

Overview of Utility of Mini-Z

Introduction:

The Mini Z instrument was developed as a tool for efficiently measuring physician burnout. Originally called the Z Clinician Questionnaire (for “Zero” Burnout), this survey tool was developed by Dr. Mark Linzer based on work in the Physician Worklife Survey (1) and the Minimizing Error, Maximizing Outcomes (MEMO) Study (2).

This 10-question survey was incorporated into the annual Faculty Survey administered by Dr. David Raiford and his team in July 2018 (is this correct?). Mini-Z survey results were distributed at the department level to all Department Chairs earlier this year to provide leadership with a measurement of baseline physician well-being and burnout. In anticipation of continued use of the Mini-Z in subsequent Faculty Surveys, this review highlights the development and utility of the overall Mini-Z score as well as its subset components which can be utilized to identify areas of strengths and weaknesses in regards to physician well-being.

Overview of Mini-Z:

The Mini-Z instrument consists of 10 questions with 5-point Likert scales and one open ended question at the end. These ten items assess **three outcomes** (burnout, stress and satisfaction) and **seven drivers** of burnout (work control, work chaos, teamwork, values alignment with leadership, documentation time pressure, EMR use at home, and EMR proficiency).

The single item burnout question (Question #2 on our Vanderbilt Faculty Survey below) has been validated externally against the Maslach Burnout Inventory (MBI). In 2004, Rohland et al demonstrated a good correlation ($r=0.64$) of the single question with emotion exhaustion as measured by the MBI ($r = 0.64$) with ANOVA-calculated r squared (0.5) (3).

Internal consistency of the ten-item survey was evaluated using a sample 603 practicing physicians from Hennepin County Medical Center and found to have a Cronbach’s alpha of 0.8 (4). Correlations also demonstrated convergent validity between burnout and five individual drivers of burnout (control, EMR use, chaos, lack of teamwork, lack of values alignment) with r values ranging 0.26-0.46 (4).

In this same study, factor analysis determined two subscales below with reasonable alphas of 0.74 and 0.72 (4). These subscales were selected a priori by the authors based on the hypothesis that high stress and high satisfaction are outcomes related to burnout and would therefore predict clinicians who are experiencing burnout.

- Subscale 1: (Satisfaction) → Satisfaction (Q1), Burnout (Q2), Values (Q3) Teamwork (Q4)
- Subscale 2: (Stress) → Stress (Q5), EMR at home (Q6), Documentation time (Q7), Chaos (Q8)

The four questions on the Satisfaction Subscale focus on positive features of a healthy work environment including alignment of values with institutional leadership and a sense of teamwork in the workplace. High measures on these two are often linked with high satisfaction and low burnout scores. The four questions on the Stress Subscales describe the lack of work-place control related to EMR use, pressured time for documentation and a chaotic work environment. Poor scores on these four questions are related to high stress scores and high burnout.

Individual questions (except Question 2) have not been validated as stand-alone measures of either outcomes or drivers of burnout. Therefore, utilization of these questions in and of themselves should be done with caution, if at all, at the departmental level.

Recommendations:

Based upon work done by Linzer (<http://www.cpperesearch.org/>) we recommend evaluating department-level data utilizing three specific scores (SEE SAMPLE MINI-Z BELOW):

1. Overall score: Add all points from the 10 items for a total score, range 10-40 points. A score ≥ 20 is considered representative of a joyful work environment
2. Satisfaction scale: Add all points from Q1, Q2, Q3, Q4, range 4-25 points. A score ≥ 20 is considered a highly supportive environment
3. Stress scale: Add all points from Q5, Q6, Q7, Q8, range 4-25 points. A score ≥ 20 is considered a low stress environment with reasonable EMR pressures

References:

1. Linzer et al. Managed care, time pressure, and physician job satisfaction: results from the physician worklifestudy. J Gen Intern Med. 2000 Jul;15(7):441-50.
2. Linzer et al. Working conditions in primary care: physician reactions and care quality. Ann Intern Med. 2009 Jul 7;151(1):28-36, W6-9.
3. Rohland et al. Validation of a single-item measure of burnout against the Maslach Burnout Inventory among physicians. Stress Health. 2004 Apr;20(2):75-79.
4. Shimotsu S, Poplau S, Linzer M. Validation of a brief clinician survey to reduce clinician burnout. In: Abstracts from the 38th Annual Meeting of the Society of General Internal Medicine. Vol 30, Issue 2 Supplement. Toronto, Canada: J Gen Intern Med. 2015:S79-S80. <http://link.springer.com/journal/11606/30/2/suppl/page/1>. Accessed April 14, 2019.

Mini Z 2.0 Survey

1. Overall, I am satisfied with my current job:

5.Strongly agree 4.Agree 3.Neither agree/disagree 2.Disagree 1.Strongly disagree

2. Using your own definition of “burnout”, please circle one of the answers below:

- 5. I enjoy my work. I have no symptoms of burnout.
- 4. I am under stress, and don't always have as much energy as I did, but I don't feel burned out.
- 3. I am definitely burning out and have one or more symptoms of burnout, e.g. emotional exhaustion.
- 2. The symptoms of burnout that I'm experiencing won't go away. I think about work frustrations a lot.
- 1. I feel completely burned out. I am at the point where I may need to seek help.

3. My professional values are well aligned with those of my department leaders:

5.Strongly agree 4.Agree 3.Neither agree/disagree 2.Disagree 1.Strongly disagree

4. The degree to which my care team works efficiently together is:

5 – Optimal 4 – Good 3 – Satisfactory 2 – Marginal 1– Poor

5. I feel a great deal of stress because of my job

5.Strongly disagree 4. Disagree 3.Neither agree/disagree 2.Agree 1. Agree strongly

6. The amount of time I spend on the electronic medical record (EMR) at home is:

5 – Minimal/none 4 – Modest 3 – Satisfactory 2 – Moderately high 1 – Excessive

7. Sufficiency of time for documentation is:

5 – Optimal 4 – Good 3 – Satisfactory 2 – Marginal 1– Poor

8. Which number best describes the atmosphere in your primary work area?

5. Calm 4 3.Busy, but reasonable 2 1. Hectic, chaotic

9. My control over my workload is:

5 – Optimal 4 – Good 3 – Satisfactory 2 – Marginal 1– Poor

10. The EMR adds to the frustration of my day.

5.Strongly disagree 4.Disagree 3.Neither agree/disagree 2.Agree 1.Strongly agree

Total Score = add the numbered responses to questions 1-10. Range 10-50 (>= 40 is a joyful workplace).

Subscale 1 (supportive work environment) = add the numbered responses to Q1-Q4. Range 4-25 (>= 20 is a highly supportive practice).

Subscale 2 (work pace and EMR stress) = add the numbered responses to Q5-Q8. Range 4-25 (>= 20 is an office with reasonable pace and manageable EMR stress).