other related issues) affect your ability to undertake personal roles and responsibilities such as caring for others study or work?	CPreRes
Carotid	ADL	How much do problems caused by carotid artery disease (e.g. mini-stroke or stroke memory balance speech visual or other related issues) affect your ability to look after yourself?	CLokAft

Carotid	ADL	How much do problems caused by carotid artery disease (e.g. mini-stroke or stroke memory balance speech visual or other related issues) affect your social activities such as visiting friends and family?	CSocAct
Carotid	ADL	How much do problems caused by carotid artery disease visual or other related issues) affect your mood?	CMood
AAA	ADL	How much do problems caused by aortic aneurysm affect your overall enjoyment of life?	AENJLIF
AAA	ADL	How much does aortic aneurysm affect your physical activities? (E.g. Exercise walking or going out)	APhyAct
AAA	ADL	How much does aortic aneurysm affect your ability to undertake personal roles and responsibilities? (E.g. Caring for others study or work?)	APreRes
AAA	ADL	How much do you feel aortic aneurysm affects your ability to look after yourself? (E.g. Rest wash toilet or feed yourself)	ALokAft
AAA	ADL	How much does aortic aneurysm affect your social activities? (E.g. Visiting friends or family)	ASocAct
AAA	ADL	Do you suffer from low mood because of having an aortic aneurysm?	AMood

Table 2B- Residual Correlations item deleted in AAA ADL section

Item short name	Residual correlation with <i>AENJLIF</i>
APhyAct	0.716
APreRes	0.844
ALokAft	0.365
ASocAct	0.791
AMood	0.695

Table S2C- Residual Correlations items deleted in CAS ADL section

Item short name	Residual correlation with <i>CENJLIF</i>
CPhyAct	0.538
CPreRes	0.644
CLokAft	0.706
CSocAct	0.631
CMood	0.450

Table 4 - Standardised factor loading of the items in the different scales.

Section	Scale (Domain)	Question	Standardised factor loading	S. E.	P Value
Carotid	Anxiety	<b>Do you worry about having a stroke?</b>	<b>0.65</b>	<b>0.10</b>	<b>0.00</b>
Carotid	Anxiety	<b>Does carotid artery disease make you feel anxious?</b>	<b>0.83</b>	<b>0.15</b>	<b>0.00</b>
Carotid	Anxiety	<b>Are you worried about your health getting worse because of carotid artery disease?</b>	<b>0.79</b>	<b>0.11</b>	<b>0.00</b>
Carotid	Anxiety	<b>Are you worried about losing your independence because of carotid artery disease?</b>	<b>0.73</b>	<b>0.11</b>	<b>0.00</b>
Carotid	ADL	<b>How much do problems caused by carotid artery disease (e.g. mini-stroke or stroke memory balance speech visual or other related issues) affect your physical activities such as exercise walking or running?</b>	<b>0.79</b>	<b>0.09</b>	<b>0.00</b>
Carotid	ADL	<b>How much do problems caused by carotid artery disease (e.g. mini-stroke or stroke memory balance speech visual or other related issues) affect your ability to undertake personal roles and responsibilities such as caring for others study or work?</b>	<b>0.99</b>	<b>0.04</b>	<b>0.00</b>
Carotid	ADL	<b>How much do problems caused by carotid artery disease (e.g. mini-stroke or stroke memory balance speech visual or other related issues) affect your ability to look after yourself?</b>	<b>0.95</b>	<b>0.05</b>	<b>0.00</b>
Carotid	ADL	<b>How much do problems caused by carotid artery disease (e.g. mini-stroke or stroke memory balance speech visual or other related issues) affect your social activities such as visiting friends and family?</b>	<b>0.89</b>	<b>0.05</b>	<b>0.00</b>
AAA	Anxiety	<b>Do you worry about aortic aneurysm?</b>	<b>0.95</b>	<b>0.03</b>	<b>0.00</b>
AAA	Anxiety	<b>Do you worry about any symptoms you experience that may be caused by aortic aneurysm?</b>	<b>0.78</b>	<b>0.06</b>	<b>0.00</b>
AAA	Anxiety	<b>Do you worry about possible increase in the size of your aneurysm?</b>	<b>0.82</b>	<b>0.05</b>	<b>0.00</b>
AAA	Anxiety	<b>Do you fear sudden death or rupture of your aortic aneurysm?</b>	<b>0.98</b>	<b>0.03</b>	<b>0.00</b>

AAA	Anxiety	Do you avoid physical exertion because of having an aortic aneurysm?	0.83	0.05	0.00
AAA	Anxiety	Do you avoid travelling independently because of aortic aneurysm?	0.88	0.05	0.00
AAA	ADL	How much does aortic aneurysm affect your physical activities? (E.g. Exercise walking or going out)	0.81	0.09	0.00
AAA	ADL	How much does aortic aneurysm affect your ability to undertake personal roles and responsibilities? (E.g. Caring for others study or work?)	0.87	0.06	0.00
AAA	ADL	How much do you feel aortic aneurysm affects your ability to look after yourself? (E.g. Rest wash toilet or feed yourself)	0.40	0.22	0.00
AAA	ADL	How much does aortic aneurysm affect your social activities? (E.g. Visiting friends or family)	0.85	0.06	0.00
AAA	ADL	Do you suffer from low mood because of having an aortic aneurysm?	0.79	0.07	0.00
Lower limbs	Ischaemic Pain	Do you experience cramping pain in your legs or feet when walking?	0.88	0.02	0.00
Lower limbs	Ischaemic Pain	How far can you walk before you experience any cramping pain in your legs or feet?	0.88	0.03	0.00
Lower limbs	Ischaemic Pain	Do you walk more slowly than you would to avoid cramping pain in your legs and feet?	0.96	0.01	0.00
Lower limbs	Ischaemic Pain	Do you experience cramping pain in your legs or feet when walking uphill?	0.89	0.02	0.00
Lower limbs	Ischaemic Pain	Do you experience pain in your legs or feet when you climb stairs?	0.81	0.04	0.00
Lower limbs	Ischaemic Pain	Do you experience pain in your feet at night?	0.69	0.07	0.00
Lower limbs	Ischaemic Pain	Do you dangle one or both of your legs over the side of the bed to help reduce foot pain?	0.70	0.07	0.00
Lower limbs	Ischaemic Pain	Do you experience severe pain in your legs or feet when you are resting or sitting?	0.50	0.06	0.00
Lower limbs	Ulcer	Are you concerned about the smell of your leg ulcers?	0.7	0.07	0.00
Lower limbs	Ulcer	Are you concerned about the appearance of your leg ulcers?	0.89	0.08	0.00
Lower limbs	Ulcer	Do you have leg ulcers that leak fluid (watery liquid)?	0.94	0.06	0.00
Lower limbs	Ulcer	Do you experience infections in your leg ulcers? (E.g. foul smell or pus)	0.53	0.08	0.00
Lower limbs	Ulcer	Do you experience repeated leg ulcers?	0.63	0.09	0.00
Lower limbs	VVs	Do you experience any bleeding from veins in your legs or feet?	0.68	0.08	0.00

Lower limbs	VVs	Do you have any problems with the skin over your varicose veins?	0.72	0.22	0.00
Lower limbs	VVs	Do varicose veins make you feel self-conscious or embarrassed?	0.88	0.17	0.00
Lower limbs	VVs	Do leg or foot problems affect what clothing or shoes you can wear?	0.84	0.08	0.00
Lower limbs	VVs	Do you experience any swelling in your legs or feet?	0.77	0.11	0.00
Lower limbs	VVs	Do you experience itching in your legs or feet?	0.55	0.14	0.00
Lower limbs	VVs	Do you wear compression stockings or tights for your legs?	0.52	0.13	0.00
Lower limbs	ADL	Do you worry about your leg problems getting worse in the future?	0.40	0.08	0.00
Lower limbs	ADL	How much do leg or foot problems affect your ability to carry out physical activities? (E.g. Walking housework or exercise)	0.61	0.07	0.00
Lower limbs	ADL	How much do leg or foot problems affect your personal responsibilities? E.g. caring for others study or work	0.94	0.02	0.00
Lower limbs	ADL	How much do leg or foot problems affect your ability to look after yourself? (E.g. Rest wash toilet or feed yourself)	0.85	0.02	0.00
Lower limbs	ADL	How much do leg or foot problems affect your social activities? (E.g. Going out visiting friends or family)	0.85	0.02	0.00
Lower limbs	ADL	Do you suffer from low mood because of leg or foot problems?	0.68	0.05	0.00

**Table.5 Internal consistency of the ePAQ-Vascular Scales**

Scale	Cronbach's alpha coefficient	Test- retest Intra- class correlation (ICC)
<b>CAD related Anxiety</b>	0.90	-
<b>Impact of CAD on ADL</b>	0.91	-
<b>AAA related Anxiety</b>	0.89	-

<b>Scale</b>	<b>Cronbach's alpha coefficient</b>	<b>Test- retest Intra- class correlation (ICC)</b>
<b>Impact of AAA on ADL</b>	0.83	-
<b>PAD symptoms</b>	0.91	0.98
<b>VLU symptoms</b>	0.80	0.99
<b>VVs symptoms</b>	0.80	0.65
<b>Lower limb related ADL</b>	0.79	0.98