Understanding Teacher Wellbeing and Social Support for Physical Activity in a Diverse School District during the COVID-19 Crisis

NOPREN/PAPREN School Wellness Working Group

April 13, 2021

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ALTAMED HEALTH SERVICES CORPORATION

- Largest Independent Community Health Center

- 231,000 patients
    - 88% Racial and/or Ethnic Minority
    - 81% Latino
    - 70% Medicaid
    - 24% Best served in language other than English

- >3,000 employees
    - ≤ 400 physicians

Mission

- To eliminate disparities in health care access and outcomes

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Extensive history as research partner

Hub of rigorous, community-advised, high-impact health equity research that informs efforts to address the social determinants of health at the clinic, health systems, and policy levels

Interdisciplinary education and training for students, scholars, and physicians

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BACKGROUND

Prior to COVID-19, teachers serving predominantly low-income, racially and ethnically diverse student populations experienced higher levels of job stress (Barnes 2007, Huang 2009)

During COVID-19, elevated burdens on teachers in these areas (Ong 2020)

How this crisis may be affecting the wellbeing of teachers serving low-income students has not been examined (Purwanto 2020)

To make such an assessment, a reliable teacher wellbeing measure is needed

Teacher Subjective Wellbeing Questionnaire (TSWQ) has only been tested in racially/ethnically homogenous teachers serving in well-resourced districts (Mankin 2018, Renshaw 2015)

- N=185: teachers employed in elem (28%) and middle (72%) schools in midsize urban city in srn US; 89% female; 48% AA, 44% White ; n= 21: elem school teachers currently experiencing classroom management challenges; 95% female; 62% White, 19% AA (Renshaw 2015)
- N=1,883 Public school teachers from six US states; 76% female; 93% White, 3% Hispanic, 2% AA; 32% elem, 26% middle schools, 35% high schools, 7% combo (Mankin 2018)

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BACKGROUND

TSWQ subscales and composite scale demonstrated strong internal consistency, and all scales demonstrated convergent validity with self-reported school supports and divergent validity with self-reported stress and emotional burnout

- TSWQ scores did not differ by school level (elem vs middle) but did differ according to unique school environment (1 middle school vs another middle school) and teacher stressors (general teachers vs teachers experiencing classroom management challenges; Renshaw 2015)
- for teachers experiencing classroom challenges the TSWQ had strong short term predictive validity for psychological distress (Renshaw 2015)
- in follow up psychometric testing, TSWQ reported as a structurally valid measure of its two teacher well-being constructs with measurement invariance analyses revealing that the factor structure stays consistent across elementary, middle and high school teachers (Mankin 2018)
- findings built support for the technical adequacy and applied use of the TSWQ in schools to screen for intervention, measure outcomes, and monitor progress (Mankin 2018)

An assessment of the psychometrics of this instrument among a more diverse set of teachers serving in lower-resourced environments is needed

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BACKGROUND

Understanding teacher wellbeing in this context will provide an initial step towards developing potential interventions

Understand potential protective factors for teacher wellbeing and what opportunities may exist to promote these factors

- Physical activity among teachers, which school districts have multiple avenues to support

Given the protective effects of physical activity on mental health and the potential for school districts to support teachers in this area, these questions are salient in the context of widespread stay-at-home orders that have further limited physical activity opportunities (Biddle 2007)

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RESEARCH QUESTIONS

1: Is the Teacher Subjective Wellbeing Questionnaire (TSWQ) a valid measure in the context of describing teacher wellbeing among a diverse sample of teachers serving predominantly low-income, racially and ethnically diverse students?

- We hypothesize that the TSWQ will exhibit technical adequacy in this population.

2: What is the association between social support for physical activity and teacher wellbeing in this teacher population?

- We hypothesize there is a positive association between social support for physical activity and teacher wellbeing.

Together, these aims will generate a snapshot of teacher wellbeing among a diverse set of teachers during the COVID-19 crisis and insights on potential interventions and protective factors.

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METHODS

administer survey once during the 2020-2021 academic year

invite teachers from 19 partner schools from five school districts (Escaron 2019, Escaron 2019, Martinez 2017, Escaron Forthcoming)

schools located within Service Planning Area 7 in majority low-income and Latinx census tracts, key qualifying criteria for schools that participated in the CDC Racial and Ethnic Approaches to Community Health grant (5 U58 DP005740-03)

email a Google Forms link to teachers

brief survey response time, 5 minutes

keep survey open one month with administration sending weekly reminder

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METHODS

Teacher Subjective Wellbeing Questionnaire (TSWQ)

eight-item instrument operationalized by subscales measuring school connectedness and a sense of efficacy in teaching

4-point Likert scale ranging from 1 (almost never) to 4 (almost always), with possible scores ranging from 8-32

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METHODS

SOCIAL SUPPORT AND EXERCISE SURVEY (SSES)

things people might do or say to someone who is trying to exercise regularly (Sallis 1987)

Each question (n=13) is rated twice for (during the last three months)

- How often family and
- friends, acquaintances, or coworkers have said or done what is described

using a 5-point Likert scale ranging from 1 (none) to 5 (very often)

Published scoring guidelines generate a Family Participation (possible score 10-50), Family Rewards and Punishment (possible score 3-15), and Friend Participation (possible score 10-50) sub-score

Both test-retest and internal consistency reliabilities were acceptable

Social support scales were correlated with respective self-reported exercise habits, providing evidence of concurrent criterion related validity

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METHODS

DEMOGRAPHICS

Teacher level
- Gender
- Race/ethnicity
- Age
- Primary grades taught
- Years teaching experience
- Education level
- Job performance on test scores
- Salary on test scores
- Number of students in class

School level
- % Free or reduced priced lunch
- Size
- Type
- Level

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METHODS

ANALYSES

Research Question 2.

Examine associations between social support for physical activity and teacher wellbeing

- linear regression models for continuous variables, teacher wellbeing outcome/dependent variable while social support is the predictor/independent variable (Stata 16.0)
- adjust for teacher- and school/district-level factors
- Effect size with n=50 (f^2 = 0.165) powered to detect a medium effect size between teacher wellbeing and social support for exercise (GPower)

- sample size necessary to detect a moderate effect (0.15) between teacher well-being and social support for exercise with minimum desired level of power (0.80), and an alpha of .05 = 235 participants

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RESULTS

DEMOGRAPHICS

Characteristic	Sample size (n)	Percentage (%)
Gender	49	-
Female	42	85.7
Male	7	14.3
Race	53	
White	24	45.3
I choose not to answer	15	28.3
Asian	2	3.8
Hispanic	3	5.7
Latina	2	3.8
Black/African American	2	3.8
More than once race	2	3.8
Mexican American	3	5.7
Ethnicity	53	
Hispanic or Latino	26	49.1
I choose not to answer	12	22.6
Not Hispanic or Latino	15	28.3
Education	54	
Bachelor's degree	17	31.5
I choose not to answer	6	11.1
Master's degree	30	55.6
Teaching credential	1	1.9
Grades	54	
K-2	16	29.6
3-5	18	33.3
6-8	20	37.0
Job performance on test scores	53	
Yes	43	81.1
No	10	18.9
Salary on test scores	54	
Yes	2	3.7
No	52	96.3
School % free and reduced lunch participation	52	
Mean (SD); Range	76.9 (3.6); 72-80.8	NA
Years of teaching	52	
Mean (SD); Range	18.3 (7.7); 1-36	NA
Average class size	51	
Mean (SD); Range	26.8 (15.5); 3-79	NA

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RESULTS

SURVEYS

	n	Mean (SD); Range
Total twcs	51	24.4 (4.2); 16-32
Teaching efficacy sub scale tesc	51	12.0 (2.4); 7-16
School connectedness sub scale scsc	53	12.4 (2.5); 8-16

	n	Mean (SD); Range
Family Participation fpsc4	52	24.8 (7.3); 10-40
Family Rewards and Punishment frsc4	54	4.1 (1.4); 3-7
Friend Participation fdpsc4	52	20.0 (8.1); 10-39

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RESULTS
REGRESSION

Independent Variable:	Dependent Variable: Teacher Subjective Wellbeing- composite scale twcs
	Model II [c'] B (95%CI)
Friend Participation sfdpsc4 [d]	.274 (-.272, .916)
Constant	58.073* (-.125, 116.271)
Observations	36
R²	.234
Adjusted R²	-.0727
Family participation sfpsc4 [d]	.0459 (-.739,.831)
Constant	66.251** (7.661, 124.842)
Observations	35
R²	.200
Adjusted R²	-.133
Friend Participation sfdpsc4 [d] & Family participation sfpsc4 [d] – sfdpsc4	.294 (-.437, 1.026)
Friend Participation sfdpsc4 [d] & Family participation sfpsc4 [a] – sfpsc4	-.0954 (-.961, .771)
Constant	59.752* (-1.521, 121.0257)
Observations	35
R²	.2235
Adjusted R²	-.148

* $p<0.1$; **$p<0.05$; ***$p<0.01$

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DISCUSSION

SURVEYS

TSWQ mean (SD)

28.01 (3.63; Renshaw 2015)

26.30 (4.41; von der Embse 2020)

SSES mean (SD)

family support for exercise habits = 26.1 (10.9; Sallis 1987)

friend support for exercise habits = 13.6 (5.3)

rewards and punishment = 3.7 (1.5)

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FUTURE DIRECTIONS

What are the psychometric properties of the TSWQ within a more diverse teacher sample?

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THANK YOU