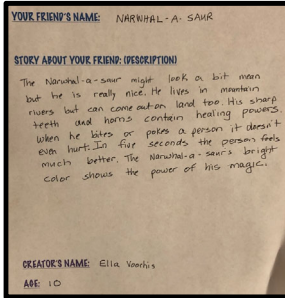




College of Nursing  
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# Research in Progress: The “Narwhal-A-Saur” of Data

## Quality of Life Outcomes with Creative Arts Therapy in Children with Cancer

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### Background

- Children with cancer experience distress and decreased quality of life (QOL).
- Creative arts therapy (CAT) uses art, music, and movement in a therapeutic manner that may improve QOL in children with cancer.
- In adults with cancer, CAT has improved QOL.
- Our pilot work in pediatric oncology showed trends of improved QOL with CAT.

### Objectives and Methods

- Purpose:** to examine the relationship between QOL and CAT in children with cancer
- Hypothesis:** positive dose-response relationship
- Design:** quasi-experimental repeated measures study
- Sample:** oncology patients ages 2-18 yo and their parent proxy
- Instruments:** PedsQL 3.0 Cancer Module
- Intervention:** dose of CAT (# of sessions)

### Results

Variable	Category	No visits (0), Count(%)	Low visits (1-3), Count(%)	High visits (4+), Count(%)	p-value, chi square test	p-value, Fisher exact test
Diagnosis	Liquid Tumor	8 (33.3%)	14 (40.0%)	11 (30.6%)	0.6262	0.6410
	Neuro Tumor	7 (29.2%)	13 (37.1%)	16 (44.4%)		
	Solid Tumor	9 (37.5%)	8 (22.9%)	9 (25.0%)		
Gender	Female	14 (58.3%)	18 (51.4%)	20 (57.1%)	0.7536	0.9237
	Male	10 (41.7%)	16 (45.7%)	15 (42.9%)		
	Non-Binary	1 (2.0%)	1 (2.9%)	1 (2.9%)		
American Indian or Alaska Native	Checked	24 (100%)	34 (97.1%)	36 (100%)	0.4205	0.6211
	Unchecked					
Asian	Checked		3 (8.6%)		0.0703	0.0619
	Unchecked	24 (100%)	32 (91.4%)	36 (100%)		
Black or African American	Checked		3 (8.6%)	3 (8.3%)	0.3385	0.4387
	Unchecked	24 (100%)	32 (91.4%)	33 (91.7%)		
American White	Checked	21 (87.5%)	31 (88.6%)	30 (83.3%)	0.7984	0.8689
	Unchecked	3 (12.5%)	4 (11.4%)	6 (16.7%)		
Ethnicity	Hispanic or Latino	6 (25.0%)	8 (22.9%)	8 (23.5%)	0.9818	1.0000
	Not Hispanic or Latino	18 (75.0%)	27 (77.1%)	26 (76.5%)		
Radiation	Checked	7 (29.2%)	8 (22.9%)	7 (19.4%)	0.6812	0.6794
	Unchecked	17 (70.8%)	27 (77.1%)	29 (80.6%)		
Infused Chemotherapy	Checked	23 (95.8%)	35 (100%)	36 (100%)	0.2243	0.2526
	Unchecked	1 (4.2%)				
Oral Chemotherapy	Checked	10 (41.7%)	16 (45.7%)	12 (33.3%)	0.5569	0.5780
	Unchecked	14 (58.3%)	19 (54.3%)	24 (66.7%)		
Port at Baseline	Yes	2 (8.3%)	35 (100%)	35 (100%)	0.0508	0.0631
	No	22 (91.7%)				
Continuous Variables		(0), Mean ± SD	(1-3), Mean ± SD	(4+), Mean ± SD	p for Low vs. No	p for High vs. Low
Age		9.46 ± 4.93	7.40 ± 4.42	7.25 ± 3.56	0.0713	0.0520
Parents' Highest Level of Education		1.70 ± 0.47	1.81 ± 0.40	1.85 ± 0.36	0.3621	0.1993

- Ninety-five children with cancer (average age 6 yo, SD (4,12)) and their parent proxy were enrolled:
  - 22 participants received no CAT
  - 36 received 1-3 sessions of CAT
  - 35 received > 4 sessions of CAT
- Solid, liquid, and brain tumors were equally divided between the groups ( $p < .05$ )
- No difference between the groups on age, sex, race ( $p < .05$ )
- Analysis continues to evaluate for a dose response relationship

Baseline PedsQL	No visits (0), Mean ± SD	Low visits (1-3), Mean ± SD	High visits (4+), Mean ± SD	p for Low vs. No	p for High vs. No	p for High vs. Low
Child Report	74.13 ± 6.86	68.66 ± 6.42	64.82 ± 6.36	0.3656	0.0994	0.4843
Parent Report	65.18 ± 15.75	64.57 ± 15.11	57.77 ± 19.32	0.8918	0.0949	0.0966

Figure 1. Mean QOL Response Profile for Child Report

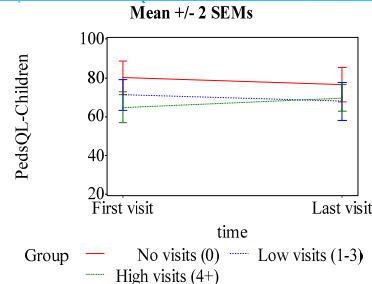
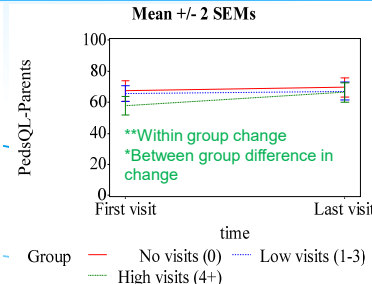


Figure 2. Mean QOL Response Profile for Parent Report, \*\*p<.001, \*p<.05



### Limitations and Ongoing Work

- Length of follow-up is a potential confounding factor
- Plan to truncate the data (e.g. by 6 months follow-up)
- Adjust statistically for length of follow-up
- Next steps: Enter exact dates for each CAT session in order to analyze the dose received compared to the time point of the questionnaire

### Preliminary Conclusions

- Cannot confirm a dose response relationship, but analysis is ongoing.
- Parent report of child QOL suggests dose response.
- Child self-report of QOL does not suggest dose response.
- No CAT was not significantly different than intervention groups, perhaps due to lack of power and selection bias.

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