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Educators Are Not Alright: Mental Health During COVID-19

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Abstract

Educator mental health sits at the intersection of multiple pressing educational issues. We provide among the first estimates of school system employee (SSE) stress, anxiety, and depression during the COVID-19 pandemic. Most participants reported clinically meaningful anxiety and depressive symptoms (77.96% and 53.65%, respectively). Being in the lowest strata of family income was associated with higher stress, a greater likelihood of clinically significant depressive symptoms, and reduced intentions to continue in the same job, portending the current staffing shortages affecting schools. Supporting SSE mental health should become a policy priority.

Keywords: mental health; COVID-19; school systems; teachers; regression analyses

Educators Are Not Alright: Mental Health During COVID-19

The COVID-19 pandemic has placed unprecedented strain on school systems. Teachers are experiencing high levels of burnout (Pressley, 2021) and many school system employees (SSEs) are considering leaving their jobs (Kaufman et al., 2020). Although SSE mental health sits at the intersection of multiple pressing educational issues, including staff attrition and retention, school climate, and occupational effectiveness, research on the topic is scarce (Harding et al., 2019). The purpose of this study is to, using standardized instruments, provide among the first estimates of SSE (stress, anxiety, and depression during the pandemic.

Method

Through public web-postings and a mid-sized urban district's newsletter, 662 SSEs (65.11% [431] instructional staff; 48.34% [320] lead classroom teachers) in Wisconsin, USA were recruited to participate in a fully remote randomized controlled trial of a meditation-based well-being smartphone application (Hirshberg et al., 2022). Participants came from 40 districts and were slightly more racially diverse and female than SSEs across the state (SM Table S1). Any preK-12 SSE (e.g., coach, food service, teacher, administrator) was eligible (See Supplemental Materials [SM] for details). In secondary analyses of pre-test data (Linked in SM) collected between mid-June and August 2020, a relatively stable period of virus transmission in Wisconsin but a time of considerable social unrest nationwide, we examined four research questions:

1. What are the average levels of stress, anxiety, and depressive symptoms?
2. What is the prevalence of clinically meaningful and severe anxiety and depressive symptoms?
3. Are there associations between symptoms and SSE characteristics?

4. Are there associations between symptoms or SSE characteristics and intentions to continue in the same professional role in the coming year (2020-2021)?

Psychological stress over the prior 30 days was assessed with the Perceived stress scale (10-items; Cohen et al., 1983). Scores ≤23, 24≥ to ≤36, 37> represent low, moderate, and high stress, respectively. The Patient Reported Outcomes Measurement Information Systems (PROMIS; 4-to-28 items, adaptive; Pilkonis et al., 2011) were used to assess anxiety and depressive symptoms over the prior 7 days. PROMIS scale T-scores have a population average of 50 and a standard deviation of 10. Scores < 55, 55≥ to ≤ 59.9, 60≥ to ≤69.9, and >70 represent normal range, mild, moderate, and severe symptom categories, respectively. Mild or greater symptoms are considered clinically meaningful. Details on measures are provided in SM (Table S2).

We calculated sample averages and the proportion of the sample in each symptom severity category for stress, anxiety, and depressive symptoms. Using multivariable and logistic regression analyses, we regressed participant age, race, gender, education level, family income level, and employment category (i.e., classroom instructional staff / other) onto stress and separately the likelihood of clinically meaningful anxiety and depressive symptoms. Using logistic regression, we regress all covariates and clinically meaningful anxiety and depressive symptoms on the intention to continue in the same job next year. Listwise deletion was used because no more than five participants (<1.00%) were missing data on any variable except for race (n=21, 3.17% missingness).

Results

Average levels of stress (28.78, *SD*=5.79) anxiety (59.92, *SD*=7.03), and depressive (55.43, *SD*=6.31) symptoms were in the mild/moderate range. Anxiety and depressive symptoms

were respectively one and half a standard deviation above the population average. A large majority of SSEs reported clinically meaningful anxiety symptoms (77.96%). Of these, 61.60% (48.02% of sample) reported moderately severe or greater symptoms. A majority of SSEs also reported clinically meaningful depressive symptoms (53.65%). Of these, 50.34% (27.05% of sample) reported moderately severe or severe symptoms (Table 1).

{TABLE 1}

In regression analyses (Figure 1; SM Table S3), SSE age (*B*=–0.07, *p*=.005) and family income were significantly associated with stress. SSEs with family income $80,000–100,000 and above $100,000/year had significantly lower levels of stress than participants with family income below $40,000/year (*B*=–2.34, *p*=.028 and *B*=–2.86, *p*=.003, respectively). Age (*B*=–0.03, *p*=.003, Odds ratio [*OR*]=0.98 95% CI[0.96, 0.99]) and family income (>$100,000-<$40,000/year, *B*=-0.78, *OR*=-2.18 95% CI[0.22, 0.91]) were significantly associated with lower odds of clinically meaningful anxiety symptoms. The odds of clinically meaningful depressive symptoms were significantly lower in all income levels greater than $40,000/year ($40,000-$80,000 *B*=–0.94, *p*=.007, *OR*= 0.40 CI[0.20, 0.77]; $80,000-$100,000 *B*=–1.31, *p*=.001, *OR*= 0.29 [0.12, 0.59]; >$100,000 *B*=–1.34, *p*<.001, *OR*= 0.27 [0.13, 0.54]) and in male SSEs (*B*=1.18, *p*=.004, *OR*=3.24 CI[1.54, 7.79]).

{FIGURE 1}

Of the 566 SSEs who reported future employment intentions, 30 (5.30%) did not intend to continue next year. Controlling for covariates and clinically meaningful anxiety, SSEs with clinically meaningful depressive symptoms had 0.33 times the odds of intending to continue (CI[0.12, 0.88], *p*=.027). Controlling for covariates and clinically meaningful anxiety and depressive symptoms, compared to SSEs with family incomes <$40,000/year, odds of intending

to continue were 3.93 CI[1.00, 15.28] p=0.045 and 3.69 CI[0.94, 13.27], p=0.050 times higher among those with incomes $40,000-80,000 and over $100,000/year, respectively.

Discussion

This study provides among the first estimates using standardized instruments on SSE mental health during the COVID-19 pandemic. The picture is concerning. Meaningful levels of anxiety and depressive symptoms were normative (i.e., >50% of the sample), with 48.02% and 27.05% of SSEs reporting moderate or severe anxiety or depressive symptoms, respectively. These prevalence rates are higher than those observed in general population samples collected during the same period (Czeisler, 2020). Consistent with population trends in depression, it is notable that SSEs identifying as female were significantly more likely to report clinically meaningful depressive symptoms.

Complementing research characterizing teacher burnout and COVID-related anxiety during the school year (e.g., Pressley, 2021), we observed concerning levels of SSE general anxiety and depression during the summer of 2020. Impossible to know at the time, the years that followed involved the two most severe COVID-19 transmission waves yet, escalating social unrest, and staffing shortages that forced schools nationwide to reduce critical services. Perhaps portending these staffing shortages, SSE families earning under $40,000/year reported significantly more stress, were more likely to report clinically meaningful depressive symptoms, and were less likely to intend to return in their job relative to higher earning peers. This group was predominately core instructional staff (>70% classroom teachers or assistants; SM Table S4). Most teachers in this income range were likely early career, a group known to have high rates of career attrition. Across the sample, clinically meaningful depressive symptoms were associated with lower odds of intending to return. These data suggest that the lowest income

SSE, which may include early career teachers, are at elevated risk for poorer mental health outcomes and occupational intentions, and should be a focal point of policy moving forward.

Generalizing these results to SSE nationwide should be done cautiously. This relatively small convenience sample of Wisconsin SSE was predominately instructional staff (65%), female (87%) and White (86%). In addition, these data were collected at a particular point in time under a unique set of circumstances. However, the COVID-19 pandemic is only one among several factors that might impact SSE mental health. For example, the murder of George Floyd in May 2020 and continuing struggle for racial justice may also impact SSE mental health, perhaps particularly for SSEs of color. It is possible that while overestimating symptoms among Wisconsin SSE, we underestimated symptoms of SSE nationwide, who are racially more diverse. In addition, working in educational systems may be more difficult today than it was in Summer 2020. These results therefore underscore the importance of continued research on SSE mental health so that decision-makers are informed about the needs of their workforce and how to best support them. They also highlight the importance of sampling diverse SSEs to enable a more complete picture of the relationships between SSE characteristics (e.g., race, gender, employment category, income) and mental health.

Schools are tasked with equitably recovering lost student learning resulting from the pandemic in students suffering from greater mental health concerns. Psychologically healthy teachers and SSEs are an essential part of any conceivable solution. These data suggest additional SSE supports are necessary and may be a prerequisite to student and educational system pandemic recovery efforts.

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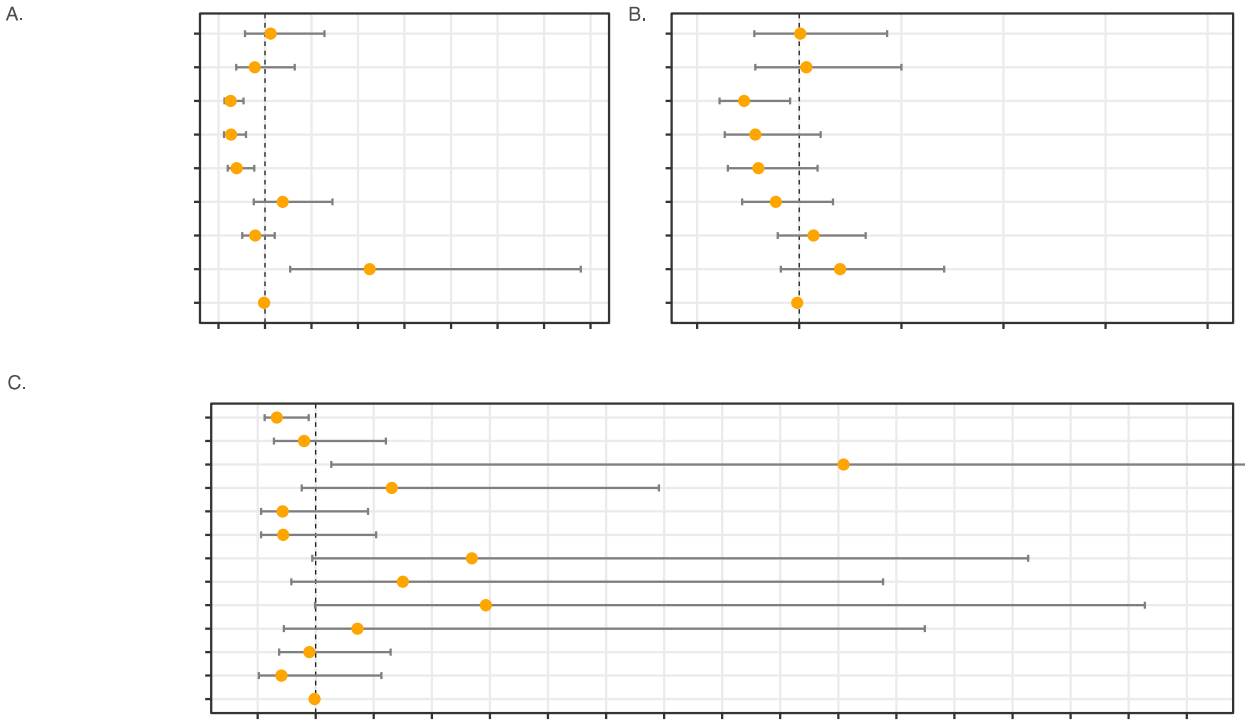
Figure 1.

Odds Ratios from Logistic Regressions of Clinically Meaningful Depressive (A) and Anxiety (B) Symptoms, and Intention to Continue in the Same Professional Role (C)



Note. Reference levels for educational attainment and family income are "less than a college degree" and "less than $40,000/year," respectively. In A. and B., odds ratios less than one and greater than one represent lower and greater odds of clinically meaningful depressive and anxiety symptoms, respectively. In C., odds ratios less than one and greater than one represent lower and greater odds of intending to continue in the same professional role next year. Upper bound for moderate stress confidence interval (C) is 219.43. All variables with confidence intervals that do not cross the dotted vertical line at 1 and in C. >$100k/year and $40-$80k/year are statistically significant (p<.05).

Table 1.

Stress, Anxiety, and Depressive Symptoms Means (SD) and Prevalence Rates Overall and By Demographic Subgroups (n/%)

Outcome		Stress	Anxiety	Depression
Mean (*SD)*		28.78 (5.79)	59.93 (7.03)	55.43 (6.31)
Low / None to mild		126 (19.0%)	145 (21.9%)	305 (46.1%)
Moderate		478 (72.21%)	197 (29.76%)	175 (26.4%)
Moderately Severe		NA	285 (43.1%)	174 (26.3%)
High / Severe		53 (8.01%)	31 (4.7%)	4 (0.6%)
Missing		5 (0.76%)	4 (0.6%)	4 (0.6%)
Covariate				
		Stress	Anxiety	Depression
Age (years)	42.58 (10.67)			
Race / Ethnicity*				
American Indian / Alaskan Native	4 (0.60%)	33.75 (2.99)	66.73 (4.47)	63.58 (4.43)
Asian / Pacific Islander	13 (1.96%)	31.25 (6.58)	62.94 (6.98)	58.45 (6.54)
Black / African American	26 (3.93%)	30.17 (4.80)	60.00 (9.77)	56.47 (7.16)
Hispanic/ Latino	27 (4.08%)	29.29 (7.30)	58.79 (7.21)	55.23 (7.63)
White / Caucasian	571 (86.25%)	28.59 (5.72)	59.88 (6.88)	55.25 (6.17)
Two or more races	21 (3.17%)	29.30 (6.19)	59.22 (6.80)	55.75 (6.42)
Gender*				
Female	578 (87.3%)	28.97 (5.78	60.20 (6.85)	55.63 (6.33)
Male	79 (11.9%)	27.59 (5.62)	57.90 (7.99)	54.09 (5.96)
Non-binary or other	5 (0.76%)	25.25 (7.63)	60.78 (7.35)	53.30 (7.43)
Highest Education Level				
Less than college degree	70 (10.6%)	28.80 (6.64)	59.50 (9.51)	54.77 (7.76)
College degree	203 (30.7%)	28.99 (5.60)	60.44 (7.04)	55.97 (6.11)
Advanced degree	386 (58.3%)	28.69 (5.72)	59.79 (6.45)	55.30 (6.11)
Family income (US Dollars)				
<$40,000	58 (8.76%)	31.21 (5.44)	61.70 (9.11)	58.42 (7.34)
$40,000 - $80,000	216 (32.6%)	29.59 (5.81)	60.69 (6.71)	56.13 (6.05)
$80,000 - $100,000	107 (16.2%)	28.33 (5.54)	59.98 (5.77)	54.97 (5.99)
>$100,000	277 (41.8%)	27.79 (5.72)	58.94 (7.12)	54.47 (6.17)
Employment category				
Non-instructional staff	183 (27.64%)	28.28 (6.03)	59.69 (7.20)	54.84 (6.87)
District personnel	*n*=25	28.27 (6.88)	59.24 (6.51)	55.11 (7.70)
School support	*n*=109	28.57 (5.60)	60.40 (6.78)	55.04 (6.58)
School staff	*n*=39	26.71 (6.70)	57.99 (8.79)	54.00 (7.61)
Instructional staff	431 (65.11%)	28.89 (5.76)	60.01 (6.93)	55.60 (6.11)
Lead teachers	*n*=320	29.06 (5.67)	60.22 (6.61)	55.50 (5.93)
Assistants	*n*=88	28.32 (5.81)	60.02 (6.83)	56.03 (6.83)
Specialists	*n*=23	28.48 (6.27)	59.88 (7.33)	55.23 (6.63)

Note. NA means the category does not exist. Non-instructional staff: District personnel include district administrators (e.g., curriculum directors) and district staff (e.g., district secretaries). School support include occupational therapists, librarians, teacher instructional coaches, and afterschool program employees. School staff include building custodial workers, bus drivers., food service, and secretaries. Instructional staff: Lead teachers include regular education, special education, and specials (e.g., art, physical education) lead classroom teachers. Assistants include classroom aides, English language learner support staff, substitute teachers, and special education assistants. Specialists include literacy specialists and speech and language pathologists.