Development and Validation of a New Measure of Scholarly Writing Motivation: The Scholarly Writing Motivation Scale

Kacey Hight, PharmD Candidate; Nalin Payakachat, PhD; Melanie Reinhardt, PharmD; Amy M. Franks, PharmD
Department of Pharmacy Practice, College of Pharmacy, University of Arkansas for Medical Sciences, Little Rock, Arkansas

Background

• Scholarship is a fundamental responsibility for pharmacy practice (PHPR) faculty
• Most recent publication rate estimates report 0.5 papers/faculty member/year published in peer-reviewed journals1
• Literature is lacking on internal barriers to scholarly writing

Objectives

1. Develop and validate a noncognitive measure of motivation in scholarly writing
2. Determine associations between the Scholarly Writing Motivation Scale (SWMS) and individual publication output of PHPR faculty within U.S.-based colleges of pharmacy

Methods

• 17-item Research Motivation Scale (RMS) was modified with permission from original author2
• The SWMS was adapted from the RMS and tested for clarity, readability and content among five PHPR faculty
• A survey was administered online to US-based PHPR faculty through department chair listservs
• Internal consistency reliability, dimensionality, and construct validity were assessed using Cronbach’s alpha, exploratory factor analysis, and confirmatory factor analysis, respectively
• Discriminative validity was evaluated by t-test using participants’ self-reported total number of publications

Scholarly Writing Motivation Scale (SWMS)3

1. Writing for publication provides me with feelings of satisfaction
2. I want to pursue less difficult writing projects that I know will guarantee a successful outcome (e.g. acceptance for publication)
3. I write for publication to earn the respect of my colleagues
4. I write for publication for the joy of it
5. When the preliminary results of my writing projects have not met my expectations, I want to cut my losses and move on to the next writing project
6. I want to be recognized as a competent writer of published works
7. I have a general feeling of well-being when I’m involved in writing for publication
8. I sometimes want to avoid difficult writing projects because I’m concerned that I may fail
9. I write for publication to leave a mark on my field
10. I want to receive awards for my publications
11. I sometimes want to give up when my writing project is not proceeding as I would like
12. Writing for publication in and of itself is enjoyable to me
13. I want to focus my energy on other writing projects when the projects I am working on is not progressing as expected
14. I enjoy writing for publication for its own sake
15. I want to avoid pursuing difficult writing projects that may result in a negative outcome (e.g. not accepted for publication)
16. Time seems to fly by when I’m writing for publications
17. I want to be recognized by my colleagues for sound publications

*The SWMS uses Likert scale scoring where 1=strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree; final score is a total summary score
†Item removed from final scale

Conclusions

• The final SWMS has 16 items
• Two domains ‘Joy’ (10 items) & ‘Challenge’ (6 items) (Figure 1)
• Item 3 was dropped due to low factor loading, guided by exploratory factor analysis
• SWMS total score ranges from 16 to 80
• Higher scores indicate higher motivation for scholarly writing
• Average SWMS scores of participants in the high publication group were significantly higher than those in the low publication group (Figure 2)
• Internal consistency reliability for the final 16 item scale was demonstrated with Cronbach’s alpha coefficients for Joy=0.91 and Challenge=0.81
• Construct validity was confirmed with a good model fit (RMS error of approximation=0.07 [95% CI: 0.05–0.08], Bentler comparative fit index=0.96)
• Domains of ‘Joy’ and ‘Challenge’ were moderately correlated (r=0.5), showing convergent validity

Results

Table 1: Participant demographic characteristics (n=237)

<table>
<thead>
<tr>
<th>Age (y)</th>
<th>N (%) or mean ± SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>41.7 ± 10.5</td>
<td></td>
</tr>
</tbody>
</table>

| White | 171 (81.4%) |
| Public | 139 (66.2%) |
| Professor | 45 (21.3%) |
| Associate Professor | 78 (37.0%) |
| Assistant Professor | 78 (37.0%) |
| High Publishers (≥19 career publications) | 82 (39.4%) |
| Low Publishers | 126 (60.6%) |

Table 2: Comparison of SWMS score between high and low publishers

<table>
<thead>
<tr>
<th>SWMS Score</th>
<th>High Publishers</th>
<th>Low Publishers</th>
</tr>
</thead>
<tbody>
<tr>
<td>59.3</td>
<td>pr&lt;.001</td>
<td></td>
</tr>
<tr>
<td>50.1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 1: Confirmatory factor analysis for the final 16 item SWMS

- Higher scores indicate higher motivation for scholarly writing
- SWMS is a valid measure to explore motivation for scholarly writing among PHPR faculty
- Easy to score and interpret
- May be a useful supplement among PHPR department chairs and faculty development leaders to guide faculty development and encourage scholarly writing

Figure 2: Discriminative validity testing for the SWMS between high and low publishers where high publishers denotes those faculty who reported publishing more than the mean total of 19 peer-reviewed publications throughout their PHPR career