

Appendix 1: Bivariate analysis for both empathy questionnaires.

<b>Table 5. Bivariate analysis for the Consultation and Relational Empathy (CARE) measure and all independent variables.</b>		<b>CARE (n=84)</b>	<b><i>p-value</i></b>
		Pearson's R	
Age		0.24	<b>0.027</b>
PHQ-2		- 0.20	<b>0.065</b>
PSEQ-2		0.24	<b>0.030</b>
		Mean ± SD	
Gender			0.89
Male		46 ± 0.98	
Female		46 ± 0.97	
Ethnicity			0.25
Non-white		45 ± 1.4	
White		47 ± 0.77	
Visit type			0.92
Follow-up		46 ± 0.82	
New		46 ± 1.2	
Highest educational degree			<b>0.085</b>
High school/GED or some college		46 ± 7.5	
Bachelor's degree		49 ± 2.7	
Master's degree, advanced graduate work or Ph.D.		45 ± 5.6	
Employment status			0.12
Currently employed		45 ± 7.2	
Retired		48 ± 3.6	
Other		47 ± 4.9	
Marital status			<b>0.025</b>
Single		43 ± 8.5	

Married/remarried	48 ± 4.7	0.14
Divorced/separated or widowed	46 ± 6.0	
Visit diagnosis		
Trauma	45 ± 7.5	
Non-trauma; pain	48 ± 4.4	
Non-trauma; other	46 ± 7.6	
PHQ = Patient Health Questionnaire; PSEQ = Pain Self-Efficacy Questionnaire		
Discrete variables as number (percentage); continuous variables as mean (± standard deviation);		
<b>Bold</b> indicates a p-value < 0.10.		

<b>Table 6. Bivariate analysis for the Jefferson Scale of Patient's Perception of Physician Empathy (JSPPPE) and all independent variables.</b>		
	<b>JSPPE (n=84)</b>	<b>p- value</b>
	Pearson's R	
Age	0.14	0.22
PHQ-2	- 0.18	0.11
PSEQ-2	0.26	<b>0.019</b>
	Mean ± SD	
Gender		0.75
Male	29 ± 0.74	
Female	28 ± 0.86	
Ethnicity		0.95
Non-white	29 ± 1.1	
White	29 ± 0.68	
Visit type		<b>0.064</b>
Follow-up	29 ± 0.67	
New	27 ± 0.92	

Highest educational degree		0.25
High school/GED or some college	28 ± 6.3	
Bachelor's degree	30 ± 4.0	
Master's degree, advanced graduate work or Ph.D.	28 ± 4.0	
Employment status		0.49
Currently employed	28 ± 5.4	
Retired	30 ± 4.7	
Other	28 ± 5.5	
Marital status		0.72
Single	29 ± 6.9	
Married/remarried	29 ± 4.3	
Divorced/separated or widowed	28 ± 5.6	
Visit diagnosis		0.34
Trauma	28 ± 6.0	
Non-trauma; pain	29 ± 4.6	
Non-trauma; other	30 ± 3.8	
PHQ = Patient Health Questionnaire; PSEQ = Pain Self-Efficacy Questionnaire.		
Discrete variables as number (percentage); continuous variables as mean (± standard deviation);		
<b>Bold</b> indicates a p-value < 0.10.		

Appendix B: Bivariate analysis for patient satisfaction.

Table 7. Bivariate analysis for patient satisfaction and all independent variables.	Satisfaction	
	(n=84)	<i>p-value</i>
	Pearson's R	
CARE	0.76	<b>&lt;0.001</b>
JSPPE	0.74	<b>&lt;0.001</b>
Age	0.21	<b>0.061</b>

PHQ-2	- 0.20	<b>0.075</b>
PSEQ-2	0.13	0.24
	Mean ± SD	
Gender		0.21
Male	9.2 ± 0.18	
Female	8.9 ± 0.20	
Ethnicity		0.76
Non-white	9.0 ± 0.29	
White	9.1 ± 0.15	
Visit type		<b>0.014</b>
Follow-up	9.2 ± 0.15	
New	8.4 ± 0.27	
Highest educational degree		0.27
High school/GED or some college	9.0 ± 1.5	
Bachelor's degree	9.4 ± 0.93	
Master's degree, advanced graduate work or Ph.D.	8.8 ± 0.97	
Employment status		0.31
Currently employed	8.9 ± 1.4	
Retired	9.2 ± 0.92	
Other	9.4 ± 0.81	
Marital status		<b>0.064</b>
Single	8.6 ± 1.6	
Married/remarried	9.3 ± 1.0	
Divorced/separated or widowed	8.7 ± 1.2	
Visit diagnosis		0.66
Trauma	8.9 ± 1.3	
Non-trauma; pain	9.1 ± 1.2	
Non-trauma; other	9.0 ± 1.1	

JSPPE = Jefferson Scale of Patient's Perception of Physician Empathy; CARE = Consultation And Relational Empathy; PHQ = Patient Health Questionnaire; PSEQ = Pain Self-Efficacy Questionnaire.

Discrete variables as number (percentage); continuous variables as mean ( $\pm$  standard deviation);

**Bold** indicates a p-value < 0.10.

Appendix C: Multivariable analysis to determine factors associated with one of both empathy questionnaires.

**Table 8. Multivariable analysis of factors associated with the standardized Consultation And Relational Empathy (CARE) Measure.**

Variables	$\beta$ regression coefficient (95% confidence interval)	Standard error	P value	Partial R <sup>2</sup> (95% confidence interval)	Adjusted R <sup>2</sup>
Age	0.0061 (-0.0084 to 0.021)	0.0073	0.41	0.0093 (0 to 0.092)	0.13
PHQ-2	-0.063 (-0.24 to 0.12)	0.091	0.49	0.0064 (0 to 0.083)	
PSEQ-2	0.079 (-0.037 to 0.20)	0.059	0.18	0.024 (0 to 0.13)	
Visit type					
Follow-up	<i>reference</i>				
New patient	0.10 (-0.41 to 0.61)	0.26	0.69	0.0022 (0 to 0.065)	
Education					
High school/GED or some college	<i>reference</i>				
Bachelor degree	0.16 (-0.40 to 0.72)	0.28	0.57	0.0042 (0 to 0.075)	
Master's degree, advanced graduate work or Ph.D.	-0.43 (-0.98 to 0.12)	0.28	0.12	0.032 (0 to 0.14)	
Marital status					
Single	<i>reference</i>				
Married/remarried	0.58 (-0.0079 to 1.17)	0.29	0.053	0.049 (0 to 0.17)	
Divorced/separated or widowed	0.50 (-0.33 to 1.34)	0.42	0.232	0.019 (0 to 0.12)	

PHQ = Patient Health Questionnaire; PSEQ = Pain Self-Efficacy Questionnaire.

**Bold** indicates statistical significance,  $P < 0.05$ .

**Table 9. Multivariable analysis of factors associated with the standardized Jefferson Scale of Patient's Perception of Physician Empathy (JSPPE).**

Variables	$\beta$ regression coefficient	Standard error	P value	Partial R <sup>2</sup>	Adjusted R <sup>2</sup>
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	(95% confidence interval)			(95% confidence interval)	
Age	0.010 (-0.0050 to 0.025)	0.0076	0.19	0.023 (0 to 0.12)	0.062
PHQ-2	0.16 (-0.17 to 0.20)	0.094	0.86	0.00039 (0 to 0.042)	
PSEQ-2	0.11 (-0.016 to 0.23)	0.061	0.087	0.039 (0 to 0.15)	
Visit type					
Follow-up	<i>reference</i>				
New patient	- 0.49 (-1.01 to 0.040)	0.26	0.070	0.043 (0 to 0.16)	
Education					
High school/GED or some college	<i>reference</i>				
Bachelor degree	0.14 (-0.44 to 0.72)	0.29	0.64	0.0030 (0 to 0.070)	
Master's degree, advanced graduate work or Ph.D.	- 0.20 (-0.76 to 0.37)	0.29	0.50	0.0062 (0 to 0.083)	
Marital status					
Single	<i>reference</i>				
Married/remarried	- 0.13 (-0.73 to 0.48)	0.31	0.68	0.0024 (0 to 0.066)	
Divorced/separated or widowed	- 0.12 (-0.98 to 0.75)	0.43	0.79	0.00096 (0 to 0.054)	

PHQ = Patient Health Questionnaire; PSEQ = Pain Self-Efficacy Questionnaire.  
**Bold** indicates statistical significance,  $P < 0.05$ .

Appendix D: Multivariable analysis to determine factors associated with patient satisfaction.

Table 10. Multivariable analysis of factors associated with patient satisfaction (model 1)					
Retained variables	$\beta$ regression coefficient (95% confidence interval)	Standard error	<i>P</i> value	Partial R <sup>2</sup> (95% confidence interval)	Adjusted R <sup>2</sup>
Standardized CARE	0.93 (0.76 to 1.1)	0.087	<b>&lt;0.001</b>	0.60 (0.46 to 0.69)	0.64
Age	0.0041 (-0.0073 to 0.015)	0.0057	0.48	0.0066 (0 to 0.083)	

PHQ-2	0.0056 (-0.10 to 0.11)	0.054	0.92	0.00014 (0 to 0.029)
Visit type				
Follow-up	<i>reference</i>			
New patient	- 0.79 (-1.2 to -0.39)	0.19	<b>&lt;0.001</b>	0.17 (0.046 to 0.32)
Marital status				
Single	<i>reference</i>			
Married/remarried	-0.010 (-0.55 to 0.35)	0.23	0.66	0.0025 (0 to 0.066)
Divorced/separated or widowed	-0.38 (-1.0 to 0.23)	0.31	0.22	0.019 (0 to 0.11)
CARE = Consultation And Relational Empathy; PHQ = Patient Health Questionnaire.				
<b>Bold</b> indicates statistical significance, $P < 0.05$ .				

<b>Table 11. Multivariable analysis of factors associated with patient satisfaction (model 2)</b>					
<b>Retained variables</b>	<b><math>\beta</math> regression coefficient (95% confidence interval)</b>	<b>Standard error</b>	<b>P value</b>	<b>Partial R<sup>2</sup> (95% confidence interval)</b>	<b>Adjusted R<sup>2</sup></b>
Standardized JSPPPE	0.86 (0.67 to 1.0)	0.091	<b>&lt;0.001</b>	0.53 (0.38 to 0.64)	0.58
Age	0.0014 (-0.011 to 0.014)	0.0062	0.83	0.00064 (0 to 0.048)	
PHQ-2	-0.032 (-0.15 to 0.082)	0.057	0.57	0.0041 (0 to 0.074)	
Visit type					
Follow-up	<i>reference</i>				
New patient	-0.32 (-0.75 to 0.099)	0.21	0.13	0.029 (0 to 0.13)	
Marital status					
Single	<i>reference</i>				
Married/remarried	0.54 (0.063 to 1.0)	0.24	<b>0.027</b>	0.062 (0 to 0.19)	
Divorced/separated or widowed	0.22 (-0.45 to 0.88)	0.33	0.514	0.0055 (0 to 0.079)	
JSPPPE = Jefferson Scale of Patient's Perception of Physician Empathy; PHQ = Patient Health Questionnaire.					
<b>Bold</b> indicates statistical significance, $P < 0.05$ .					

Appendix E: Tertiary analysis to explain variance in patient satisfaction by specific factors.

<b>Table 12. Tertiary analysis for CARE score per item.</b>				
	<b>Single (n=22)</b>	<b>Married/remarried (n=50)</b>	<b>Divorced/separated or widowed (n=12)</b>	<b>p-value</b>
<b>How was the doctor at...</b>	<b>Mean ± SD</b>			
Item 1: Making you feel at ease.	4.5 ± 0.86	4.8 ± 0.47	4.8 ± 0.62	0.1
Item 2: Letting you tell your "story".	4.3 ± 1.0	4.8 ± 0.52	4.6 ± 0.67	0.057
Item 3: Really listening.	4.3 ± 1.1	4.8 ± 0.49	4.6 ± 0.67	<b>0.035</b>
Item 4: Being interested in you as a whole person.	4.2 ± 1.1	4.6 ± 0.70	4.6 ± 0.67	0.12
Item 5: Fully understanding your concerns.	4.3 ± 0.99	4.7 ± 0.56	4.6 ± 0.67	0.075
Item 6: Showing care and compassion.	4.3 ± 1.0	4.7 ± 0.56	4.6 ± 0.67	<b>0.048</b>
Item 7: Being positive.	4.5 ± 0.80	4.8 ± 0.46	4.6 ± 0.67	0.16
Item 8: Explaining things clearly.	4.5 ± 0.86	4.9 ± 0.40	4.5 ± 0.67	<b>0.028</b>
Item 9: Helping you to take control.	4.4 ± 1.0	4.8 ± 0.48	4.5 ± 0.67	<b>0.026</b>
Item 3: Making a plan of action with you.	4.1 ± 1.1	4.8 ± 0.59	4.8 ± 0.62	<b>0.0056</b>
CARE = Consultation And Relational Empathy.				
<b>Bold</b> indicates statistical significance, <i>P</i> < 0.05.				



**Table 13. Tertiary analysis for JSPPE score per item.**

	Follow-up (n=65)	New patient (n=19)	<i>p-value</i>
	<b>Mean ± SD</b>		
Item 1: Can view things from my perspective (see things as I see them).	6.2 ± 1.1	5.7 ± 1.0	0.14
Item 2: Asks about what is happening in my daily life.	5.5 ± 1.4	4.8 ± 0.92	<b>0.042</b>
Item 3: Seems concerned about me and my family.	5.6 ± 1.3	5.1 ± 1.2	0.12
Item 4: Understands my emotions, feelings and concerns.	5.8 ± 1.1	5.2 ± 0.96	<b>0.035</b>
Item 5: Is an understanding doctor.	6.2 ± 1.0	5.9 ± 0.99	0.27

JSPPE = Jefferson Scale of Patient's Perception of Physician Empathy.

**Bold** indicates statistical significance,  $P < 0.05$ .