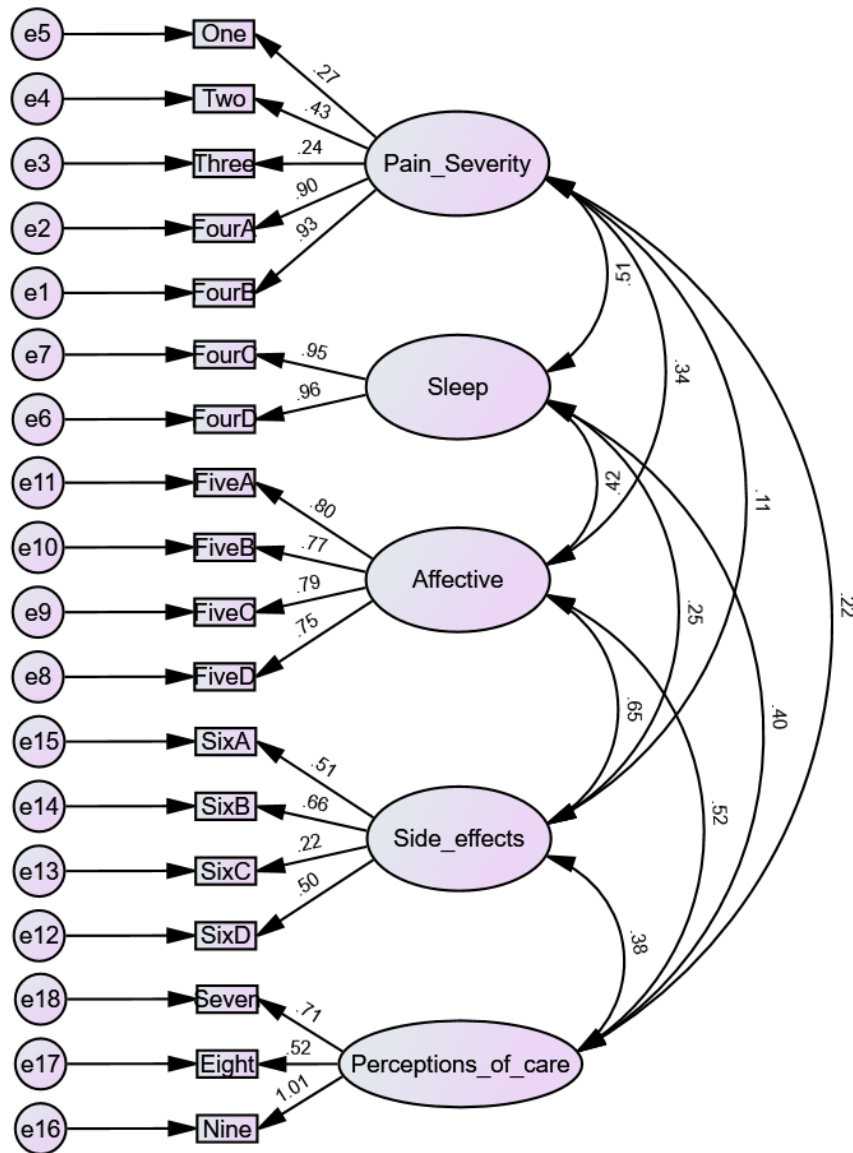


Supplementary Material for “Enhancing pain care with the American Pain Society Patient Outcome Questionnaire for use in the Emergency Department (APS-POQ-RED): validating a patient-reported outcome measure”.

Supplementary Figure 1: Structure and factor loading of the previously described structure of the APS-POQ-R modified for the ED.



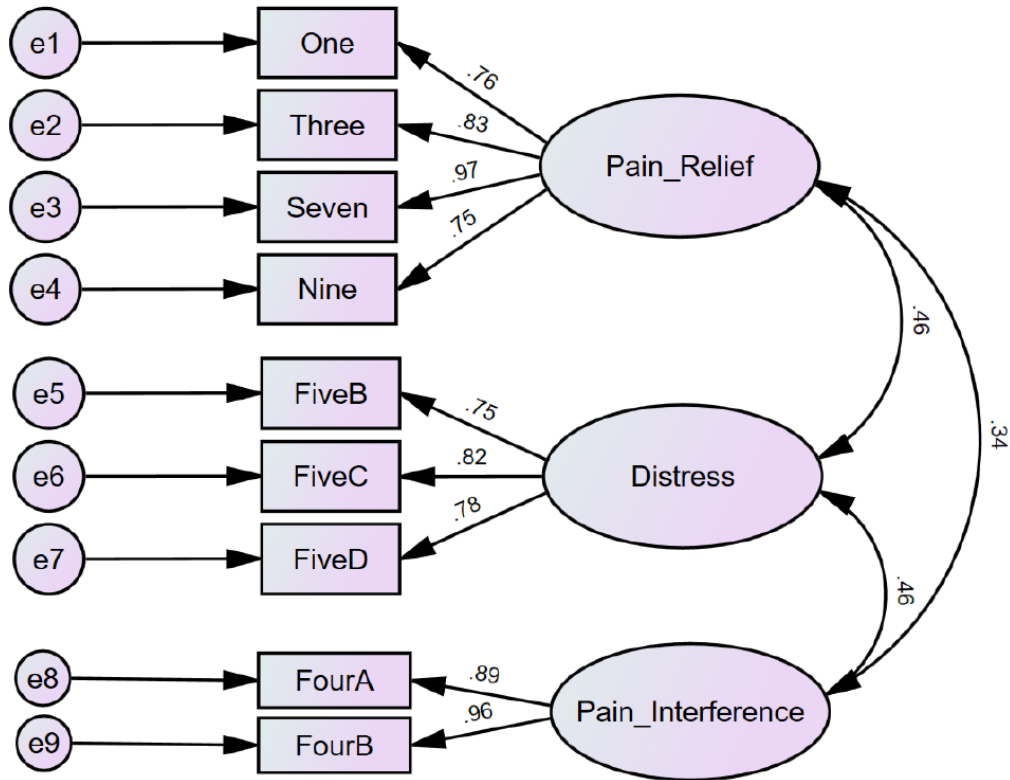
**Supplementary Table 1:** Pattern Matrix for Exploratory Factor Analysis for Objective Two.

Number	Question	Factor		
		1	2	3
1	On this scale please indicate the least pain that you had in the emergency department?	0.805		
2	On this scale please indicate the worst pain you had in the emergency department?			
3	How often were you in severe in the emergency department? Please select the best estimate of the percentage of time you experience severe pain	0.774		
4a	Select one number below that best describes how much pain interfered or prevented you from Doing activities in bed such as turning, sitting up, repositioning			0.953
4b	Select one number below that best describes how much pain interfered or prevented you from Doing activities out of bed such as walking, sitting in a chair, standing at a sink			0.883
5a	Pain can affect our mood and emotions. On this scale, please select the one number that best shows how much the pain caused you to feel: Depressed			
5b	Pain can affect our mood and emotions. On this scale, please select the one number that best shows how much the pain caused you to feel: Frightened		0.757	
5c	Pain can affect our mood and emotions. On this scale, please select the one number that best shows how much the pain caused you to feel: Helpless		0.616	
5d	Pain can affect our mood and emotions. On this scale, please select the one number that best shows how much the pain caused you to feel: Anxious		0.745	
6a	Have you had any of the following side effects? Please select "0" if no; if yes, please circle the number that best shows the severity of each. Nausea			
6b	Have you had any of the following side effects? Please select "0" if no; if yes, please circle the number that best shows the severity of each. Drowsiness			
6c	Have you had any of the following side effects? Please select "0" if no; if yes, please circle the number that best shows the severity of each. Itching			
6d	Have you had any of the following side effects? Please select "0" if no; if yes, please circle the number that best shows the severity of each. Dizziness			
7	In the emergency department, how much relief of your pain did you receive? Please circle the one percentage that best shows how much relief you have received from all of your pain treatments combined (medicine and non-medicine treatment)	0.968		
8	Were you allowed to participate in decisions about your pain treatment as much as you wanted to?			
9	Select one number that best shows how satisfied you are with the results of your pain treatment in the emergency department.	0.805		

	Pain relief and satisfaction subscale
	Affective distress subscale
	Pain interference subscale

**Supplementary Figure 2: Structure of the three-factor solution showing the factor loading and discriminate ability between constructs.**

The circles represent the error variance, the rectangles represent the questions included (as per Table 2), and the ovals represent the constructs.



*Supplementary Table 2A: Validity and Reliability*

<b>Factor</b>	<b>CR</b>	<b>AVE</b>	<b>MSV</b>
<b>Distress</b>	0.824	0.609	0.216
<b>Pain_Relief</b>	0.899	0.692	0.216
<b>Pain_Interference</b>	0.922	0.855	0.211

CR = Composite reliability, AVE Average Variance Extracted, MSV = Maximum Shared Variance

*Supplementary Table 2B: Factor Correlation Matrix with the square root of the average variance explained on the diagonal*

	<b>Distress</b>	<b>Pain_Relief</b>	<b>Pain_Interference</b>
<b>Distress</b>	<b>0.781</b>		
<b>Pain_Relief</b>	0.465	<b>0.832</b>	
<b>Pain_Interference</b>	0.459	0.335	<b>0.925</b>

## The American Pain Societies – Patient Outcome Questionnaire- Revised for the Emergency Department (APS-POQ-RED)

### The following questions are about the pain you experienced during your stay in the emergency department

On this scale, please tick the least pain you had in the emergency department:

From “0” - no pain to “10” - worst possible pain

0    1    2    3    4    5    6    7    8    9    10

How often were you in severe pain in the emergency department?

Please tick your best estimate of the percentage of time you experienced severe pain

0%    10%    20%    30%    40%    50%    60%    70%    80%    90%    100%

### Tick the one number below that best describes how much this episode of has pain interfered or prevented you from different activities: (From “0” – did not interfere to “10” – completely interfered)

	0	1	2	3	4	5	6	7	8	9	10
Doing activities in bed such as turning, sitting up, repositioning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Doing activities out of bed such as walking, sitting in chair, standing at sink	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### Pain can affect our mood and emotions. On this scale, please tick the number that best describes how this episode of pain caused you to feel different emotions: (From “0” – not at all to “10” – extremely)

	0	1	2	3	4	5	6	7	8	9	10
Anxious	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Frightened	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Helpless	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

In the emergency department, how much pain relief did you receive?

Please tick the one percentage that best shows how much relief you have received for all of your pain treatments combined (medicine and non-medicine treatment)

0%    10%    20%    30%    40%    50%    60%    70%    80%    90%    100%

Tick the number that best shows how satisfied you are with the results of your pain treatment in the emergency department

From “0” – extremely dissatisfied to “10” – extremely satisfied

0    1    2    3    4    5    6    7    8    9    10

Adapted from: Hughes, J. A., Jones, L., Potter, J., Wong, A., Brown, N. J., & Chu, K. (2021). An initial psychometric evaluation of the APS-POQ-R in acute pain presenting to the emergency department. *Australasian Emergency Care*, 24(4), 287-295.