Integrating the Canadian Occupational Performance Measure and Goal Attainment Scaling in Occupational Therapy: A Structured Approach to Goal Setting

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Introduction

- Goal setting is central to rehabilitation but often lacks structure and consistency.
- COPM (Canadian Occupational Performance Measure) and GAS (Goal Attainment Scale) are validated tools supporting client-centred goal setting.

COPM → Identification of meaningful occupations

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Client priorities & performance/satisfaction ratings

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Translation into SMART goals

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GAS → Structured scaling of goal attainment (-2 to +2)

↓

Outcome evaluation at discharge

Study aim

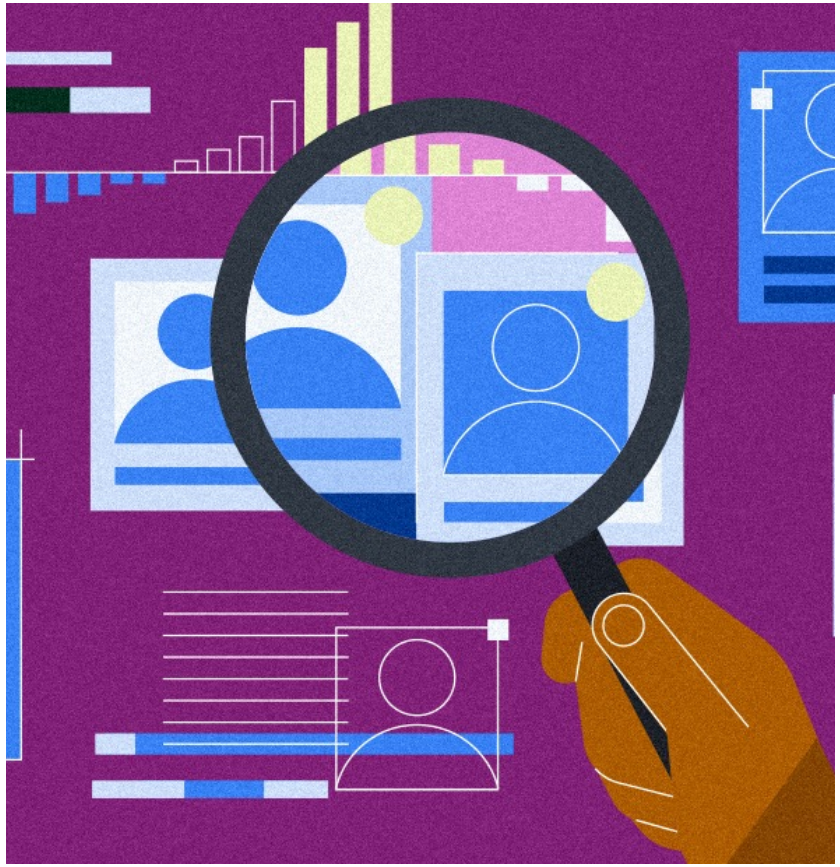
- The pilot study aimed to evaluate whether the combined use of the COPM and GAS appropriately supports goal setting and progress monitoring in such a heterogeneous population.
- Objectives
  - To evaluate the clinical applicability of the combined use of COPM and GAS.
  - To examine the sensitivity of the instruments across different diagnostic groups.
  - To analyze the association between subjective and objective outcome measures.

Methods

- A prospective uncontrolled study
- Pre–post clinical study in five rehabilitation departments at the University Rehabilitation Institute Republic of Slovenia.
- COPM used to identify goals, GAS to structure and evaluate them.

Data Analysis

- Statistical analyses were performed using descriptive statistics (means and standard deviations) and one-way analysis of variance (ANOVA) to compare departments. Bonferroni tests were used for post-hoc comparisons. Statistical significance was set at $p < 0.05$.



Participants

50 adult clients, 10 from each department (amputations, stroke, polytrauma, head injury and spinal cord injury)

Inclusion criteria were:

- age ≥ 18 years,
- first hospitalization at URI Soča with an anticipated,
- rehabilitation stay of at least four weeks,
- the ability to provide informed consent.

We excluded individuals with severe aphasia or cognitive impairment (MMSE ≤ 24), as well as those whose medical condition prevented participation in the planned rehabilitation program.

Procedure and Outcome Measures

1

At the beginning of rehabilitation **(T0)**, an occupational therapist conducted a semi-structured COPM interview. Participants identified **3–4 meaningful occupations** they wished to improve. Each occupation was translated into specific, measurable goals.

2

Goals were rated using GAS. Therapists and clients jointly defined the expected outcome: Expected level of achievement was set at **0GAS** allowed individualized yet standardized goal evaluation.

3

Intervention Phase: Participants received individualized occupational therapy for a minimum of four weeks. Therapy followed the Canadian Practice Process Framework (CPPF). Interventions were tailored to participants' identified goals.

4

Post-Intervention Assessment at the end of rehabilitation **(T1)**, outcomes were reassessed: COPM (performance and satisfaction) GAS changes between **T0 and T1** were calculated for all outcome measures.

5

COPM assesses: Performance Satisfaction Ratings are based on a 10-point scale: Higher scores indicate better outcomes. For each participant: Change score calculated as **Δ COPM (T1 – T0).**

6

GAS scores were converted into normalized T-scores based on the number of goals. The following variables were calculated: **GAS T0** (baseline T-score) **GAS T1** (final T-score)**Δ GAS T-score** (change from T0 to T1) Mean GAS score and the number of goals achieved (score ≥ 0).

Results

Department	N	Mean age ± SD (years)	Women (%)	Mean number of rehabilitation days ± SD
Amputation	10	63,2 ± 21,6	60 %	23,2 ± 8,4
Stroke	10	64,0 ± 12,8	50 %	42,9 ± 16,8
Polytrauma	10	62,5 ± 13,7	40 %	28,6 ± 2,4
Head injury	10	62,5 ± 16,3	50 %	19,6 ± 4,4
Spinal cord injury	10	51,0 ± 15,8	10 %	30,6 ± 6,0
Total	50	60,6 ± 16,4	42 %	29,0 ± 11,9

- Demographic Characteristics

The oldest participants were in the stroke (64.0 ± 12.8 years) and amputation (63.2 ± 21.6 years) groups, while the youngest were in the spinal cord injury group (51.0 ± 15.8 years). The proportion of women was highest in the amputation group (60%) and lowest in the spinal cord injury group (10%). The mean length of rehabilitation ranged from 19.6 ± 4.4 days (head injury) to 42.9 ± 16.8 days (stroke).

Results GAS, COPM

Department	Mean GAS T0 (SD)	Mean GAS T1 (SD)	Δ GAS T-score (SD)	GAS Mean (SD)	Mean nr. of goals scored
Amputation	**36,8 ± 6,7**	50,9 ± 5,7	**14,1 ± 6,4**	1,2 ± 0,3	2,9
Stroke	36,5 ± 9,3	58,6 ± 6,7	22,1 ± 10,6	1,3 ± 0,8	3,0
Polytrauma	**29,7 ± 8,6**	53,1 ± 7,2	23,4 ± 9,6	0,8 ± 1,0	2,3
Head injury	34,8 ± 5,5	51,9 ± 5,2	17,1 ± 7,5	1,1 ± 0,6	2,6
Spinal cord injury	30,5 ± 6,3	59,7 ± 6,9	**29,1 ± 7,4**	1,4 ± 0,6	3,0
Total	**33,7 ± 7,6**	**54,8 ± 7,1**	**21,2 ± 10,1**	**1,2 ± 0,7**	**2,8**

Department	Mean COPM Perf T0 (SD)	Mean COPM Perf T1 (SD)	Δ COPM Perf (SD)	Mean COPM Sat T 0 (SD)	Mean COPM Sat T 1 (SD)	Δ COPM Sat (SD)
Amputation	3,3 ± 1,6	7,0 ± 2,0	3,7 ± 2,7	3,1 ± 1,9	6,6 ± 2,2	3,4 ± 1,6
Stroke	3,3 ± 2,0	6,6 ± 2,6	3,3 ± 2,5	3,6 ± 2,6	6,7 ± 2,6	3,1 ± 3,0
Polytrauma	2,3 ± 1,6	6,2 ± 1,8	**3,9 ± 2,0**	2,4 ± 1,4	6,2 ± 2,3	3,9 ± 2,2
Head injury	3,6 ± 2,1	6,3 ± 2,0	2,7 ± 2,0	3,0 ± 1,4	5,7 ± 1,9	2,7 ± 1,5
Spinal cord injury	3,0 ± 1,9	7,2 ± 2,2	**4,2 ± 2,1**	2,8 ± 1,7	7,3 ± 2,4	**4,6 ± 2,0**
Total	**3,1 ± 1,8**	**6,6 ± 2,1**	**3,4 ± 2,3**	**3,0 ± 1,8**	**6,5 ± 2,3**	**3,5 ± 2,1**

Results

One-way ANOVA

Variable	F	p-value
Δ COPM performance	2,02	0,107
Δ COPM satisfaction	1,14	0,348
Δ GAS T-score	**2,74**	**0,040**
GAS Mean	1,75	0,156
Goals achieved	**3,12**	**0,024**
GAS T0	**3,62**	**0,012**
GAS T1	1,99	0,112

• Post-hoc analysis showed that differences in Δ GAS T-score were significant between amputations and spinal cord injuries clients: the spinal cord injury group achieved significantly greater improvement (+29.1 ± 7.4) than the amputation group (+14.1 ± 6.4). For the number of goals achieved, differences were observed between the stroke unit (3.0) and polytrauma (2.3), as well as between polytrauma and spinal cord injury (3.0). For baseline GAS T-score, the only statistically significant comparison was between amputations and polytrauma, with amputee participants showing higher baseline T-scores.

Conclusion

PILOT STUDY DEMONSTRATES THAT THE COMBINED USE OF THE COPM AND GAS ENABLES COMPREHENSIVE MONITORING OF REHABILITATION OUTCOMES BY INTEGRATING SUBJECTIVE SELF-ASSESSMENT WITH OBJECTIVE GOAL-BASED MEASUREMENT.

ACROSS ALL GROUPS, STATISTICALLY SIGNIFICANT IMPROVEMENTS WERE OBSERVED IN SELF-RATED PERFORMANCE, SATISFACTION, AND GAS T-SCORES, SUPPORTING A GOAL-ORIENTED OCCUPATIONAL THERAPY PROCESS.

SIGNIFICANT DIFFERENCES WERE IDENTIFIED BETWEEN DEPARTMENTS IN BASELINE GAS T-SCORES, THE NUMBER OF GOALS ACHIEVED, AND THE MAGNITUDE OF CHANGE IN GAS T-SCORES. PARTICIPANTS WITH POLYTRAUMA PRESENTED WITH THE LOWEST BASELINE SCORES AND ACHIEVED THE FEWEST GOALS, LIKELY REFLECTING THE COMPLEXITY OF MULTISYSTEM INJURIES. IN CONTRAST, INDIVIDUALS WITH SPINAL CORD INJURIES DEMONSTRATED THE GREATEST IMPROVEMENT IN GAS T-SCORES, POTENTIALLY DUE TO HIGHER MOTIVATION LEVELS OR MORE CLEARLY DEFINED REHABILITATION GOALS, WHILE AMPUTEES SHOWED THE HIGHEST BASELINE SCORES.

THE FINDINGS CONFIRM THE CLINICAL USEFULNESS OF THE COMBINED APPLICATION OF COPM AND GAS ACROSS DIVERSE DIAGNOSTIC GROUPS. DESPITE THE LIMITATIONS INHERENT TO A PILOT STUDY, THE RESULTS SUPPORT THE INTEGRATION OF STRUCTURED GOAL SETTING INTO OCCUPATIONAL THERAPY PRACTICE AND HIGHLIGHT THE NEED FOR FURTHER RESEARCH TO IDENTIFY OPTIMAL, DIAGNOSIS-SPECIFIC INTERVENTION STRATEGIES.

Limitations and Suggestions for Future Research

Limitations:

- The sample size was small which limits statistical power and generalizability.
- Clients selection was opportunistic, based on hospital admission.
- The design lacked a control group.
- Departments were heterogeneous in terms of injury types, making direct comparisons difficult.

Clinical Implications:

- The combined use of COPM and GAS proved useful in this pilot study for heterogeneous clients groups. The instruments allow structured goal setting, ongoing adjustment of interventions, and both objective and subjective monitoring of progress.
- Results highlight the importance of involving clients and families in goal setting, interdisciplinary collaboration, and flexible adaptation of strategies according to diagnosis.
- Implementing such an approach could enhance rehabilitation effectiveness and increase client satisfaction.

“I am a winemaker; this is my occupation.”

Thank you for your attention!