

# Supplemental Material

*CBE—Life Sciences Education*

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Modified School Burnout Inventory (SBI)

Please choose the alternative that best describes your situation (estimation from previous month)

Scale:

- 1 = Completely disagree
- 2 = Partly disagree
- 3 = Disagree
- 4 = Partly agree
- 5 = Agree
- 6 = Completely agree

Items:

- 1. I feel overwhelmed by my graduate program (EXH1)
- 2. I feel a lack of motivation in my graduate program and often think of giving up (CYN1)
- 3. I often have feelings of inadequacy in my graduate program (INAD1)
- 4. I often sleep badly because of matters related to my graduate program (EXH2)
- 5. I feel that I am losing interest in my graduate program (CYN2)
- 6. I'm continually wondering whether my graduate program has any meaning (CYN3)
- 7. I brood over matters related to my graduate program a lot during my free time (EXH3)
- 8. I used to have higher expectations of my graduate program than I do now (INAD2)
- 9. The pressure of my graduate program causes me problems in my close relationships with others (EXH4)

Note. EXH = exhaustion at graduate program; CYN = cynicism toward the meaning of graduate program; INAD = sense of inadequacy at graduate program.

Patient Health Questionnaire-9 (PHQ-9)

Over the past 2 weeks, how often have you been bothered by any of the following problems?

Scale:

0 = Not at all

1 = Several days

2 = More than half the days

3 = Nearly every day

Items:

1. Little interest or pleasure in doing things

2. Feeling down, depressed or hopeless

3. Trouble falling asleep, staying asleep, or sleeping too much

4. Feeling tired or having little energy

5. Poor appetite or overeating

6. Feeling bad about yourself - or that you're a failure or have let yourself or your family down

7. Trouble concentrating on things, such as reading the newspaper or watching television

8. Moving or speaking so slowly that other people could have noticed. Or, the opposite - being so fidgety or restless that you have been moving around a lot more than usual

9. Thoughts that you would be better off dead or of hurting yourself in some way

10. If you checked off any problems, how difficult have those problems made it for you to do your work, take care of things at home, or get along with other people?

0 = Not difficult at all

1 = Somewhat difficult

2 = Very difficult

3 = Extremely difficult

Modified Work and Social Adjustment Scale (WSAS)

People's problems sometimes affect their ability to do certain day-to-day tasks in their lives. To rate your problems look at each section and determine on the scale provided how much your problem impairs your ability to carry out the activity. This assessment is not intended to be a diagnosis. If you are concerned about your results in any way, please speak with a qualified health professional.

Scale:

0 = Not at all

1

2 = Slightly

3

4 = Definitely

5

6 = Markedly

7

8 = Very severely

Items:

1. Because of mental health challenges, my ability to work is impaired.
2. Because of mental health challenges, my home management (cleaning, tidying, shopping, cooking, looking after home or children, paying bills) is impaired.
3. Because of mental health challenges, my social leisure activities (with other people e.g. parties, bars, clubs, outings, visits, dating, home entertaining) are impaired.
4. Because of mental health challenges, my private leisure activities (done alone, such as reading, gardening, collecting, sewing, walking alone) are impaired.
5. Because of my mental health challenges, my ability to form and maintain close relationships with others, including those I live with, is impaired.

Modified Employment Opportunity Index (EOI)

Scale:

- 1 = Strongly disagree
- 2 = Disagree
- 3 = Neutral
- 4 = Agree
- 5 = Strongly agree

Items from original measure:

- 7. I have a farreaching “network” of contacts which could help me find out about other job opportunities.
- 11. There simply aren’t very many jobs for people like me in today’s job market. (R)
- 12. Given my qualifications and experience, getting a job after graduation would not be very hard at all.
- 13. I can think of a number of organizations that would probably offer me a job if I was looking.
- 16. I have contacts who might help me line up a new job.
- 24. My work and/or social activities tend to bring me in contact with a number of people who might help me line up a new job.
- 28. My spouse’s career makes it very difficult for me to find a job after graduation that will fit our needs. (R)
- 29. There are factors in my personal life (e.g., school age children, relatives, etc.) which make me concerned about finding a job after graduation.

Items added to original measure:

- 1. I understand the career paths available to me.
- 2. I am not concerned about finding a job after graduation.
- 3. My program and advisor have explored different career options with me.
- 4. I am not concerned about my financial status after graduation.

Note. Items from original measure have numbers indicating the original order in the survey. (R) = item is reverse scored.

Modified Graduate Program Climate Scale (GPCS)

Scale:

- 1 = Almost never
- 2 = Occasionally
- 3 = Frequently
- 4 = Almost always

Items:

- 2. Students feel that faculty are “on their side.”
- 3. My program makes students enthusiastic about learning.
- 4. The Director of Graduate Studies (DGS) really cares about biomedical students.
- 6. Although we (the faculty and graduate students) don’t always agree, we can share our concerns with each other openly.
- 7. Faculty feel pride in the program and in its students.
- 8. I think faculty in my program care about me as a person and are concerned about more than just how well I perform my role at school.
- 10. Students can count on faculty to listen to their side of the story and to be fair.
- 12. I feel wanted and needed in my program.
- 13. Faculty in my program are proud to be faculty.
- 15. Faculty and students would rise to the defense of the program if it were challenged.
- 16. Most people in my program are kind.
- 17. Most of the faculty really try hard to get to know the graduate students.
- 18. Faculty here make a real effort to understand difficulties graduate students may be having with their work.
- 19. Faculty in this program seem to go out of their way to be friendly toward graduate students.
- 20. The faculty in this program always seem ready to give help and advice (on the best way to learn something new).
- 21. Faculty in this program generally take graduate student ideas and interests seriously.
- 22. Students in my program are proud to be students here.
- 23. Students feel pride in the program and in the faculty.

Note. Item numbers indicate the original order in the survey.

Modified Research Training Environment Scale-Revised (RTES-R)

Scale:

1 = Disagree

2 = Somewhat disagree

3 = Neutral

4 = Somewhat agree

5 = Agree

N/A = not applicable to this relationship at this time

Items from original measure:

1. In general, my relationship with my advisor is both intellectually stimulating and interpersonally rewarding. (If your advisor has been newly assigned or chosen, respond in terms of what you expect the relationship to be.)
2. My graduate program rarely acknowledges the scholarly achievements of students. (R)
3. Many of our faculty do not seem to be very engaged in the research their graduate students are doing. (R)
4. The faculty do what they can to make research requirements such as the thesis and dissertation as rewarding as possible.
5. The faculty here only seem to notice a few selected students in terms of reinforcing scholarly achievements. (R)
6. My graduate program provides concrete support for graduate student research (e.g., access to computers, travel money for making presentations, research supplies, or free postage for mailing surveys).
7. I feel that my advisor expects too much from my research projects. (R)
8. There is informal sharing of research ideas and feelings about research ideas in my program.
9. My advisor understands and accepts that any piece of research will have its methodological problems.
10. Faculty members often invite graduate students to be responsible collaborators in the faculty members' own research projects.
11. I was encouraged to get involved in some aspects of research early in my graduate training.
12. Because of the diversity of research approaches among faculty members in my program, I would be able to find help learning about virtually any major research approach, e.g. field, laboratory, experimental, qualitative.
13. In my graduate training program there are opportunities to be part of research teams.
14. I have felt encouraged during my training to find and follow my own scholarly interests.
15. My training program faculty tend to produce research that is important to the field.
16. The research climate here is one in which students can get in touch with their own curiosity and with the research questions they themselves want to ask.
18. The faculty members of my graduate program enjoy discussing ideas.
19. Much of the research in which we become involved prior to the thesis is organized in a way that is highly anxiety provoking to students. (R)
20. Students in my program receive sound training in how to design research experiments and logically analyze research data.
21. I have gotten the impression in my graduate training that my research will be considered worthwhile.

22. The faculty in my graduate training program is involved in the conduct and publication of high-quality research (or theory).
23. The core courses we are required to take are not relevant to the development of my scientific thinking. (R)
24. We do not receive sound training in my program on applied, practical, and less traditional approaches to research. (R)
25. The statistics courses we take do a good job, in general, of showing students how statistics are actually used in biomedical research.
26. There is a sense around here that being on a research team can be fun, as well as intellectually stimulating.
28. My graduate training program has enabled me to see the value of conducting both basic and translational scientific research.
29. The faculty members of my graduate program encourage me to pursue the research questions in which I am interested.
30. My advisor offers much encouragement to me for my research activities and accomplishments.
31. Faculty members in my program use an extremely narrow range of research methodologies. (R)
32. In my research training, the focus has been on understanding the logic of experimental design.
33. Some of the faculty teach students that during a phase of the research process, it is important for the researchers to “look inward” for interesting research ideas.
34. Generally, students in my training program do not seem to have intellectually stimulating and interpersonally rewarding relationships with their research advisors. (R)
35. It is unusual for first-year students in this program to collaborate with advanced students, postdocs, or faculty on research projects. (R)
36. There seems to be a general attitude here that there is one best way to do research. (R)
37. I have the feeling, based on my training, that my thesis (or dissertation) needs to be completely original and revolutionary for it to be acceptable to the faculty. (R)
36. My program provides me with opportunities to obtain high-quality quantitative or statistics training.
40. I get the impression from my training that, although a single study does not revolutionize thinking in the scientific community, such a study can contribute a useful piece to an unfolding body of knowledge.
41. This training environment promotes the idea that, although parts of research must be done alone, other parts may involve working closely with other colleagues.
43. Faculty seem interested in helping students appreciate the broader importance or societal value of our research.
44. Most faculty do not seem to really care if students are genuinely interested in research. (R)
45. My graduate training experience will be useful in a variety of careers, even outside of tenure-track academic research.
46. During their first year in the program, students take a research course aimed at developing research skills, interests, and confidence.
47. I feel that I need to choose a research topic of interest to my advisor at the expense of my own interests. (R)



49. Students in our program feel that their personal research ideas are squashed during the process of collaborating with faculty members, so that the finished project no longer resembles the student's original idea. (R)
50. Students here seem to get involved in thinking about research from the moment they enter the program.
52. The faculty members are quite open in sharing their research with their students.
53. The faculty members of my graduate program show excitement about research and scholarly activities.

Items added to original measure:

1. If I needed to learn a technique or method from another faculty or a member of their lab, I would be comfortable asking for the help I needed.
2. I feel that it is my responsibility to master the core knowledge of my discipline. (R)
3. The first two years of research training (e.g., classes and rotations) are beneficial to my development as a scientist.
4. The first two years of research training (e.g., classes and rotations) are intellectually stimulating.
5. I understand how to balance the competing demands of class work and lab work for rotations.
6. The time spent in doing a rotation is beneficial to my development as a scientist.
7. I am clear on what is expected of me during my rotations.
8. I understand the prelim exam process and expectations.
9. I know where to find information about how to succeed in the prelim.
10. The prelim exam was a useful way to assess my scientific development at that point in my graduate career.

Note. Items from original measure have numbers indicating the original order in the survey.(R) = item is reverse scored.

History Interview (THI-4) – Intake Version

**THI Part 1: Psychotherapy & Other Counseling**

S1   2   TIME FRAME COVERED BY INTERVIEW (1 = Lifetime, 2 = Last Year)

S2 \_\_\_\_\_ Have you received help from any kind of therapist, psychologist, psychiatrist, or medical provider prescribing you psychiatric medications in the past year? (0 = No, 1 = Yes).

If no, discontinue THI.  
If yes, who have you seen?

Treatment provider #1 (e.g. sequence #1):  
\_\_\_\_\_

Treatment provider #2 (e.g. sequence #2):  
\_\_\_\_\_

Treatment provider #3 (e.g. sequence #3):  
\_\_\_\_\_

1a. \_\_\_\_\_ Sequence number

2. \_\_\_\_\_ 2a Name (Person)

2b Name (Program) \_\_\_\_\_

3. \_\_\_\_\_ Exact description of component/ provider/program  
(1=Indiv. Tx/coun. 2=group tx/coun 3=formal drug/ETOH trmt 4=psychiatrist 5=medication prescribed by PCP, NP, PA)

4. \_\_\_\_\_ Gender  
(1=Male, 2=Female; 3=Both, e.g., group co-leaders; or alternating leaders).

5. \_\_\_\_\_ Highest degree  
(1=Ph.D./PsyD, 2=MD, 3=EdD, 4=RN, ARNP 5=MSW, 6=MA,MS, 7=BA, 8=Other, -7=Don't know, -8=12-step, N/A)

6. \_\_\_\_\_ Is this treatment part of a more comprehensive program?  
(0=No, 1=Day treatment, 2=Group home, 3=Residential program, 4=Inpatient hospitalization, 5=Other, Name of program: 5o) \_\_\_\_\_, 6=Formal Drug and Alcohol Treatment Program 7 = Formal (Borderline) Personality Disorder Program, 8= research study participant (therapy offered through study)

7. \_\_\_\_\_ When did you start seeing this provider?

(1= less than a week ago, 2=one week ago, 3= 2-3 weeks ago, 4=1 month ago, 5= 2 to 5 months ago, 6=6months ago, 7=7-11 months ago, 8= 12months or longer)

8. \_\_\_\_\_ How often do you see this provider? Modal (*usual # of visits per week*) number of visits per week (e.g., during most months, does the subject see the provider 1x/wk, 2x/wk, 4x/wk? If the subject saw the provider 2x/mo. enter .5, if 1x mo. enter .25).

9. \_\_\_\_\_ How long are your sessions/meetings with this provider? (Minutes)

10. \_\_\_\_\_ Do you know what type of therapy you are doing with this provider? (1 = CBT, 2= DBT, 3 = Psychoanalysis, 4 = PE, 5 = Supportive Counseling, 6 = Meds only, -7 = I don't know)

11. \_\_\_\_\_ How helpful has this provider been on a scale of 1-5 with 1 being "not at all helpful" and 5 being "very helpful".

12. \_\_\_\_\_ Were you court ordered into this treatment (0=No, 1=Initially court ordered, but not now, 2= Yes).

13. \_\_\_\_\_ Are there any other people or organizations that are requiring that you participate in this treatment? (*i.e., Are you required to be in this Tx in order to receive SSI?*) (0=No, 1=Public Assistance, 2=SSI or SSDI, 3=Part of a larger treatment program, 4=Other).

14. \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ What was the most recent session date with provider/program?

15. \_\_\_\_\_ When is your next scheduled session with this provider? (1 = this week, 2 = next week, 3 = within this month, 4 = next month, 5 = 2-5 months from now, 6 = 6 or more months from now, -7 = "I don't know")

### Medical Problems

16. \_\_\_\_\_ Do you have any medical problems that interfere with your life? (0=No, 1=Yes)  
If yes, what is your diagnosis?

16 a. \_\_\_\_\_

16 b. \_\_\_\_\_

16 c. \_\_\_\_\_

16 d. \_\_\_\_\_

17. In the past year, have you been to:

17a. \_\_\_\_\_ Emergency Room

17b. Reason for ER visit \_\_\_\_\_

17c. Number of days in ER \_\_\_\_\_

17d. \_\_\_\_\_ Medical Floor

17e. Reason for Medical Floor Admission \_\_\_\_\_

17f. Number of days on Medical Floor \_\_\_\_\_

17g. \_\_\_\_\_ Psychiatric Hospital – Voluntary

17h. Reason for Psych Hospital Admission \_\_\_\_\_

17i. Number of days on Inpatient Psychiatry Unit \_\_\_\_\_

17j. \_\_\_\_\_ Psychiatric Hospital – Involuntary

17k. Reason for Involuntary Admission \_\_\_\_\_

17l. Number of days Involuntarily Committed \_\_\_\_\_

17m. \_\_\_\_\_ Inpatient Drug and Alcohol Treatment

17n. Reason for Inpatient Sub Use Treatment \_\_\_\_\_

17o. Number of days in Inpatient Sub Use Treatment \_\_\_\_\_

17p. \_\_\_\_\_ Detox Center

17q. Reason for Detox \_\_\_\_\_

17r. Number of days in Detox \_\_\_\_\_

17s. \_\_\_\_\_ Physician Visits

17t. Reason for Physician Visit \_\_\_\_\_

17u. Number of Physician Visits \_\_\_\_\_

17v. \_\_\_\_\_ AA/NA/12-Step Meetings

17w. Number of meetings attended \_\_\_\_\_

18. \_\_\_\_\_ Are you currently taking any prescribed medications for treatment of a medical problem? (0=No, 1=Yes) If yes, list below.

18a. \_\_\_\_\_

18b. \_\_\_\_\_

18c. \_\_\_\_\_

18d. \_\_\_\_\_

19. \_\_\_\_\_ Are you currently taking any vitamins or over the counter medications (such as cold, allergy or sleep medications)? (0=No, 1=Yes)

19a. \_\_\_\_\_

19b. \_\_\_\_\_

19c. \_\_\_\_\_

19d. \_\_\_\_\_

19e. \_\_\_\_\_

20. \_\_\_\_\_ Are you currently taking any prescribed medications for treatment of a psychiatric problem? (0=No, 1=Yes) If yes, list below.

20a. Medication Name \_\_\_\_\_

20b. Dose \_\_\_\_\_

20c. How often have you taken this medication in the past year? (1 = daily, 2 = weekly, 3 = PRN) \_\_\_\_\_

20d. Compliance (1 = sporadic, 2 = most times good, 3 = very good/complete compliance) \_\_\_\_\_

20e. When did you start this medication? (1= less than a week ago, 2=one week ago, 3= 2 or 3 weeks ago, 4=1 month ago, 5= 2 to 5 months ago, 6=6months ago, 7=7-11 months ago, 8= 12 months or more) \_\_\_\_\_

21a. Medication Name \_\_\_\_\_

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21e. When did you start this medication? (1= less than a week ago, 2=one week ago, 3= 2 or 3 weeks ago, 4=1 month ago, 5= 2 to 5 months ago, 6=6months ago, 7=7-11 months ago, 8= 12 months or more) \_\_\_\_\_

22a. Medication Name \_\_\_\_\_

22b. Dose \_\_\_\_\_

22c. How often have you taken this medication in the past year? (1 = daily, 2 = weekly, 3 = PRN) \_\_\_\_\_

22d. Compliance (1 = sporadic, 2 = most times good, 3 = very good/complete compliance) \_\_\_\_\_

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