

Creation and Validation of an Administrator Support Amid COVID-19 Scale

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Introduction/ Need for Research/ Theoretical Framework

In March of 2020, a new norm began as COVID-19 made its way into the United States and effectively shut down schools for the remainder of the spring semester. Shared community trauma has only been used as a lens to evaluate trauma in a few instances since its inception following the 9/11 attacks in New York City (Tosone et al., 2003; 2012). These instances include the Virginia Tech shootings (Day et al., 2015) and Hurricane Katrina (Boulanger, 2013). No such work has been used to evaluate a chronic shared trauma like the COVID-19 pandemic, although issues that can arise for teachers from acute trauma to themselves or their students has been evaluated through concepts like compassion fatigue, secondary traumatic stress, and burnout. (Hydon et al, 2015; Jenkins & Baird, 2002; O'Halloran & O'Halloran, 2001). The unique challenges brought on by COVID for teachers and school districts required an instrument that could measure how teachers perceived administrator support.

Methodology

The purpose of this study was to develop summated psychometric scales that sought to measure School Based Agricultural Education (SBAE) teachers' perceptions of administrative support amid the COVID-19 pandemic and addresses the National Research Agenda Priority Area 3: Sufficient scientific and professional workforce that addresses the challenges of the 21st century (Stripling & Ricketts, 2016). To begin, items were drafted into a pool that sought to describe support given to teachers by administration (i.e. "after the COVID shutdown, my administration communicated clearly to teachers). The item pool was then evaluated by the researchers, removing items that seemed unimportant or unintentionally duplicated others, resulting in 28 items, all measured on a five-point scale from "not at all" to "a great extent". The instrument was then submitted for feedback to a panel of experts ($n = 5$) who provided feedback on wording and added 6 items to the item pool, resulting in 34 items. After recommendations were considered, the instrument was distributed via Qualtrics software in a pilot study to 102 Illinois SBAE teachers and garnered a response rate of 53% ($n = 54$). Results were then analyzed using SPSS v. 26, and after finding no outliers, the factor analysis was completed.

Results

Initially, factorability of all items was examined. Items were analyzed by utilizing principal axis factoring as the extraction method with a direct oblimin rotation. Initial factor analysis indicated desirable Kaiser-Meyer-Olkin and Bartlett's calculations, indicating sampling adequacy (Field, 2018). Upon initial analysis, every item contained a factor loading of at least .33, falling between Comrey and Lee's (1992) designations for "poor" ($< .32$) and "fair" (.45 - .54). The initial factor matrix extracted eight factors with eigenvalues greater than one, but upon further examination the scree plot indicated a point of inflection at factor three, indicating that final analysis should include only two extracted factors.

Following the first iteration of the factor analysis, items were removed from the pool one by one based on 1) having the lowest factor loading, and 2) loading into multiple factors, or some combination of these two criteria. After removing 17 items, the final factor analysis indicated two primary factors where all items indicated factor loadings of at least "good" ($> .55$) (Comrey & Lee, 1992). This final iteration indicated a KMO value of .79 and extracted two factors accounting for 62.58% of the total variance. All final items can be found in Table 1.

Factor one, accounting for 47% of total variance, consisted of 12 items, all consisting of "very good" (.63-.69) or "excellent" ($\geq .7$) factor loadings (Comrey & Lee, 1992). This factor

contained items that all indicated actions that administrators would do; thus it was named the “supportive actions scale” and calculated a desirable Cronbach’s alpha of .95 (Carmines & Zeller, 1979). Descriptive statistics showed a mean score slightly above the mid-point of the scale, indicating that administrators moderately supported SBAE teachers ($M = 3.38, SD = .93$).

Factor two, accounting for 15.58% of total variance, consisted of five items, with a range of factor loadings from .58 - .80. This factor contained items that all indicated actions that administrators would *expect* from SBAE teachers; thus it was named the “supportive expectations scale” and calculated a desirable Cronbach’s alpha of .80. Descriptive statistics indicated that administrators had high rates of supportive expectations of teacher’s duties, particularly when it came to lowering “traditional” expectations ($M = 4.1, SD = .84$).

Table 1

Results From a Factor Analysis of Administration Response to COVID-19 questionnaire (N = 43)

Item	Factor Loading	
	1	2
<i>All item stems begin with “After the COVID shut down, my administration...”</i>		
Factor 1: Supportive Actions ($\alpha = .950$)		
- communicated clearly to teachers	.91	
- communicated clearly to students	.89	
- supported teachers	.89	
- reminded me to focus on personal wellness	.87	
- reminded me to focus on self care	.86	
- communicated clearly to parents	.81	
- expected high levels of teacher well being	.80	
- was quick to respond to issues that arose in the shutdown	.76	
- expected teachers to put their health first	.76	
- expected high levels of teacher self preservation	.70	
- expected teachers to complete tasks outside of their capabilities (R)	.66	
- encouraged me to have patience with students	.60	
Factor 2: Supportive Expectations ($\alpha = .796$)		
- expected teachers to work at the school (R)		.80
- expected teachers to work from home		.69
- expected high academic results (R)		.60
- expected teachers to use school internet access (R)		.60
- expected teachers to give leniency in grades		.58

Note. Reverse-scored items denoted with (R). Bold factor loadings denote “good” or above ($> .55$) (Comrey & Lee, 1992).

Conclusions/ Implications/Recommendations

Based on a principal axis factoring, the item pool generated two distinct factors relating to supportive actions and expectations from administrators. Teachers also indicated that administrators provided support amid the shared, chronic trauma of the COVID-19 pandemic. Administrative support has been ranked in the past as the most prominent issue facing SBAE teachers (Boone & Boone, 2007), and has been shown to be a component of job satisfaction impacted by COVID-19 (McKim & Sorensen, 2020). The COVID-19 pandemic continues to interfere with the population, so it is recommended that further research seeks to uncover how SBAE teachers have coped with this trauma, and what sources of support exist for them.

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