

Running head: SELF-EFFICACY AS AN

Student self-efficacy as an outcome of social work education

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Abstract

Social work educators need reliable and valid measures of educational outcomes to meet the increasing demands of social work program development and the accreditation process. The research reported here is one element in an ongoing program that is attempting to develop a social work educational assessment approach using the Social Cognitive Theory construct self-efficacy. In this replication study with 331 MSW students, we found evidence supporting the reliability and sensitivity to change of the Social Work Self-Efficacy scale.

Introduction

The Social Cognitive Theory construct self-efficacy (e.g., Bandura, 1977; 1982; 1995; 1997a), which refers to an individual's confidence in their ability to successfully perform a particular set of behaviors, has been used to explain human behavior across a variety of disciplines, including psychology, education, rehabilitation, family nursing, family medicine and social work (e.g., Bieschke, Bishop & Herbert, 1995; Bishop & Bieschke, 1998; Hackett & Betz, 1995; Laschinger, McWilliam & Weston, 1999). More specifically, self-efficacy has been employed as a predictor of educational outcomes (e.g., Bandura, Barbaranelli, Caprara & Pastorelli, 1996) and as an educational outcome (e.g., Larson & Daniels, 1998; Multon, Brown & Lent, 1991).

Hull, Mather, Christopherson and Young (1994) surveyed U.S. social work programs (BSW, MSW, DSW/PhD) regarding the outcome assessment methods that they used. In the category of student-focused methods, 'student completion of required courses' and 'formal alumni surveys' were the most prevalent. 'Pre/post or value added testing' was only used by 29% of the BSW, 28% of the MSW and 34% of the doctoral programs. The research reported below, a pretest-posttest-retrospective pretest replication study, sought to extend our ongoing attempts at assessing the impact of social work education (e.g., Holden, Cuzzi, Rutter, Rosenberg & Chernack, 1996; Holden, et al., 1997; Holden, Cuzzi, Rutter, Chernack, & Rosenberg, 1997; Holden, Barker, Meenaghan & Rosenberg, 1999).

The frequency of replication of prior research is less than optimal in the behavioral sciences (e.g., Bornstein, 1990; Neulip & Crandall, 1990; Rosenthal,

1990). Partially in response to this situation, this article describes a direct replication of prior research in which changes in masters students' self-efficacy regarding social work practice were assessed (Holden, Meenaghan, Anastas & Metrey, 2002). It was hypothesized that, as in the prior study, evidence would be found supporting the reliability and sensitivity to change of the *Social Work Self-Efficacy* scale (SWSE).

Method

Participants

The sample for consisted of 318 MSW students at pretest and 331 at posttest for the class of 2001 in a large, urban, private, Northeastern US school of social work. All students present in each class section on the day of administration were invited to participate, resulting in usable response rates of 95% & 74% of those scheduled to be in attendance, respectively.

Measure

The SWSE is based on Social Cognitive Theory and developed according to Bandura's (1997b) guidelines. It is a 52-item scale in which respondents indicate how confident they are *today* in their ability *to successfully perform the professional task*, described in the SWSE item. They indicate their level of confidence on a 0-100 scale [0 = cannot do at all; 50 = moderately certain can do; 100 = certain can do]. Respondents are told to consider 'successfully' as meaning that they would be able to perform the specific task in a manner that an experienced social work supervisor would think was excellent. The SWSE takes approximately 15 minutes to complete and has a readability

estimate of Flesch-Kincaid Grade Level: 9.9, which is appropriate for the sample used here (Ley & Florio, 1996).

In prior research focused on a different self-efficacy scale (Holden, Barker, Meenaghan & Rosenberg, 1999), the Cronbach's alpha for the SWSE total scale was .96. Preliminary evidence supporting the construct validity of the SWSE was provided by a large positive correlation ($r = .58$) between the SWSE and the Social Work Empowerment scale (Frans, 1993). Subsequently, in the two earlier studies in this series, the Cronbach's alpha was .98 for the SWSE at pretest, in each. In addition, statistically significant results from tests of pretest-posttest change were obtained in both studies, indicating that the SWSE is sensitive to change (Holden, Meenaghan, Anastas & Metrey, 2002). In the replication reported here, the Cronbach's alphas for the total SWSE was .99 at pretest and .98 at posttest. Factor analysis was not employed in these studies because the results have had the most utility for curriculum planning when a total scale and individual item results are used.

Procedure

This was a pretest-posttest-retrospective pretest (see below) design. In order to maintain anonymity, an identification number was created by the participants according to a predetermined format. This allowed us to match pretests with posttests without being able to identify a particular individual. This approach was used to decrease the influence of socially desirable responding (Paulhus, 1991). However, this approach means that no potentially identifying demographic information was collected, which in turn precluded most analyses of within group variance.

Response shift bias (RSB). RSB may occur if self-report measures are used in a pretest - posttest intervention study. Individuals may change their understanding of the construct being measured over the course of the study, and this changed understanding may bias pretest-posttest comparisons (Howard & Dailey, 1979; Sprangers, 1988). The possible presence of RSB is assessed with the use of a retrospective pretest-posttest design, the distinctive feature of which is retrospective pretest or the 'then' test (e.g., Howard, et al., 1979, Howard, Dailey & Gulanick, 1979; Howard, Schmeck & Bray, 1979). Participants answer the same pretest questions again at posttest. Each item is answered first according to their perception of themselves now and then according to their current perception of themselves at pretest [thentest].

Results

The mean and standard deviation for each self-efficacy item at pretest are presented in Table 1 along with the amount of change between pretest and posttest. The primary focus in our studies is on change at the level of individual item self-efficacy ratings regarding particular behavioral performances rather than more generalized change, as the individual item data is more useful information for curricular modification. Mean SWSE item scores range from 47.4 to 81.2 at pretest. As can be seen by the bolded cell entries in Table 1, at pretest students reported being *most confident* in their abilities to:

- ▶ employ empathy to help clients feel that they can trust you
- ▶ provide emotional support for clients
- ▶ practice in accordance with the ethics and values of the profession

Students were *least confident* in their abilities to:

- ▶ evaluate their own practice using an appropriate research method
- ▶ analyze a critical piece of welfare legislation
- ▶ participate in using research methods to address problems encountered in practice and agency based settings

Insert Table 1 about here

Table 2 portrays pretest-posttest-thentest changes in self-efficacy for the SWSE total scale. A Bonferroni adjustment (Cliff, 1987) was used to establish an overall alpha level of .05 for the set of analyses of differences (each of the four comparisons was done using alpha of .0125). Given the non-normal distributions of the scale scores, these comparisons were done using the Wilcoxon signed rank test. All of these comparisons were statistically significant at this conservative alpha level: pretest – posttest; thentest – posttest; thentest – pretest; thentest – posttest (using the larger sample that included participants who did not have pretests). The pretest – posttest comparison indicates that students experienced statistically significant increases in self-efficacy during the program, as do both of the thentest – posttest comparisons. The thentest – pretest comparison indicates that RSB may have been operating – that is, in retrospect students thought they should have been significantly less confident at the beginning of the program than they had actually been (students did not have their original ratings in front of them during the posttest/thentest).

Insert Table 2 about here

The pre-post change on the total scale SWSE was converted to the common effect size - U_3 (Cohen, 1988, see Table 2) as had been done in our prior research and then compared to the effect sizes from Lipsey and Wilson's 1993 meta-analysis of meta-analyses of studies of psychological, educational and behavioral interventions. U_3 is the percentage of scores on the pretest that are exceeded by the median score on the posttest and it ranges from 0-100 in value. The average U_3 for the 302 meta-analyses covered by Lipsey and Wilson was 69.1. The average effect size for the subset of studies in the Lipsey and Wilson study that were one-group, pretest-posttest studies (the design used in our studies) was 76.5. The U_3 representing pre-post change in our current study was 89.6, exceeding the average U_3 for one-group, pretest-posttest studies in the Lipsey and Wilson meta-analysis. In our original study and the first replication, the comparable U_3 's were 88.8 and 83.3.

Discussion

This group of students entered this masters program slightly more than moderately confident in their ability to successfully engage in social work practice, although there was substantial variability in self-efficacy across the range of specific professional tasks covered in the SWSE. Students experienced statistically significant increases in self-efficacy over the course of their time in the program. In addition, the degree of pre-post change was larger than that found in other studies reported in the literature and similar to the degree of change observed in our earlier studies. As hypothesized and as was found in prior research, the SWSE appears to be internally reliable and sensitive to change. Finally, evidence was obtained supporting the

existence of response shift bias: The SWSE thetest mean was significantly lower than the actual SWSE pretest mean.

However, these findings should obviously be viewed with caution as they with are based on a non-random, convenience sample of social work students and self-report data. This study was carried out in a single school, in a unique city, by a single group of investigators. In addition, this was basically a single group, pretest-posttest study. Finally, attrition over the course of the study is also a potential threat to internal validity. All of these caveats may apply to the generalizability of these findings.

The SWSE was designed to measure change over the course of the masters curriculum in a particular school. The SWSE appears to do that and is being applied in other settings. Our current research attempts to increase the generalizability of this self-efficacy approach, by creating a self-efficacy scale that assesses outcomes relative to the objectives set by CSWE for the Foundation year which are relevant to all masters programs (CSWE, 2002).

Conclusion

The social work profession needs new and improved approaches to educational outcomes assessment (e.g., Garcia & Floyd, 2002). While there continues to be a paucity of freely available, theoretically based, student focused outcome measures with demonstrably sound psychometric properties, the self-efficacy approach described here represents a viable addition to the list of possibilities.

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Table 1. Individual pretest SWSE items and descriptive statistics for class of 2001 (n=318).

<i>How confident are you that you can. . . .</i>	Pretest Mean	SD	Pre-post Change¹
<i>ESSW Items 1-19</i>			
1. initiate and sustain empathic, culturally sensitive, non-judgmental, disciplined relationships with clients?	70.2	20.5	18.9
2. elicit and utilize knowledge about historical, cognitive, behavioral, affective, interpersonal, and socioeconomic data and the range of factors impacting upon client to develop biopsychosocial assessments and plans for intervention?	52.6	24.3	34.1
3. apply developmental, behavioral science and social theories in your work with individuals, groups and families?	53.2	24.9	30.1
4. understand the dialectic of internal conflict and social forces in a particular case?	59.0	23.7	25.6
5. intervene effectively with individuals?	63.9	23.6	23.0
6. intervene effectively with families?	56.6	24.7	20.1
7. intervene effectively with groups?	56.3	24.7	24.2
8. work with various systems to obtain services for clients (e.g., public assistance, housing, Medicaid, etc.)?	61.9	28.3	19.6
9. assume the social work role of change agent / advocate by identifying and working to realistically address gaps in services to clients?	58.2	25.8	23.7
10. function effectively as a member of a service team within the agency and service delivery system, consistently fulfilling organizational and client-related responsibilities?	67.6	23.1	21.6
11. maintain self-awareness in practice, recognizing your own personal values and biases, and preventing or resolving their intrusion into practice?	70.5	19.4	19.5
12. critically evaluate your own practice, seeking guidance appropriately and pursuing ongoing professional development?	73.9	20.4	17.3

Table 1 (Cont'd.)

<i>How confident are you that you can. . . .</i>	Pretest Mean	SD	Pre-post Change¹
13. practice in accordance with the ethics and values of the profession?	79.6	20.0	12.5
14. analyze a critical piece of welfare legislation?	51.1	25.6	22.5
15. define the impact of a major social policy on vulnerable client populations (e.g., the Welfare Reform Act)?	54.9	27.3	21.9
16. use library and on-line resources to retrieve published articles and reports from the empirical research literature?	71.7	25.9	15.9
17. critically review and understand the scholarly literature?	68.4	22.2	20.5
18. evaluate your own practice using an appropriate research method (e.g., single system designs, brief measures such as scales, indexes, or checklists)?	47.4	27.0	28.3
19. participate in using research methods to address problems encountered in practice and agency based settings?	51.4	26.8	25.3
<i>SWSE-PSI Items: Therapeutic Techniques 20-35</i>			
20. teach clients skills to relieve their own stress?	65.4	23.0	19.7
21. educate clients about how to prevent certain problems from reoccurring?	64.3	22.7	21.8
22. help clients to reduce dysfunctional ways of thinking that contribute to their problems?	62.0	23.7	23.0
23. help clients to anticipate situations that can cause problems for them?	65.2	22.4	22.4
24. teach clients specific skills to deal with certain problems?	64.4	23.2	22.7
25. help clients to understand better how the consequences of their behavior affect their problems?	66.5	22.5	21.6
26. teach clients how to manage difficult feelings?	62.6	23.2	22.9
27. demonstrate to clients how to express their thoughts and feelings more effectively to others?	65.0	22.9	23.6

Table 1 (Cont'd.)

<i>How confident are you that you can. . . .</i>	Pretest Mean	SD	Pre-post Change¹
28. help clients to practice their new problem-solving skills outside of treatment visits?	61.1	23.5	23.3
29. teach communication skills to clients?	62.9	23.5	22.4
30. teach clients how to manage their own problem behaviors?	59.9	23.8	24.4
31. show clients how to reward themselves for progress with a problem?	64.7	22.7	21.1
32. teach clients how to accomplish tasks more effectively?	63.1	22.3	20.8
33. coach clients in how to make decisions more effectively?	61.5	22.6	22.8
34. teach clients the skills for reducing unhealthful habits?	62.2	23.1	21.0
35. show them how to set limits for others' dysfunctional behavior?	60.6	23.1	23.5
<i>SWSE-PSI Items: Case Management 36-42</i>			
36. assess the level of their material resources?	62.4	23.8	22.2
37. monitor the delivery of services provided by several other providers?	61.2	24.6	21.4
38. advocate on others behalf?	69.2	23.7	19.5
39. make referrals to other services?	70.0	26.8	21.6
40. analyze social problems and policies relevant to the client's problems?	62.4	23.5	22.3
41. provide information about other services available to clients?	67.0	26.4	22.5
42. network with agencies to coordinate services?	65.8	27.5	22.6
<i>SWSE-PSI Items: Supportive 43-48</i>			
43. reflect thoughts and feelings to help clients feel understood?	73.9	19.8	18.2
44. employ empathy to help clients feel that they can trust you?	81.2	17.0	13.3

Table 1 (Cont'd.)

<i>How confident are you that you can. . . .</i>	Pretest Mean	SD	Pre-post Change¹
45. provide emotional support for clients?	80.6	17.3	13.4
46. help clients feel like they want to open up to you?	78.3	18.4	14.6
47. employ the treatment relationship so clients can feel accepted for who they are?	74.1	20.3	16.1
48. point out their successes to increase their self-confidence?	78.0	19.1	15.5
<i>SWSE-PSI Items: Treatment Planning / Evaluation 49-52</i>			
49. define the client's problems in specific terms?	63.8	23.1	24.8
50. collaborate with clients in setting intervention goals?	65.1	23.7	23.4
51. define treatment objectives in specific terms?	61.0	24.8	26.6
52. ask clients to evaluate the effects of treatment on themselves?	63.9	24.4	22.4

¹The pre-post change scores are based on the smaller subset of participants for whom both the pretest and the posttest were available.

Table 2. SWSE pre-post-thentest outcomes.

Scale	Pretest Mean	Posttest Mean	U_3 ¹	Thentest Mean	Posttest Mean Full Post Sample	Thentest Mean Full Post Sample
SWSE total scale	64.6	84.1 ²	89.6	54.0 ^{3,4}	84.5	57.5 ⁵

Note. There is variation in n across comparisons due to missing data (e.g., students who were absent from class, refused to participate, failed to recognize their own id number, advanced standing students who did not take the pretest, etc.)

¹The effect size representing the amount of pre-post change is U_3 (Cohen 1988).

²Significant pretest vs. posttest comparison, $p < .0125$ (2 tailed), Wilcoxon signed rank test, $n = 184$.

³Significant thentest vs. posttest comparison, $p < .0125$ (2 tailed), Wilcoxon signed rank test, $n = 183$.

⁴Significant thentest vs. pretest comparison, $p < .0125$ (2 tailed), Wilcoxon signed rank test, $n = 183$.

⁵Significant thentest vs. posttest comparison, $p < .0125$ (2 tailed), Wilcoxon signed rank test, $n = 331$. The larger n here includes those who had usable data for the Posttest and Thentest only.