



Exploring Face-to-Face and Telerehabilitation Outcomes of Indigent Children with Disabilities from Quezon City: A Mixed Methods Study

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Photo from **QC Kabahagi Center for Children with Disabilities**' Facebook page



Photo from **QC Government Website**

- Traditional **face-to-face rehabilitation** services for indigent children with disabilities
- Shift to **Telerehabilitation**



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- **Challenges** of face-to-face rehabilitation and telerehabilitation
 - ✓ **Accessibility**
 - ✓ Child and caregiver **characteristics**

- **Insufficient evidence**
 - ✓ Comparison between the modalities
 - ✓ Perceptions of caregivers on this comparison
 - ✓ Within the context of indigent populations



Research Objectives

1

To compare and contrast occupational therapy **goal attainment, occupational performance, and occupational satisfaction** of **face-to-face** and **telerehabilitation** methods on indigent children with disabilities in a community-based rehabilitation program

2

To describe the **perceptions of caregivers** on **rehabilitation outcomes** of **face-to-face** and **telerehabilitation** methods of indigent children with disabilities in a community-based rehabilitation program



Methodology



Explanatory Sequential Mixed Methods Design

Quantitative: records review

- Census sampling
- **Goal Attainment Scaling** and **Canadian Occupational Performance Measure**
- 65 face-to-face participants
- 300 telerehabilitation participants
- **Independent t-Test** and **Paired t-Test**

Qualitative: primary data

- Purposive sampling
- 2 focus group discussions
- **Inductive analysis**



Results: GAS



Face-to-Face Group	Paired Differences					t	df	Sig. (2-Tailed)	Cohen's d
	Mean	Std. Deviation	S.E. Mean	95% Confidence Interval of the Difference					
				Lower	Upper				
GAS Goal 1 Pre- and Post-Intervention	-2.03	.79	.10	-2.23	-1.84	-20.73	64	.000	-2.57
GAS Goal 2 Pre- and Post-Intervention	-2.02	.86	.11	-2.23	-1.80	-18.96	64	.000	-2.35
GAS Goal 3 Pre- and Post-Intervention	-2.00	.83	.10	-2.21	-1.79	-19.45	64	.000	-2.41

Tele rehabilitation Group	Paired Differences					t	df	Sig. (2-Tailed)	Cohen's d
	Mean	Std. Deviation	S.E. Mean	95% Confidence Interval of the Difference					
				Lower	Upper				
GAS Goal 1 Pre- and Post-Intervention	-1.53	.91	.05	-1.63	-1.42	-28.99	299	.000	-1.68
GAS Goal 2 Pre- and Post-Intervention	-1.59	1.01	.06	-1.70	-1.48	-27.38	299	.000	-1.57
GAS Goal 3 Pre- and Post-Intervention	-1.65	1.11	.07	-1.78	-1.52	-24.98	282	.000	-1.49

Paired t-Test: Increase in scores after face-to-face and telerehabilitation sessions

GAS Goal 1	N	Mean	Std. Deviation	S.E. Mean
Face-to-Face	65	1.03	.79	.10
Telerehabilitation	300	.53	.91	.05

GAS Goal 2	N	Mean	Std. Deviation	S.E. Mean
Face-to-Face	65	1.02	.86	.11
Telerehabilitation	300	.59	1.01	.06

GAS Goal 3	N	Mean	Std. Deviation	S.E. Mean
Face-to-Face	65	1.00	.83	.10
Telerehabilitation	283	.65	1.11	.07

GAS Goal 1	Levene's Test for Equality of Variances		t-Test for Equality of Means							
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		Cohen's d
								Lower	Upper	
Equal variances assumed	14.15	.000	-4.13	363.00	.000	-.50	.12	-.74	-.26	0.56
Equal variances not assumed			-4.53	104.45	.000	-.50	.11	-.72	-.28	0.59

GAS Goal 2	Levene's Test for Equality of Variances		t-Test for Equality of Means							
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		Cohen's d
								Lower	Upper	
Equal variances assumed	15.18	.000	-3.17	363.00	.002	-.43	.13	-.69	-.16	0.44
Equal variances not assumed			-3.51	105.91	.001	-.43	.12	-.67	-.19	0.46

GAS Goal 3	Levene's Test for Equality of Variances		t-Test for Equality of Means							
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		Cohen's d
								Lower	Upper	
Equal variances assumed	11.79	.001	-2.42	346.00	.016	-.35	.15	-.64	-.07	0.33
Equal variances not assumed			-2.89	122.67	.005	-.35	.12	-.60	-.11	0.36

Independent t-Test: Higher scores for the face-to-face group

Results: COPM



Face-to-Face Group	Paired Differences					t	df	Sig. (2-Tailed)	Cohen's d
	Mean	Std. Deviation	S.E. Mean	95% Confidence Interval of the Difference					
				Lower	Upper				
Performance Pre- & Post-Intervention	-4.90	1.87	.23	-5.36	-4.43	-21.10	64	.000	-2.62
Satisfaction Pre- & Post-Intervention	-4.65	2.46	.30	-5.25	-4.04	-15.24	64	.000	-1.89

Telerehabilitation Group	Paired Differences					t	df	Sig. (2-Tailed)	Cohen's d
	Mean	Std. Deviation	S.E. Mean	95% Confidence Interval of the Difference					
				Lower	Upper				
Performance Pre- & Post-Intervention	-2.46	1.41	.08	-2.62	-2.30	-30.17	299	.000	-1.74
Satisfaction Pre- & Post-Intervention	-2.60	1.68	.10	-2.79	-2.40	-26.74	299	.000	-1.55

Paired t-Test: Increase in scores after **face-to-face** and **telerehabilitation** sessions

Performance Post-Intervention	N	Mean	Std. Deviation	S.E. Mean
Face-to-Face	65	8.09	.70	.09
Telerehabilitation	300	6.64	1.62	.09

Satisfaction Post-Intervention	N	Mean	Std. Deviation	S.E. Mean
Face-to-Face	65	8.20	.98	.12
Telerehabilitation	300	7.07	1.74	.10

Performance Post-Intervention	Levene's Test for Equality of Variances		t-Test for Equality of Means							
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		Cohen's d
								Lower	Upper	
Equal variances assumed	37.97	.000	-7.05	363.00	.000	-1.44	.20	-1.85	-1.04	0.97
Equal variances not assumed			-11.28	229.36	.000	-1.44	.13	-1.69	-1.19	1.16

Satisfaction Post-Intervention	Levene's Test for Equality of Variances		t-Test for Equality of Means							
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		Cohen's d
								Lower	Upper	
Equal variances assumed	21.82	.000	-5.09	363.00	.000	-1.14	.22	-1.58	-.70	0.69
Equal variances not assumed			-7.20	164.87	.000	-1.14	.16	-1.45	-.83	0.80

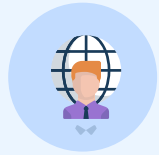
Independent t-Test: Higher scores for the **face-to-face** group

Results: Themes



Factors Influencing Perceived Competence and Self-Efficacy of Caregivers

- ✓ **Complexity** of the Therapy Process
- ✓ **Increased Involvement** in Rehabilitation Sessions



Environment as a Facilitator or Inhibitor during Therapy Engagement

- ✓ **Physical Environment** Utilization as necessitated by **Caregiver Skills and Contexts**
- ✓ Influences of the **Social Environment** on Therapy Engagement
- ✓ **Naturalistic Environment** as an Advantage in Therapy Activities



Effectiveness of Therapy Procedure by Modality

- ✓ Perceived Procedure **Similarities**
- ✓ Advantages of **Hands-on** Assessments



- ✓ **Significant differences** between face-to-face and telerehabilitation
 - Goal attainment, occupational performance, and occupational satisfaction
 - Face-to-face group had higher scores

✓ **Face-to-face rehabilitation** is the **preferred** modality

✓ **Telerehabilitation** as an **alternative** method



Person, environment, and occupational factors

✓ **Benefits and challenges in face-to-face rehabilitation**

- Complexity of therapy process
- Physical and social environment
- Sustainability

✓ **Benefits and challenges in telerehabilitation**

- Continuity of care
- Caregiver's skills
- Environmental considerations



Conclusion



Face-to-face rehabilitation appears to be **more effective**

- ✓ Significant differences in GAS and COPM scores
- ✓ Large effect sizes
- ✓ Caregivers' perceptions

Positive effects of telerehabilitation

- ✓ Filling the gaps of face-to-face rehabilitation

Strengthen **person** and **environment factors**

Enhancement of **occupational factors**

- ✓ Therapy protocols
- ✓ Procedures

Policy reforms in the Philippines



