Spring 2015

Goal Attainment Scaling: An Interprofessional Assessment of Student Learning

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Goal Attainment Scaling: An Interprofessional Assessment of Student Learning
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Background
Professional development includes self-assessment, critical thinking, and reflective practice. These skills are universal for health care professionals, but are difficult to concretize and measure. The GAS process can be used to capture this highly individualized data for each student and across academic programs.

This program provides students the opportunity to learn and apply a systematic approach to assessment of personal professional development. The primary goal was implementation of an interprofessional education (IPE) study led by clinical faculty from Occupational Therapy, Nursing, Speech Pathology and Audiology, and Music Therapy at selected clinical training locations.

Specific Aims:
1. To examine development of reflective thinking skills in students enrolled in clinical practicums at WMU
2. To determine the clinical utility of GAS as an interprofessional tool for measuring self-directed change in students’ reflective thinking
3. To create an interprofessional model of teaching, supporting, and measuring professional development

Method
Fall Semester 2014
Student and supervisor training at start of semester:
1. Pizza lunch for interprofessional socializing/networking
2. GAS training video
3. Baseline data collection and analysis

Midterm review of goal status
Final data collection and analysis
Exit survey at end of semester: student and supervisor data

Spring Semester 2014: In Progress
Student and supervisor training at start of semester:
1. Pizza lunch for interprofessional socializing/networking PLUS forming small interprofessional peer groups to promote dialogue throughout semester
2. GAS training video
3. Creation of eLearning course site for participants: discussion boards for student partners ongoing dialogue/support

Midterm review of goal status in progress
Final data collection and analysis scheduled for April/May, 2014

The Instrument: GAS
Goal Attainment Scaling (GAS) is a method of measuring individual and program goal attainment. This tool was originally developed by Kiresuk and Sherman (1968) for practitioners in mental health. GAS involves the use of interviews during goal-setting and re-evaluation to determine progress and, as an outcome measure, offers a framework for self-assessment.

The GAS provides a structured framework for identifying specific, measurable, and objective goals using a five-point numerical scale of -2 to +2. The GAS allows for a comparison of scores among multiple subjects with different goals, making it useful for program evaluation as well (Chapleau, Seroczyński, Meyers, Lamb & Buchino, 2012; Jones, Walley, Leech, Paterson, Common & Metcalfe, 2006; Ottenbacher & Cusick, 1989; Schlősler, 2003).

STUDENT GOAL SHEET

<table>
<thead>
<tr>
<th>Student Initials:</th>
<th>Place a &quot;*&quot; next to scale level that dictates level of functioning at initial assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal Attainment Levels</td>
<td>Goal:</td>
</tr>
<tr>
<td>most unfavorable treatment outcome thought likely</td>
<td>(+2)</td>
</tr>
<tr>
<td>less than expected success with treatment</td>
<td>(+1)</td>
</tr>
<tr>
<td>expected level of treatment success</td>
<td>(0)</td>
</tr>
<tr>
<td>more than expected success with treatment</td>
<td>(-1)</td>
</tr>
<tr>
<td>best anticipated success with treatment</td>
<td>(-2)</td>
</tr>
</tbody>
</table>

Number of participants in GAS study
Fall 2014 (N=34)

- 34 unique students completed the project in Fall 2014, over 4 disciplines
- 32.4% of students were in their first practicum, another 29.4% in their second practicum, and 38.2% in their third or later practicum.
- Most placements (85.3%) were in the Kalamazoo area, across 21 different sites.

Results: Quantitative
- On average, participants reported significantly higher scores on the Goal Attainment Scale (GAS) between beginning of semester baseline (M=2.00, SE 3.18), and mid-term (M=.31, SE=.16), t(24) = -10.23, p<.01, r=.91, a large effect size.
- Also, on average, participants reported significantly higher scores on the Goal Attainment Scale (GAS) at mid-term compared to beginning of semester (M=.28, SE .16), and final scaling compared to mid-term (M=.60, SE=.26), t(20) = 3.07, p<.01, r=.57, a moderate effect size.

<table>
<thead>
<tr>
<th>Paired t-test of GAS scores over time</th>
<th></th>
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<tbody>
<tr>
<td><strong>Pair</strong></td>
<td><strong>Mean (SE)</strong></td>
</tr>
<tr>
<td>Baseline (N=24)</td>
<td>-2.00 (.00)</td>
</tr>
<tr>
<td>Mid-Term (N=24)</td>
<td>-31 (.16)</td>
</tr>
<tr>
<td>Mid-Term (N=20)</td>
<td>-28 (.16)</td>
</tr>
<tr>
<td>Final (N=20)</td>
<td>+60 (.26)</td>
</tr>
</tbody>
</table>

Results: Qualitative
Exit Survey Data Fall 2014:
Respondents: 24 students, 6 clinic supervisors

- How did the initial orientation prepare you? All responses were positive:
  - “video modeling” “It helped me prepare to develop a goal.”
- Benefits of participation:
  - “encouraged me to think more about my personal goal” “It kept me accountable to ask my supervisor questions and be prepared.”
  - Challenges: “Writing my goals was a challenge” “balancing the extra work was sometimes tough”

Discussion
Preliminary findings of this study support the use of GAS as a relevant assessment of student learning for interprofessional groups:
1. Students were able to achieve expected or better than expected goal attainment of their individualized learning goal.
2. Qualitative data overwhelmingly supported the value of GAS in providing a structured process for self-reflection and growth.
3. The primary challenge to IPE was logistics: each academic program’s clinic schedule varied, resulting in difficulties scheduling orientation, midterm check-ins, and exit focus groups, and researchers’ schedules also limited ongoing planning, collaboration and support.

Changes made for Spring 2015 semester, based on exit survey feedback:
1. Students placed in small IPE groups to collaborate on goals and maintain contact throughout semester
2. Creation of ELearning course site for all participants for ongoing access:
   - Training video
   - Discussion boards
3. Drop boxes for GAS forms and online exit survey
3. End of semester meeting changed to focus group to provide additional data collection and IPE experience

Future Work
- Seek external funding for student assessment using GAS
- Explore feasibility of GAS mobile application to decrease logistical challenges

Acknowledgements
This work was supported by funds from the Faculty Assessment Award Program, Institutional Effectiveness Office, Western Michigan University.
Special thanks also to Kathryn Petronio, Morgan Jarrard, & Brittany Neuser, graduate Assistants