

Screening for Anxiety and Depressive Symptoms in Adolescents with Complex Health Conditions from a Longitudinal Registry Study in Los Angeles County: Comparative Performance of the EQ-5D-5L and PedsQL



PRESENTER:

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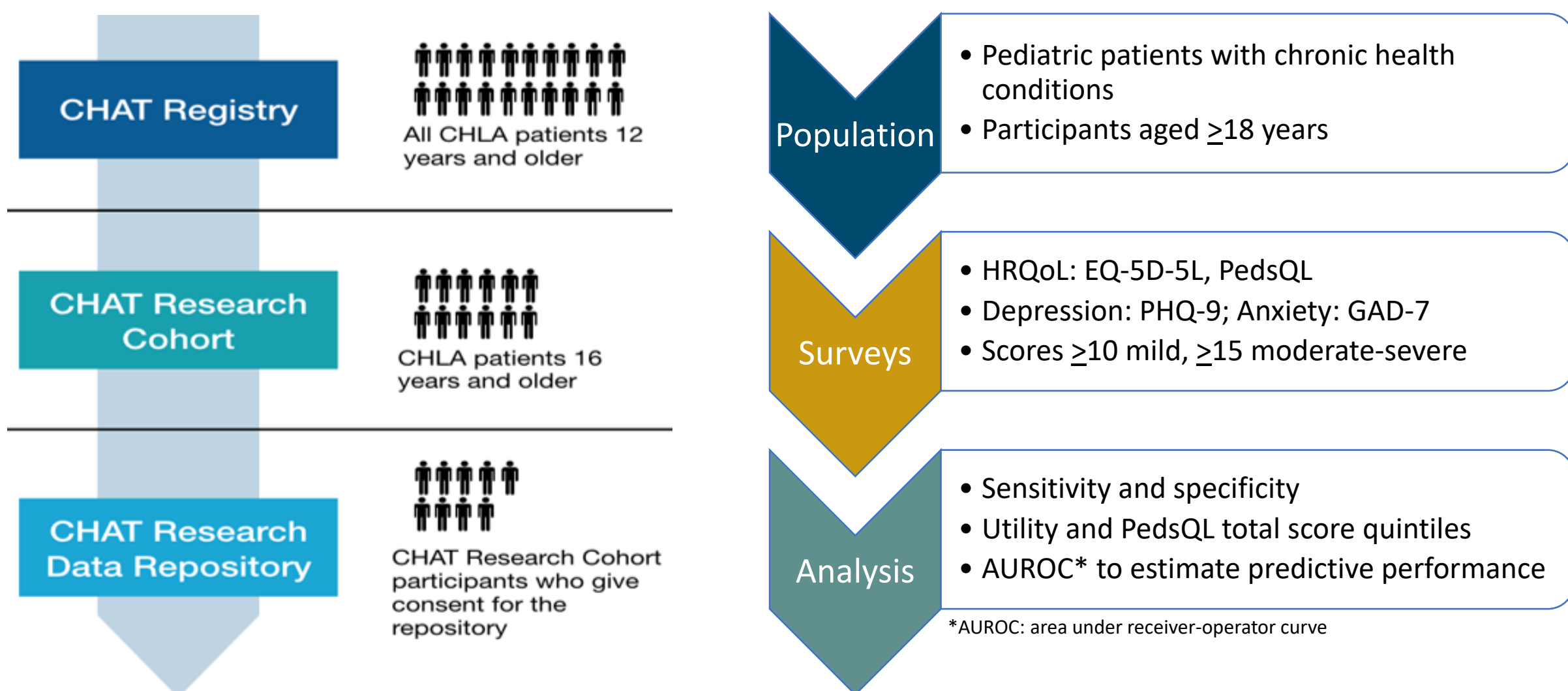
BACKGROUND

Adolescent patients with special healthcare needs are at increased risk for chronic physical, developmental, behavioral, or emotional conditions.

OBJECTIVE

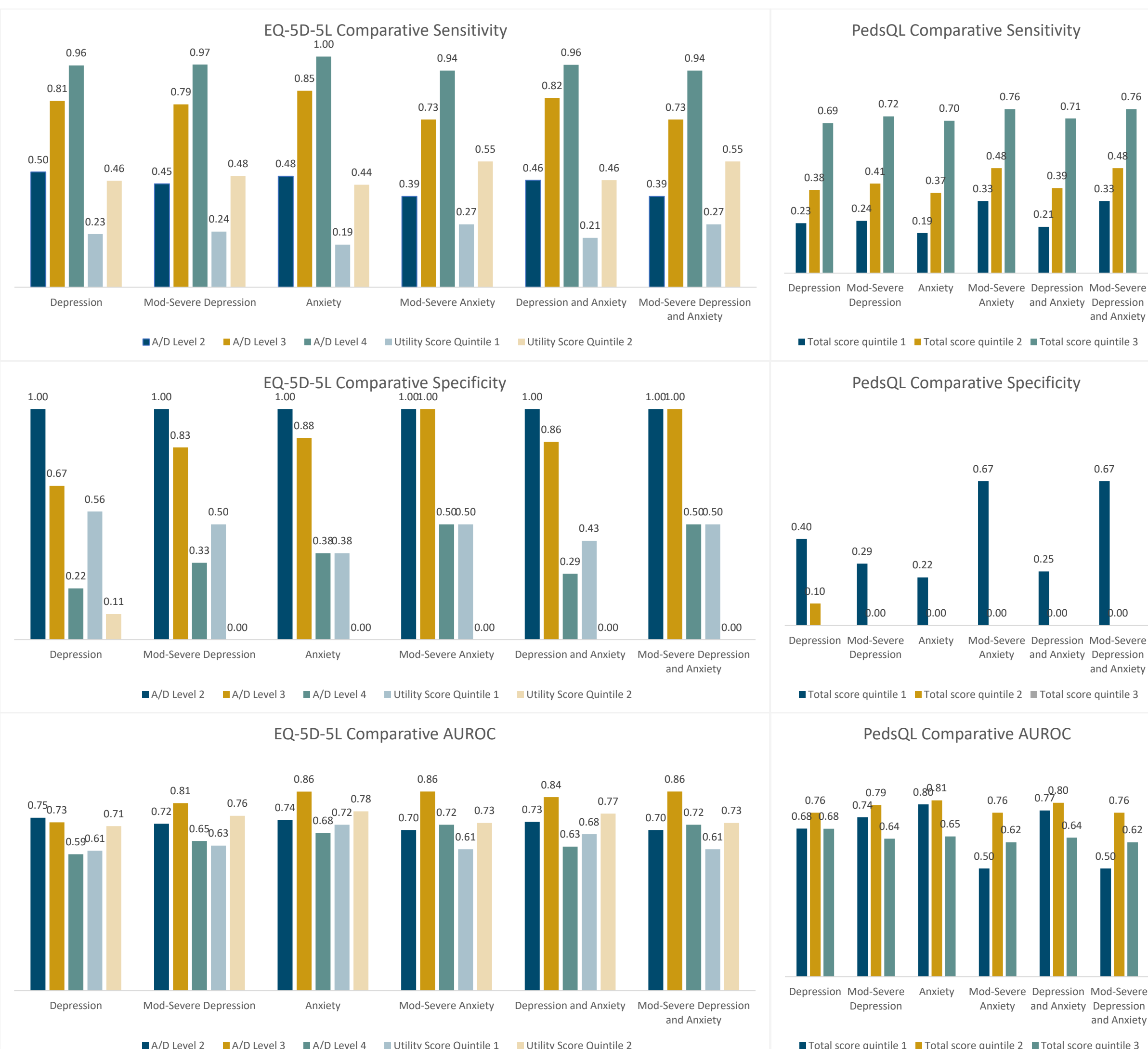
To compare the EQ-5D-5L with the PedsQL in measuring anxiety or depression symptoms as defined by the PHQ-9 and GAD-7 in this sample.

METHODS

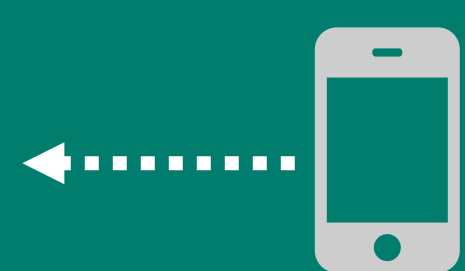
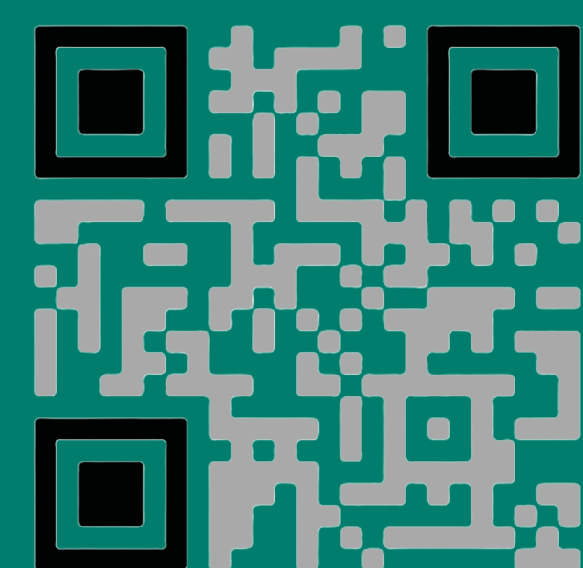


RESULTS

- EQ-5D-5L**: Sensitivity was highest for anxiety/depression level 4 while specificity was highest in level 2. AUROC was highest for level 3 in predicting anxiety and depressive symptoms (range: 0.73 – 0.86), and higher for utility score quintile 2 vs. quintile 1 (range: 0.71-0.79 vs. 0.61-0.72).
- PedsQL**: Total score quintile 3 had the best sensitivity in predicting moderate/severe anxiety, whereas quintile 1 had the highest specificity for predicting anxiety and depression. Overall AUROC was highest for total score quintile 2 (range: 0.76-0.81).



The EQ-5D-5L performs better than the PedsQL overall in classifying depression and anxiety symptoms among adolescents with chronic health conditions based on sensitivity, specificity and AUROC.



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HEALTH-RELATED QUALITY OF LIFE BY DEPRESSION / ANXIETY SYMPTOMS

27.8% reported symptoms of depression, corresponding to a mean (SD) EQ-VAS score of 60.4 (21.50) and utility score of 0.67 (0.27), compared to EQ-VAS and index score of 79.4 (18.4) and 0.85 (0.18). Similar trends were seen for the PedsQL and more pronounced among those with moderate-severe depression.

VARIABLES	Depression (PHQ-9≥10)				Moderate/severe depression (PHQ-9≥15)			
	TOTAL	No	Yes	P_VALUE	TOTAL	No	Yes	P_VALUE
N (%)	36 (100.0)	26 (72.2)	10 (27.8)	NA	36 (100.0)	29 (80.6)	7 (19.4)	NA
EQ VAS (Mean (SD))	74.5 (20.7)	79.4 (18.4)	60.4 (21.5)	0.02	74.5 (20.7)	79.6 (17.6)	50.2 (17.9)	0.001
EQ index score (Mean (SD))	0.80 (0.22)	0.85 (0.18)	0.67 (0.27)	0.03	0.80 (0.22)	0.84 (0.18)	0.61 (0.30)	0.01
Anxiety/Depression				0.02				0.01
Level 1	13 (37.1)	13 (50.0)	0 (0.0)		13 (37.1)	13 (44.8)	0 (0.0)	
Level 2	11 (31.4)	8 (30.8)	3 (33.3)		11 (31.4)	10 (34.5)	1 (16.7)	
Level 3	8 (22.9)	4 (15.4)	4 (44.4)		8 (22.9)	5 (17.2)	3 (50.0)	
Level 4	3 (8.6)	1 (3.8)	2 (22.2)		3 (8.6)	1 (3.4)	2 (33.3)	
EQ anxiety/depression level 2				<0.01				0.04
None	13 (37.1)	13 (50.0)	0 (0.0)		13 (37.1)	13 (44.8)	0 (0.0)	
Any anxiety/depression	22 (62.9)	13 (50.0)	9 (100.0)		22 (62.9)	16 (55.2)	6 (100.0)	
EQ anxiety/depression level 3				<0.01				0.003
None/mild	24 (68.6)	21 (80.8)	3 (33.3)		24 (68.6)	23 (79.3)	1 (16.7)	
Anxiety/depression	11 (31.4)	5 (19.2)	6 (66.7)		11 (31.4)	6 (20.7)	5 (83.3)	
EQ anxiety/depression level 4				0.09				0.02
None/mild/moderate	32 (91.4)	25 (96.2)	7 (77.8)		32 (91.4)	28 (96.6)	4 (66.7)	
Anxiety/depression	3 (8.6)	1 (3.8)	2 (22.2)		3 (8.6)	1 (3.4)	2 (33.3)	
Anxiety/depression eq index q1				0.22				0.2
None (<=0.653)	10 (28.6)	6 (23.1)	4 (44.4)		10 (28.6)	7 (24.1)	3 (50.0)	
Depression/anxiety(>0.653)	25 (71.4)	20 (76.9)	5 (55.6)		25 (71.4)	22 (75.9)	3 (50.0)	
Anxiety/depression eq index q2				0.03				0.02
None (<=0.882)	20 (57.1)	12 (46.2)	8 (88.9)		20 (57.1)	14 (48.3)	6 (100.0)	
Depression/anxiety(>0.882)	15 (42.9)	14 (53.8)	1 (11.1)		15 (42.9)	15 (51.7)	0 (0.0)	
Anxiety/depression pedsq1 q1				0.04				0.02
None (<=58)	12 (33.3)	6 (23.1)	6 (60.0)		12 (33.3)	7 (24.1)	5 (71.4)	
Depression/anxiety (>58)	24 (66.7)	20 (76.9)	4 (40.0)		24 (66.7)	22 (75.9)	2 (28.6)	
Anxiety/depression pedsq1 q2				<0.01				<0.01
None (<=67)	19 (52.8)	10 (38.5)	9 (90.0)		19 (52.8)	12 (41.4)	7 (100.0)	
Depression/anxiety (>67)	17 (47.2)	16 (61.5)	1 (10.0)		17 (47.2)	17 (58.6)	0 (0.0)	
Anxiety/depression pedsq1 q3				0.047				0.12
None (<=89)	28 (77.8)	18 (69.2)	10 (100.0)		28 (77.8)	21 (72.4)	7 (100.0)	
Depression/anxiety (>89)	8 (22.2)	8 (30.8)	0 (0.0)		8 (22.2)	8 (27.6)	0 (0.0)	
Peds QL Total Score (Mean (SD))	70.3 (20.3)	77.3 (16.3)	52.2 (19.1)	0.0004	70.3 (20.3)	76.3 (16.0)	45.6 (17.9)	<0.0001

25% reported symptoms of anxiety, with lower EQ-VAS, index, and PedsQL total scores than those without anxiety.

VARIABLES	Anxiety (GAD-7≥10)				Moderate/severe anxiety (GAD-7≥15)			
	TOTAL	No	Yes	P_VALUE	TOTAL	No	Yes	P_VALUE
N (%)	36 (100.0)	27 (75.0)	9 (25.0)	NA	36 (100.0)	33 (91.7)	3 (8.3)	NA
EQ VAS (Mean (SD))	74.5 (20.7)	80.4 (18.0)	54.8 (17.4)	0.001	74.5 (20.7)	75.7 (20.7)	55.0 (7.1)	0.17
EQ index score (Mean (SD))	0.80 (0.22)	0.87 (0.16)	0.59 (0.26)	0.001	0.80 (0.22)	0.81 (0.22)	0.72 (0.12)	0.61
Anxiety/Depression				0.0003				0.09
Level 1	13 (37.1)	13 (48.1)	0 (0.0)		13 (37.1)	13 (39.4)	0 (0.0)	
Level 2	11 (31.4)	10 (37.0)	1 (12.5)		11 (31.4)	11 (33.3)	0 (0.0)	
Level 3	8 (22.9)	4 (14.8)	4 (50.0)		8 (22.9)	7 (21.2)	1 (50.0)	
Level 4	3 (8.6)	0 (0.0)	3 (37.5)		3 (8.6)	2 (6.1)	1 (50.0)	
EQ anxiety/depression level 2				0.01				0.26
None	13 (37.1)	13 (48.1)	0 (0.0)		13 (37.1)	13 (39.4)	0 (0.0)	
Any anxiety/depression	22 (62.9)	14 (51.9)	8 (100.0)		22 (62.9)	20 (60.6)	2 (100.0)	
EQ anxiety/depression level 3				0.0001				0.03
None/mild	24 (68.6)	23 (85.2)	1 (12.5)		24 (68.6)	24 (72.7)	0 (0.0)	
Anxiety/depression	11 (31.4)	4 (14.8)	7 (87.5)		11 (31.4)	9 (27.3)	2 (100.0)	
EQ anxiety/depression level 4				0.001				0.03
None/mild/moderate	32 (91.4)	27 (100.0)	5 (62.5)		32 (91.4)	31 (93.9)	1 (50.0)	
Anxiety/depression	3 (8.6)	0 (0.0)	3 (37.5)		3 (8.6)	2 (6.1)	1 (50.0)	
Anxiety/depression eq index q1				0.02				0.49
None (<=0.653)	10 (28.6)	5 (18.5)	5 (62.5)		10 (28.6)	9 (27.3)	1 (50.0)	
Depression/anxiety(>0.653)	25 (71.4)	22 (81.5)	3 (37.5)		25 (71.4)	24 (72.7)	1 (50.0)	
Anxiety/depression eq index q2				<0.01				0.21
None (<=0.882)	20 (57.1)	12 (44.4)	8 (100.0)		20 (57.1)	18 (54.5)	2 (100.0)	
Depression/anxiety(>0.882)	15 (42.9)	15 (55.6)	0 (0.0)		15 (42.9)	15 (45.5)	0 (0.0)	
Anxiety/depression pedsq1 q1				0.001				1
None (<=58)	12 (33.3)	5 (18.5)	7 (77.8)		12 (33.3)	11 (33.3)	1 (33.3)	
Depression/anxiety (>58)	24 (66.7)	22 (81.5)	2 (22.2)		24 (66.7)	22 (66.7)	2 (66.7)	
Anxiety/depression pedsq1 q2				0.001				0.09
None (<=67)	19 (52.8)	10 (37.0)	9 (100.0)		19 (52.8)	16 (48.5)	3 (100.0)	
Depression/anxiety (>67)	17 (47.2)	17 (63.0)	0 (0.0)		17 (47.2)	17 (51.5)	0 (0.0)	
Anxiety/depression pedsq1 q3				0.06				0.33
None (<=89)	28 (77.8)	19 (70.4)	9 (100.0)		28 (77.8)	25 (75.8)	3 (100.0)	
Depression/anxiety (>89)	8 (22.2)	8 (29.6)	0 (0.0)		8 (22.2)	8 (24.2)	0 (0.0)	
PedsQL Total Score (Mean (SD))	70.3 (20.3)	77.7 (15.7)	48.2 (16.4)	<0.0001	70.3 (20.3)	71.1 (21.0)	61.3 (4.9)	0.43

22% reported symptoms of both anxiety and depression; similar trends were seen for EQ-VAS, index, and PedsQL total scores as among those who reported symptoms of either anxiety or depression.

VARIABLES	Anxiety and depression				Moderate/severe anxiety and depression	
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