

2020

## A Whole-School Approach to Promoting Staff Wellbeing

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### Recommended Citation

Lester, L., Cefai, C., Cavioni, V., Barnes, A., & Cross, D. (2020). A Whole-School Approach to Promoting Staff Wellbeing. *Australian Journal of Teacher Education*, 45(2). <https://doi.org/10.14221/ajte.2020v45n2.1>

This Conference Proceeding is posted at Research Online.  
<https://ro.ecu.edu.au/ajte/vol45/iss2/1>

## A Whole-School Approach to Promoting Staff Wellbeing

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*Abstract: A caring school community can enhance whole-school wellbeing including the wellbeing of school staff, which directly impacts on student academic, social and emotional wellbeing. This study firstly examines the validity and reliability of a proposed whole-school staff wellbeing evaluation tool which uses a set of whole-school wellbeing indicators to identify strengths and areas for improvement within the school environment which may be impacting on staff wellbeing. Secondly, the association between factors found within the whole-school staff wellbeing tool with staff self-reported mental health are examined, and finally, the influence of person characteristics and role of factors on perceived whole-school staff wellbeing are determined. Cross-sectional data were collected from 801 school staff from six non-government schools in Australia as part of the School Staff Wellbeing Project. Results confirmed and validated the hypothesised structure of the whole-school staff wellbeing evaluation tool with staff relationships (leadership, staff), staff engagement (active, supported), staff emotional wellbeing (supported through policies and opportunities) and school climate (culture and values) found to be significant predictors of mental health. Prioritising resources to building supportive staff relationships, school climate, and providing opportunities to promote staff emotional wellbeing, were found to have the greatest impact on staff mental health. Characteristics such as age, gender, education, role, and length of time working in schools predicted perceptions of the whole-school's general wellbeing. The whole-school staff wellbeing evaluation tool provides a useful screening and self-evaluation measure to identify whole-school staff wellbeing strengths and areas for improvement in staff wellbeing.*

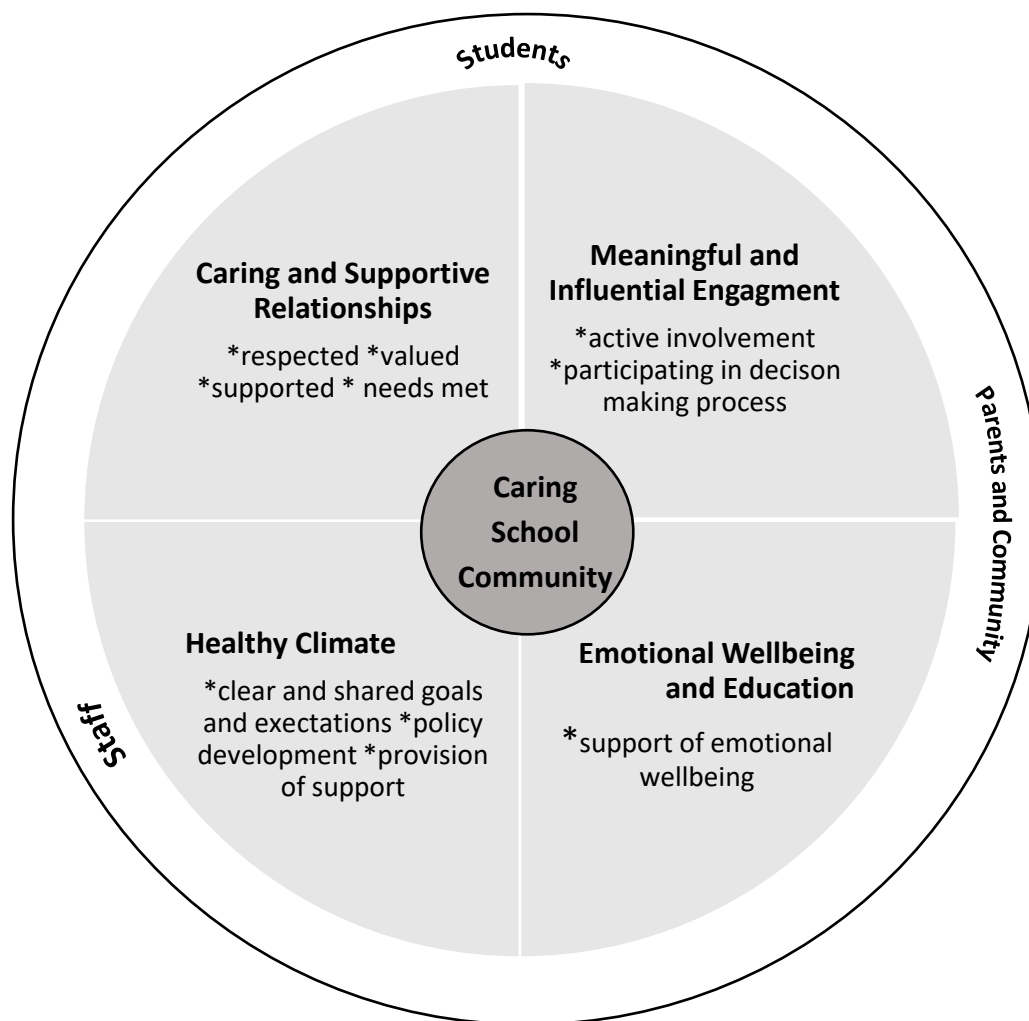
**Keywords:** whole-school wellbeing, evaluation tool, staff mental health and wellbeing

## Introduction

Mental health and wellbeing in the workplace is becoming increasingly critical, with mental health problems one of the leading causes of absence, long-term work incapacity, and reduced work performance in Australia (Harvey et al., 2014). WHO defines mental wellbeing as “a state of wellbeing in which every individual realises his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully and is able to make a contribution to her or his community”. This definition suggests the many risk factors for mental health that may be present in a working environment can be reduced by providing a healthy workplace (WHO, 2010, 2019). (Organization, 2010, 2019)The whole-school environment (or school workplace) involves the physical or built school environment, school values, school climate, organisational functioning, school system and government policies, and can significantly impact school staff wellbeing (Biggio & Cortese, 2013). The importance of providing and promoting a healthy workplace for all school staff is paramount given the impact of an unhealthy workplace on both staff wellbeing and subsequently student academic, social and emotional wellbeing (Cefai & Cavioni, 2014; Roorda et al., 2011). To date, the exploration of the association between staff wellbeing factors and staff-reported mental health within a school context is limited. This study examines the relationship between whole-school staff wellbeing factors and staff-reported mental health and determined which characteristics appear to influence perceptions of whole-school staff wellbeing.

Cefai and Cavioni (2014) present a conceptual framework which theorises how a caring school community can provide the context for and enhance whole-school wellbeing, including the wellbeing of school staff (Figure 1). They construe staff health and wellbeing within a multidimensional systemic framework showing how the school can operate as a health promoting context, providing opportunities for school staff to sustain and maintain their wellbeing through collegial and supportive relationships, meaningful and influential engagement, and resources and services to care for their own health. This ecological, systemic approach shifts school staff wellbeing from an individual concept to a more socially-embedded understanding of health, with schools operating as caring communities for all their members, including staff members (Bronfenbrenner, 2005; Ungar, 2012).

The systemic framework was informed by the National Curriculum Council Focus Group for Inclusive Education (Education, 2002) which suggested three dimensions of the inclusive education process: inclusive cultures, policies and practices. These indicators of inclusive school cultures which focussed on students (a welcoming school community which have inclusive values), policies (learning opportunities for all and supporting diversity) and practices (orchestrating learning and mobilising school resources to support the learning and participation of all students) have been expanded by Cefai and Cavioni (2014) to include staff wellbeing indicators addressing staff relationships, staff engagement, staff wellbeing and school climate measured at the whole-school level.



**Figure 1 Conceptual framework of a caring school community**  
(adapted from Cefai & Cavioni, 2014)

Within a whole-school approach, schools can promote a sense of belonging and encourage meaningful relationships amongst staff, promote a positive school culture, and provide opportunities for staff engagement to address and promote their wellbeing (Cefai & Cavioni, 2014). Staff relationship indicators include items measuring caring and supportive relationships between colleagues, the school administration, students and staff, as well as sense of belonging. Caring and supportive relationships amongst school staff ensures that all of the school community feels ‘respected, valued, supported and have their needs addressed’ (p114)(Cefai & Cavioni, 2014). Positive feedback and supportive relationships between teachers and administrators is particularly important for staff wellbeing and job satisfaction during periods of change, including the provision of opportunities for professional development (Gu & Day, 2013; Margolis & Nagel, 2006a; Papatraianou & Le Cornu, 2014). A culture of collegial supportiveness with empathetic support from school principals and administrators, which also allows opportunities for good communication processes, and high quality of interpersonal relationships, have positive effects on teacher wellbeing including buffering against mental health difficulties (Biglan, 2008; Butt & Retallick, 2009; Harvey et al., 2015; Moyer, Henkin, & Egley, 2005).

School climate relates to the character and quality of life within a school (Cohen, McCabe, Michelli, & Pickeral, 2009). A positive school climate can reduce school staff

burnout and promote retention (Cohen et al., 2009; Grayson & Alvarez, 2008), and staff levels of stress can be assessed through their perceptions of their school's climate and student social and emotional learning (Collie, Shapka, & Perry, 2012). School climate indicators within the proposed systemic framework include a welcoming, safe, supportive, and well-maintained environment, and policies and procedures with clear expectations about staff relationships, behaviours and practices.

Meaningful and influential work engagement can impact positively on staff wellbeing. Engaged employees are characterised as having energy, zest and stamina when working, are dedicated and identify with their work, and happily immersed in their own work, and are able to deal well with the demands of their job (Schaufeli & Bakker, 2004). Being provided with opportunities to participate in school decision-making, and receiving positive feedback and praise were found to be key protective organisational factors which promote job satisfaction, staff wellbeing and resilience (Gu & Day, 2013; Konu, Viitanen, & Lintonen, 2010). Conversely, low job control or low levels of autonomy can have a negative impact on staff mental wellbeing, and are strongly related to depression (Kahneman, Diener, & Schwarz, 1999). Staff work engagement indicators within the school context include their engagement in the development of school policies, activities, planning, conflict resolution, and active participation in professional learning (Cefai & Cavioni, 2014).

The staff wellbeing indicators proposed by Cefai and Cavioni (2014) include emotional wellbeing indicators which measure a school's provision of support for staff social and emotional needs and development. Emotional wellbeing refers to a positive sense of wellbeing where a person is able to cope and function, and meet the demands of everyday life (Galderisi, Heinz, Kastrup, Beezhold, & Sartorius, 2015). Emotional wellbeing inspires positive mental health by reducing depression, stress and anxiety, and increasing coping skills and resilience, self-esteem, performance and productivity at work and in the community (Fredrickson & Joiner, 2002). In addition to their unique effects on staff wellbeing, positive relationships, work engagement and emotional wellbeing also interact to enhance staff mental health and psychological resilience (Harvey et al., 2015).

Together these whole-school staff wellbeing indicators are used to provide a holistic whole-school staff wellbeing evaluation tool to enable school staff to identify strengths and areas for improvement within their school environment which may be impacting on their personal wellbeing (Cefai & Cavioni, 2014). The first aim of this paper is to examine the proposed whole-school staff wellbeing evaluation tool to determine the latent factors within each of the whole-school staff wellbeing components or dimensions. Secondly this paper will measure the whole-school staff wellbeing factors using the proposed evaluation tool and the association to staff self-reported mental health.

Several studies have found that school staff experience higher levels of work-related stress than employees in other occupations, and they are at increased risk of common mental health disorders (Kidger et al., 2016; Riley, 2014, 2017; Stansfeld, Rasul, Head, & Singleton, 2011). Stressors on school staff include heavy workloads, competing demands, addressing the expectations of parents or colleagues, dealing with student disciplinary and behavioural issues, and pressure to meet school targets and administrative duties (Gu & Day, 2013; Naghieh, Montgomery, Bonell, Thompson, & Aber, 2013). High levels of work stress experienced by school staff have been associated with mood disorders, anxiety, and physical health complaints among staff themselves, as well as negative effects on students and school communities (Naghieh et al., 2013, p. 2; Stansfeld & Candy, 2006a). Chronic work stress may result in staff 'burnout', characterised by physical and psychological exhaustion and associated with poor mental and physical health, and high levels of sick leave, absenteeism and job attrition (Milfont, Denny, Ameratunga, Robinson, & Merry, 2008; Naghieh et al., 2013). However, a supportive school community has been found to mediate the negative

impact of stress, help to prevent burn out, and have a positive effect on teacher job satisfaction and mental health (Collie et al., 2012; Dahlkamp, Peters, & Schumacher, 2017; Gray, Wilcox, & Nordstokke, 2017; Malinen & Savolainen, 2016).

Previous studies have found differences in school characteristics (such as sector, location and type (primary vs secondary), person characteristics (such as gender and education level), and role factors (such as type of employment, working hours, time served in schools, resources, number and type of staff and students) also affect staff wellbeing (Goddard & Goddard, 2006; Konu et al., 2010; Riley, 2017; Tran, 2015; Van Petegem, Creemers, Rossel, & Aelterman, 2005). Consequently, the third aim of this paper is to determine whether person characteristics and role factors influence perceptions of whole-school staff wellbeing using the proposed wellbeing evaluation tool.

## **Methods**

### **Sample**

This project aimed to enhance staff wellbeing in schools by increasing school leadership awareness of staff wellbeing and encouraging their implementation of whole-school staff and student wellbeing practices. Cross-sectional data were collected via on-line surveys from school staff from six non-government schools in Australia as part of the School Staff Wellbeing Project. Participating schools were self-selected from three Australian states and included boys' schools (n=3), girls' schools (n=2) and one mixed school of boys and girls. Three schools accepted enrolments from kindergarten/prep to grade 12, while the remaining three schools enrolled students from upper primary (grade 5) to grade 12. The schools that participated were interested in examining their staff wellbeing as part of their pastoral care review process and encouraged all their school staff to participate. Staff consent was obtained at the beginning of the questionnaire. Staff response rates by school ranged from 58% to 86%, with all staff sent a reminder to complete after two weeks of questionnaire invitation. A total of 801 staff completed online surveys in 2016 and 2017 via Qualtrics providing data about staff demographics and whole-school staff wellbeing indicators. While the questionnaires were tailored to each school, there were 106 common questions or items. Three of the six study schools also collected information from staff measuring their social, emotional, mental and physical wellbeing. The questionnaires took on average 30 minutes to complete. Ethics approval for this study was provided by the UWA Human Research Ethics Committee (RA/4/1/7146).

### **Measures**

#### ***Staff Whole-school Wellbeing Indicators***

Cefai and Cavioni suggest 52 items can be used to measure four whole-school staff wellbeing components: addressing supportive relationships (17 items), staff engagement (15 items), emotional wellbeing (12 items), and school climate (8 items). All items are measured using a four point scale (1=never, 2=sometimes, 3=mostly, 4=always). A factor analysis was used to confirm or negate the hypothesised structure and to determine underlying latent factors within each of the four staff wellbeing components.

### **Mental Health Resilience**

*The Brief Resilience Scale (Smith et al., 2008) comprises six items (e.g.: I tend to bounce back quickly after hard times; It does not take me long to recover from a stressful event)*

measured on a five point scale (1=strongly disagree to 5=strongly agree). A resilience score was calculated by finding the average of the six items, with higher score reflecting greater resilience ( $\alpha=0.85$ ).

### **Work Stress**

Work related stress was assessed using an adapted Stress at Work scale (Cooper & Marshall, 1978). The original scale was designed to measure sources of pressure from management within the workplace. The wording of the eight items in the scale were adapted to reflect the stress from leadership within the school environment with staff reporting how stressful they found: Their relationship with school leadership team; The manner in which the daily organisation of the school is run; The school leadership team's understanding of the problems connected with the work; The school leadership team's decision making strategies; The school leadership team's support in daily work; The school leadership team's support in collaboration with parents'; The school leadership team's organisation of the work; and The school leadership team's acceptance of pedagogic freedom. Items were measured on a six point scale (1=not very stressful to 6=very stressful) ( $\alpha=0.93$ ).

### *Depression, anxiety and stress*

Self-reported depression, anxiety and stress were assessed using the Depression Anxiety Stress Scale (Lovibond & Lovibond, 1995) which comprises seven items measuring depression, seven items measuring anxiety, and seven items measuring stress using a four point scale (scores ranged from 0 = not at all to 3 = applied to me very much, or most of the time). A depression, anxiety and stress score was calculated for each construct by adding the respective items, with higher scores reflecting greater feelings of depression ( $\alpha=0.88$ ), anxiety ( $\alpha=0.79$ ), and stress ( $\alpha=0.81$ )(DeVellis, 2016).

### **Statistical Analysis**

Analyses were conducted using STATA v10 and MPLUs 6.0. Exploratory Factor Analysis was used to determine the underlying factor structure of the whole-school wellbeing indicator scales. Final estimates of communalities were iterated from squared multiple item correlations to convergence. Kaiser's criterion (Eigenvalues  $\geq 1.0$ ), together with Cattell's scree test, were used to determine the number of underlying factors. An orthogonal varimax rotation was performed on the principal components and an overall score was calculated for each underlying factor by summing the factor scores identified from the data.

Confirmatory Factor Analysis models using the Comparative Fit Index, Tucker Lewis Index and Standardised Root Mean Square Residual statistics were examined to determine model fit of the hypothesised factor structure (Hu & Bentler, 1999). Cronbach's alpha was used to measure the reliability of the whole-school wellbeing indicator factors and the mental health scales. Non-parametric Wilcoxon and Kruskal-Wallis tests were used to determine differences in whole-school wellbeing indicators and demographics.

Separate multi-level regression models with random effects were used to determine the whole-school wellbeing indicators of staff mental health. All models considered gender, age, role at the school, education level, length of time working in schools and clustering at the school level. A final model was used to determine the relative importance of whole-school factors on school staff's mental health, with all whole-school factor variables entered together into each of the mental health regression models.

## Results

The majority of school staff who responded were female (72%), with 34% aged under 40, 30% between 40-59, and 36% aged 60 and above. Approximately a half of the respondents were teachers (51%), with a further 20% in leadership positions. Most respondents had either a Bachelor (37%) or postgraduate degree (41%). The length of time working in schools was evenly spread with 26% working in schools 1-5 years, 24% 6-10 years, 26% 11-20 years, and 24% over 20 years.

### Whole-School Staff Wellbeing Factors

Exploratory and Confirmatory Factor Analysis was used to determine three underlying factors for staff supportive relationships: relationships with school leadership (e.g.: I am understood and am supported by the administration; I have a good relationship with the school leadership team) ( $\alpha=0.89$ ); relationships with other staff (e.g.: There is a strong sense of collegiality amongst our staff; Our staff solves problems together constructively) ( $\alpha=0.91$ ); and relationships with the school community (e.g.: I have a good rapport with our students; I maintain regular communication with the parents/caregivers) ( $\alpha=0.64$ ). Relationships with school leadership involved feeling valued, welcomed, supported and understood by school leadership and knowing school leadership is concerned and cares about the wellbeing of the staff. Relationships with staff involved collegiality, respect, understanding and support amongst staff, and being able to discuss work problems and find constructive solutions, acting as mentors for each other and welcome and valuing feedback. Relationships with the school community involved support, rapport and communication with colleagues, students and parents/caregivers. Factor loadings for supportive relationships ranged from 0.55 to 0.83.

For staff engagement two underlying factors were identified: supported engagement (e.g.: I am well informed about the school's policies; I am provided with adequate support, resources and technology for my work) ( $\alpha=0.87$ ) and active influential and meaningful engagement (e.g.: I plan, work and share practice and resources with my colleagues; I participate actively in staff meetings and professional development sessions) ( $\alpha=0.78$ ). Supported engagement involved staff being given particular roles and responsibilities, opportunities, resources and technology to complete their work and to develop strengths, and their contribution being valued. School promotion of staff collaboration, constructive conflict resolution, partnerships and mentoring schemes and organisation of professional learning days were also factors contributing to supported engagement. Active influential and meaningful engagement involved staff participation in curriculum planning, policy development, professional development, adapting the curriculum and assessment according to the needs of their students, and staff sharing resources with their colleagues. Factor loadings for staff engagement ranged from 0.50 to 0.79.



Staff emotional wellbeing was found to have two underlying factors: promotion through school policies (e.g.: The school organises professional learning days for staff health and wellbeing; The school has provisions in place to safeguard the health and safety of our staff) ( $\alpha=0.88$ ); and promotion through opportunities (e.g.: I have opportunities to apply for positions/roles or promotions; Our staff has opportunities to socialise and connect with each other) ( $\alpha=0.73$ ). Staff emotional wellbeing promoted through school policies involved procedures and provisions to safeguard staff health and safety and reduce staff stress and burnout, and to address staff bullying, harassment or discrimination by leadership, colleagues, students or parents. School policies which support vulnerable and/or challenging students, access to professional advice and assistance and professional learning days were also part of the staff emotional wellbeing construct. Staff emotional wellbeing promoted through opportunities included opportunities and designated areas to socialise and connect with other staff, opportunities to apply for positions/roles of promotions, and opportunities to be creative and autonomous in their work. Factor loadings for staff emotional wellbeing ranged from 0.59 to 0.78.

School climate was found to have one underlying factor encompassing school culture and values (e.g.: The school climate encourages mutual respect and understanding, open discussion of concerns and constructive problem solving; The school encourages and reinforces positive relationships and behaviour amongst all members; The school policies and procedures reflect the rights and responsibilities of all concerned)( $\alpha=0.87$ ). School culture and values included the school being a safe, warm, and welcoming environment, which encourages mutual respect and understanding and reinforces positive relationships and behaviour, and school leadership shows concern for the social and emotional wellbeing of the whole school community. Factor loadings for school climate ranged from 0.74 to 0.86.

Chronbach's Alpha measure of reliability ranged from 'questionable' ( $0.6 \leq \alpha < 0.7$ ) for 'supportive relationships community' to 'acceptable' ( $0.7 \leq \alpha < 0.8$ ), 'good' ( $0.8 \leq \alpha < 0.9$ ) and 'excellent' ( $\alpha \geq 0.9$ ) for other factors. Examination of the item-total statistics for the three items included in the 'supportive relationships community' factor, did not show an increase in reliability if various items were excluded. Confirmatory factor analysis was used for factor validation with all goodness of fit measures indicating a good model fit ( $CFI \geq 0.9$ ,  $TLI \geq 0.9$ ,  $SRMR < 0.8$ ) (Hu & Bentler, 1999).

	Supportive Relationships			Staff engagement		Emotional wellbeing		School climate
	Leadership	Staff	Community	Active	Supported	Policies	Opportunities	Culture
# of items	8	6	3	10	5	7	5	8
Exploratory Factor Analysis								
Factor loadings (range)	0.51-0.84	0.54-0.82	0.59-0.82	0.51-0.79	0.59-0.82	0.63-0.83	0.49-0.78	0.74-0.86
Eigenvalue	7.904	1.602	1.335	5.944	1.577	5.603	1.072	4.92
Percentage variance explained	46.49	9.42	7.85	39.625	10.514	46.695	8.934	61.4
Percentage cumulative variance	46.49	55.91	63.76	39.625	50.138	46.695	55.630	61.4
Reliability	0.89	0.91	0.64	0.87	0.78	0.88	0.73	0.87
Confirmatory Factor Analysis								
CFI		0.912			0.890		0.891	0.934
TLI		0.897			0.870		0.864	0.908
SRMR		0.065			0.054		0.049	0.000

CFI – Comparative Fit Index, TLI – Tucker Lewis Index, SRMR – Standardized Root Mean Square Residual

**Table 1. Factor Analysis and Reliability Results of Whole-School Staff Wellbeing Indicators**

### **The Association of Whole-school Staff Wellbeing Indicators and Mental Health**

On average school staff reported high resilience ( $M = 3.3$  out of 5), average work stress ( $M = 3.0$  out of 6), and low depression ( $M = 5.3$  out of 42), anxiety ( $M = 3.4$  out of 42), and stress ( $M = 8.7$  out of 42). Multi-level regression models with random effects were used to determine the whole-school staff wellbeing indicators of staff mental health. After controlling for age, gender, length of time working in schools, role, and education level, staff members' more supportive relationships with the school leadership and other staff, were associated with lower work stress ( $B = -.95, p < 0.001$ ;  $B = -1.28, p < 0.001$ ), depression ( $B = -2.70, p = 0.007$ ;  $B = -3.22, p < 0.001$ ), anxiety ( $B = -1.50, p = 0.012$ ;  $B = -1.53, p = 0.007$ ) and stress ( $B = -1.98, p = 0.011$ ,  $B = -2.19, p = 0.003$ ). Staff perceptions of supportive community relationships were not associated with their mental health (all  $p > 0.05$ ) (Table 2).

The more staff perceived they had supported engagement, the lower their reported work stress ( $B = -1.17, p < 0.001$ ), depression ( $B = -3.04, p < 0.001$ ), and anxiety ( $B = -1.64, p < 0.001$ ). Active engagement of staff was significantly associated with staff reporting lower work stress ( $B = -0.49, p < 0.001$ ) and lower depression ( $B = -3.24, p < 0.001$ ).

Staff perception of school policies and school opportunities that promote staff emotional wellbeing were significantly associated with their lower work stress ( $B = -1.11, p < 0.001$ ;  $B = -1.00, p < 0.001$ ), lower depression ( $B = -2.57, p < 0.001$ ;  $B = -2.76, p = 0.001$ ), lower anxiety ( $B = -1.87, p = 0.001$ ;  $B = -2.44, p < 0.001$ ), and lower stress ( $B = -2.54, p < 0.001$ ;  $B = -2.59, p = 0.001$ ).

To determine the relative importance of whole-school factors on staff mental health, all significant whole-school factor variables were entered together into each of the multi-level mental health regression models. After controlling for age, gender, length of time working in schools, role, and education level, supportive staff relationships ( $B = -0.89, p < 0.001$ ), school policies promoting staff emotional wellbeing ( $B = -0.39, p < 0.001$ ) and school climate ( $B = -0.26, p = 0.021$ ) were protective school factors for work stress, and staff active engagement in the school was identified as a risk factor for staff work stress ( $B = 0.19, p = 0.026$ ). School opportunities promoting staff emotional wellbeing was the only whole-school factor significantly associated with lower anxiety ( $B = -1.84, p = 0.031$ ). When all whole-school factors were included in the one model, there were no significant whole-school factor associations with staff resilience, depression or stress.

B(95%CI)	Resilience	Work stress	Depression	Anxiety	Stress
Supportive relationships					
School leadership	-.07(-.21,.08)	-.95(-1.09,-.81)**	-2.70(-4.19,-1.22)**	-1.50(-2.68,-.32)*	-1.98(-3.51,-.46)*
Staff	.06(-.09,.20)	<b>-1.28(-1.39,-1.16)**</b>	-3.22(-4.60,-1.84)**	-1.53(-2.64,-.41)**	-2.19(-3.63,-.75)**
Community	.06(-.11,.23)	-.10(-.29,.08)	-0.95(-2.60,.70)	-.17(-1.47,1.14)	-.22(-1.90,1.46)
Engagement					
Supported	.09(-.09,.26)	-.1.17(-1.32,-1.01)**	-.3.04(-4.72,-1.37)**	-1.64(-2.97,-.31)*	-1.71(-3.53,.10)
Active	.17(-.10,.34)	<b>-.49(-.68,-.31)**</b>	-3.24(-5.08,-1.40)**	-1.30(-2.76,.17)	-1.49(-3.39,.41)
Emotional wellbeing					
School policies	.01(-.14,.15)	<b>-1.11(-1.23,-.99)**</b>	-2.57(-3.95,-1.19)**	-1.87(-2.96,.80)**	-2.54(-3.94,-1.14)**
School opportunities	.10(-.06,.26)	-1.00(-1.16,-.85)**	-2.76(-4.32,-1.21)**	<b>-2.44(-3.65,-1.23)**</b>	-2.59(-4.17,-1.00)**
School climate					
School culture and values	.02(-.15,.19)	<b>-1.28(-1.42,-1.13)**</b>	-3.19(-4.80,-1.58)**	-2.39(-3.66,-1.12)**	-2.79(-4.44,-1.14)**

\*p<0.05, \*\*p<0.01, All models controlled for age, gender, length of time working in schools, role, and education level. **Bolded** figures indicate the most significant whole-school associations with each mental health factor, when all whole-school indicators are placed within the one model.

**Table 2 Relationships Between Whole-School Factors and Mental Health After Controlling for Age, Gender, Length of Time Working in Schools, Role, and Education Level**

### Whole-School Staff Wellbeing Factors by Demographics

Significant differences were found between staff demographics and whole-school staff wellbeing indicators (Table 3). Females reported significantly higher perceptions that staff were supportive ( $z=-3.244$ ,  $p=0.001$ ), greater supportive community relationships ( $z=-4.048$ ,  $p<0.001$ ), higher supported engagement ( $z=-3.333$ ,  $p=0.001$ ), and higher school climate culture ( $z=-2.056$ ,  $p=0.040$ ) than males. Respondents aged 60 and above reported significantly lower perceptions of community relationships ( $X^2=6.735$ ,  $p=0.034$ ) and less supported engagement ( $X^2=7.305$ ,  $p=0.026$ ) than younger respondents, whereas, respondents aged under 40 reported lower perceptions of staff emotional wellbeing promoted through school policies than older staff.

Staff in 'other' school roles (e.g.: administration, allied health, maintenance) reported significantly lower perceptions of supportive community relationships ( $X^2=44.615$ ,  $p<0.001$ ) and less supported engagement ( $X^2=120.199$ ,  $p<0.001$ ), and more positive perceptions of school climate ( $X^2=17.337$ ,  $p=0.001$ ). Teachers reported significantly lower perceptions of staff emotional wellbeing being promoted through school policies ( $X^2=27.594$ ,  $p<0.001$ ), whereas, student support staff reported significantly lower perceptions of staff emotional wellbeing promoted through opportunities ( $X^2=9.081$ ,  $p<0.001$ ). Respondents with a postgraduate degree reported significantly lower perceptions of supportive relationships with leadership ( $X^2=9.219$ ,  $p=0.027$ ), while respondents without a qualification reported significantly lower perceptions of supportive community relationships ( $X^2=15.133$ ,  $p=0.002$ ) and less supported engagement ( $X^2=32.952$ ,  $p<0.001$ ). Those staff with more experience working in schools reported significantly higher perceptions of supported engagement ( $X^2=8.883$ ,  $p=0.031$ ), higher perceptions of staff emotional wellbeing promoted through opportunities ( $X^2=9.940$ ,  $p=0.019$ ) and higher school climate ( $X^2=9.441$ ,  $p<0.024$ ).

Mean	n(%)	Supportive Relationships			Staff engagement		Emotional wellbeing		School climate
		Leadership (1-4)	Staff (1-4)	Community (1-4)	Active (1-4)	Supported (1-4)	Policies (1-4)	Opportunities (1-4)	Culture (1-4)
Total	801	2.87	3.04	3.32	2.88	2.92	2.65	2.98	3.15
<b>Gender<sup>bedh</sup></b>									
Male	204(27.9)	2.74	2.99	3.18	2.83	2.93	2.62	2.94	3.07
Female	536(72.1)	2.93	3.06	3.38	2.90	2.92	2.65	3.00	3.18
<b>Age<sup>cef</sup></b>									
<40 years	256(34.3)	2.84	2.86	3.44	2.83	2.97	2.55	2.94	3.10
40-59 years	221(29.6)	2.91	2.95	3.52	2.83	2.89	2.66	3.00	3.12
>=60 years	269(36.1)	2.86	2.96	3.36	2.84	2.79	2.72	3.01	3.19
<b>Role<sup>cefg</sup></b>									
Teaching	349(51.5)	2.85	2.93	3.36	2.83	3.06	2.53	2.97	3.07
Middle/Senior leadership	146(20.2)	2.85	3.15	3.48	3.05	3.30	2.71	3.09	3.16
Student support	70(10.9)	2.83	3.08	3.21	2.77	2.45	2.70	2.84	3.13
Other	106(17.4)	2.96	3.21	3.09	2.89	2.27	2.88	2.97	3.35
<b>Education<sup>ace</sup></b>									
Diploma	63(10.2)	2.93	3.09	3.33	2.85	2.76	2.63	2.95	3.19
Bachelor Degree	247(37.4)	2.88	3.00	3.33	2.87	3.01	2.60	3.01	3.13
Postgraduate	277(41.0)	2.83	3.02	3.36	2.90	3.06	2.65	2.99	3.11
Other	70(11.4)	2.94	3.17	3.23	2.89	2.40	2.74	2.91	3.30
<b>Length of time working in schools<sup>egh</sup></b>									
1-5 years	160(26.3)	2.92	3.08	3.23	2.87	2.79	2.70	2.95	3.17
6-10 years	152(23.5)	2.85	3.06	3.34	2.85	2.80	2.63	3.00	3.19
11-20 years	175(26.4)	2.80	2.89	3.31	2.75	2.97	2.55	2.89	3.01
20+ years	164(23.9)	2.88	3.13	3.41	3.05	3.11	2.69	3.09	3.21

p<0.05 <sup>a</sup>supportive relationships - leadership <sup>b</sup>supportive relationships - staff <sup>c</sup>supportive relationships - community <sup>d</sup>staff engagement - active <sup>e</sup>staff engagement - supported <sup>f</sup>emotional wellbeing - policies <sup>g</sup>emotional wellbeing - opportunities <sup>h</sup>school climate - culture and values

**Table 3 Whole-School Staff Wellbeing by Demographics**

## Discussion

This study firstly aimed to examine the reliability and validity of a whole-school staff wellbeing evaluation tool and the underlying latent factors within each of the whole-school staff wellbeing components: supportive relationships, staff engagement, staff emotional wellbeing and school climate. Secondly, it aimed to determine the relationship between the underlying latent factors within each of the whole-school staff wellbeing components and their association with self-reported mental health. Finally, this study examined whether person characteristics and role factors influence perceptions of whole-school staff wellbeing factors within the proposed wellbeing evaluation tool.

Results have confirmed and validated the hypothesised structure of the wellbeing evaluation tool, with all but one of the underlying factors within each of the four staff wellbeing components having acceptable reliability. The staff wellbeing component 'supportive relationships' contained the underlying themes of leadership, staff and community relationships; 'staff engagement' contained the underlying themes of active and supported engagement; 'emotional wellbeing' contained the underlying themes of promotion of emotional wellbeing through school policies and promotion of emotional wellbeing through opportunities; and 'school climate' contained the underlying theme of culture and values.

### Supportive Relationships

Staff supportive relationships were defined by relationships with the school leadership, relationships with other school staff members, and relationships with the broader school community such as students and parents/carers. Higher perceived supportive relationships with school leadership and other staff members was associated with staff reporting lower work stress, depression, anxiety and stress. This finding is similar to previous research which found a lack of support from leadership and co-workers was associated with anxiety disorders, mood disorders, depressive disorders and neurotic disorders (C. Day & Gu, 2013; Netterstrøm et al., 2008; Nieuwenhuijsen, Bruinvels, & Frings-Dresen, 2010; Stansfeld & Candy, 2006b). Sustained, nurturing, and quality support from colleagues and leadership can influence how well school staff manage and cope with anticipated as well as unanticipated events (Day & Gu, 2013).

Previous research has found that school leadership can promote caring and supportive relationships with school staff by ensuring staff feel valued, respected and supported and that their wellbeing is important (Bryk & Schneider, 2003). Further, research suggests that school staff can also support each other through: collegiality; understanding; respecting and caring for one another; solving problems together; acting as mentors for each other; and providing feedback (Acton & Glasgow, 2015; Aelterman, Engels, Van Petegem, & Pierre Verhaeghe, 2007; Swafford, 1998; Yıldırım, 2014).

Surprisingly, perceived relationships with students and parents/caregivers was not associated with staff mental health. Other studies have found student behaviour and student and parent related issues were linked to stress for both school leadership and teachers (Friedman-Krauss et al., 2014; Geving, 2007; Hastings & Bham, 2003; Riley, 2017). This finding may be explained by differing methodology as the current study examined mental health of all school-staff rather than focussing on only teaching or only leadership staff, and the whole-school staff wellbeing indicators used in the current research focussed on relationships and communication with students and parents/caregivers rather than behaviour, such as challenging student behaviour and lack of parental collaboration (Friedman-Krauss et al., 2014; Geving, 2007; Hastings & Bham, 2003; Riley, 2017).

While the length of time staff had worked in schools did not appear to influence their perception of supportive relationships within the school, being male or female influenced the respondents' perception of both staff and community relationships. It would have been valuable to measure the length of time staff have been in their current school as this may have been more likely to be associated with staff relationships than years of teaching experience. Female staff perceived more supportive staff and community relationships within the school than males. In this study the majority of respondents were female (72%), which is representative of the gender ratio in Catholic and Independent schools in Australia (McGrath & Van Bergen, 2017). It may be within the school context, females are more supportive of other females, or show support in ways which are perceived by females as being more supportive. Younger staff members, and staff in teaching and leadership positions also reported greater community support, whereas staff with higher education levels perceived less leadership support. Younger staff may have received more support given their limited teaching experience, whereas those with more education may be perceived as needing less support given they potentially have greater skills and experience. Teachers and school leaders have more contact with the school community, especially students, and hence their likely higher perceptions of support than other members of staff.

### **Staff Engagement**

Staff engagement was defined by supported engagement and active influential and meaningful engagement. Supported engagement can be encouraged through treating all staff equally and valuing their contribution, procedures to promote staff collaboration and constructive conflict resolution, providing staff with adequate support, resources and technology for their work, informing staff of the school's policies, and giving staff particular roles and responsibilities at the school (Aelterman et al., 2007; MacTavish & Kolb, 2006). Schools can promote active influential and meaningful engagement by encouraging staff to be involved in staff meetings and professional development sessions, involve the staff in planning and policy development, encourage collegiality through the sharing of practice and resources, encouraging partnerships and mentorships and giving staff the autonomy to adapt curriculum and assessment according to the needs of students (Konu et al., 2010; Louis et al., 2010; Margolis & Nagel, 2006b; Skaalvik & Skaalvik, 2014).

Staff perceptions of being engaged with the school community was associated with lower work stress and depression irrespective of whether their engagement was active or supported. Moreover, supported engagement was also associated with lower anxiety. Surprisingly, neither supported nor active engagement was associated with staff perceptions of greater resilience. Previous research found school staff resilience can be built through collegiality and support networks, participation in professional development, engaging in reflective practice, availability of resources and having realistic goals (Konu et al., 2010; *Promoting resilience and well-being*, 2014). Schools can promote staff personal resilience by encouraging staff to be actively engaged in school activities, staff meetings, professional development sessions, providing staff with opportunities to participate in school decision-making, and encouraging sharing of practice and resources between staff members (C. Day & Gu, 2013; Konu et al., 2010).

Gender influenced the perceptions of active staff engagement, whereas age, role, education and length of time working in schools influenced the perception of supported staff engagement. The influence of gender on active staff engagement within this study, could be due to the large proportion of female respondents.



### **Emotional Wellbeing**

Staff emotional wellbeing was associated with school policies that supported positive emotional wellbeing, and opportunities for staff to support and improve their own emotional wellbeing. Staff with higher perceptions that their school's policies and opportunities supported their own emotional wellbeing reported less work stress, depression, anxiety and stress than those who didn't feel they had this emotional support. Previous research has found that school policies and practices that help to prevent and reduce staff stress and burnout include providing staff with access to professional advice and assistance, providing extra support to staff working with vulnerable and/or challenging students, organising professional development on staff social and emotional competence and wellbeing, and provisions to address staff bullying, harassment or discrimination (Askill-Williams, Lawson, & Skrzypiec, 2012; Lendrum, Humphrey, & Wigelsworth, 2013; Reinke, Stormont, Herman, Puri, & Goel, 2011). Other actions schools can take to support staff emotional wellbeing include providing designated areas where staff can take a break, quiet work areas, giving staff the opportunity to socialise and connect with each other, giving the staff opportunities to be creative and autonomous in their work, and providing staff with opportunities to apply for positions/promotions (Aelterman et al., 2007; Matters, 2012; Skaalvik & Skaalvik, 2014; Watt & Richardson, 2008).

Age and role influenced staff perception that their emotional wellbeing was being supported through school policies, whereas, their role and the length of time they have been working in schools influenced their sense of emotional wellbeing support through opportunities provided by the school.

### **School Climate**

School climate was associated with school culture and values. Staff with higher perceptions of school climate reported less work stress, depression, anxiety and stress than those with lower perceptions of school climate. Previous studies have shown perception of a positive school climate is associated with less stress and more job satisfaction, teaching efficacy, and teacher commitment (Ahghar, 2008; Collie, Shapka, & Perry, 2011; Collie et al., 2012). Teacher mental health and school climate have a cyclical relationship with school climate impacting teacher stress, and heightened teacher stress influencing school climate (Gray et al., 2017). School climate is greatly influenced by school leadership practices such as the promotion of positive relationships and interactions, respect for all members of the school community, consistent policies, and positive and effective communication (Christopher Day, 2008; Halawah, 2005; D. Wilson, 2004).

Gender, role, and length of time working in schools influenced staff perception of school climate. These results are supported by previous studies which found that a teacher's gender and age effected their perceptions of the quality of the school climate or environment (Johnson, 2017; Tran, 2015; J. Wilson, Pentecoste, & Bailey, 1984).

### **Relative Importance of Relationships, Engagement, Emotional Wellbeing and School Climate on Mental Health**

On average this population of school staff had good mental health (above average resilience, and below average work stress, depression, anxiety and stress) and high perceptions of whole-school staff wellbeing significantly related to different elements of supportive relationships, work engagement, emotional wellbeing, and school climate. To enable schools

to prioritise resources to improve staff mental health, the relative importance of all whole-school factors on mental health were considered. Promoting supportive staff relationships, focussing on school policies promoting staff emotional wellbeing, and a positive school climate were correlated with lower work stress, whereas promoting school opportunities which support staff emotional wellbeing correlated with lower reports of staff anxiety. As previous studies have found school staff reporting higher levels of work-related stress than other occupations, school leaders need to provide a keener focus on creating opportunities for staff to build collegiality, and ensuring school policies prioritise staff emotional wellbeing (Kidger et al., 2016; Riley, 2014, 2017; Stansfeld et al., 2011). School leadership can increase opportunities for staff to interact meaningfully and increase collegiality through organisational structures such as professional development opportunities, regular team meetings where staff routinely work and plan with each other, and increasing physical proximity by situating team members near each other (Ford & Youngs, 2018; Lai & Cheung, 2015; Owen, 2014). School staff can increase their collegiality through regular participation in school activities, exploring new possibilities to support curricular and pedagogical improvement, extending teacher learning in communities of practice, and forming professional networks (Lai & Cheung, 2015). Co-planning activities, sharing knowledge and information, inviting staff from all disciplines to participate in collegial open discussions, and sharing resources will increase staff collaboration and collective responsibility (Boyland & Fisher, 2018; Murphy, 2005).

#### **The Relationship Between Staff Demographics and Whole-School Staff Wellbeing**

Similar to previous research, staff perception of their whole-school staff wellbeing is associated with staff characteristics such as gender, age, education, length of time working in schools, and role within the school, highlighting the importance of involving all school staff collaboratively to identify targets for intervention (Goddard & Goddard, 2006; Konu et al., 2010; Riley, 2017; Tran, 2015; Van Petegem et al., 2005).

The whole-school staff wellbeing evaluation tool could be used by schools as a screening or staff self-evaluation tool to identify school or system strengths and areas for improvement related to staff relationships, staff engagement, staff emotional wellbeing and school climate. Once areas for school improvement through staff wellbeing are identified, a plan of action can then be developed. The action plan would outline key activities, resource requirements and allocation, and monitoring and regular evaluation of whole-school approaches to enhance staff wellbeing.

As the wellbeing of all school staff is an important determinant of student academic, social and emotional competencies and behaviour, it is important to promote the wellbeing of the whole-school community (Cefai & Cavioni, 2014; Roorda et al., 2011). Educators as well as families and researchers increasingly recognise the impact of students' emotional resilience and social interactions on their behavioural and academic outcomes (Cefai & Cavioni, 2014; Wentzel, 1991). As a result, school leaders, teachers, and pastoral care staff are expected to provide emotional and social support to students as part of their responsibilities as educators. High levels of teacher stress predict more negative student-teacher relationships and interactions, and lower emotional classroom climates, which in turn is likely to negatively impact the wellbeing of school staff and students (Friedman-Krauss et al., 2014; S Yoon, 2002; Spilt et al., 2011). Hence, the provision of a healthy workplace for all school staff is essential in promoting the wellbeing of the whole-school community.

While a large and diverse sample of school staff have participated in this research, the results are limited. Schools were self-selected and there was no requirement for school staff to complete the surveys, which may have resulted in selection bias. Participating schools were all

non-government, from metropolitan areas, and areas of higher socio-economic status. There is a need for further research to determine if the relationships found in this study hold in different types of schools, and schools in different locations as well as in different cultural contexts. Data used in this study were cross-sectional, with longitudinal data needed to understand the causal relationship between whole school staff wellbeing and their mental health.

## Conclusion

This study explores the relationship between whole-school staff wellbeing and staff-reported mental health, and individual staff characteristics which influence perceptions of whole-school staff wellbeing. Results of this study highlight the importance of the school as a health promoting context for its staff, where a school operating as a caring community, characterised by a sense of belonging and common goals, caring and collegial relationships and meaningful and influential engagement, can impact positively on staff wellbeing. An ecological, systemic approach can enhance school staff mental health through addressing staff relationships, staff engagement, emotional wellbeing, and school climate. Prioritising resources to build supportive staff relationships, school policies promoting the emotional wellbeing of staff, and school culture and values appear to positively impact staff mental health. Continued monitoring and evaluation of whole-school interventions to identify strengths and needs to improve staff wellbeing is recommended.

## References

- Acton, R., & Glasgow, P. (2015). Teacher wellbeing in neoliberal contexts: A review of the literature. *Australian Journal of Teacher Education*, 40(8), 6. <https://doi.org/10.14221/ajte.2015v40n8.6>
- Aelterman, A., Engels, N., Van Petegem, K., & Pierre Verhaeghe, J. (2007). The well-being of teachers in Flanders: the importance of a supportive school culture. *Educational studies*, 33(3), 285-297. <https://doi.org/10.1080/03055690701423085>
- Ahghar, G. (2008). The role of school organizational climate in occupational stress among secondary school teachers in Tehran. *International Journal of Occupational Medicine and Environmental Health*, 21(4), 319-329. <https://doi.org/10.2478/v10001-008-0018-8>
- Askell-Williams, H., Lawson, M. J., & Skrzypiec, G. (2012). Scaffolding cognitive and metacognitive strategy instruction in regular class lessons. *Instructional Science*, 40(2), 413-443. <https://doi.org/10.1007/s11251-011-9182-5>
- Biggio, G., & Cortese, C. (2013). Well-being in the workplace through interaction between individual characteristics and organizational context. *International Journal of Qualitative Studies on Health and Well-being*, 8(1), 19823. <https://doi.org/10.3402/qhw.v8i0.19823>
- Biglan, A. (2008). Teacher stress and collegiality: Overlooked factors in the effort to promote evidence-based practices. *Association for Behavior Analysis International Newsletter*, 31(3).
- Boyland, J. R., & Fisher, T. (2018). Collegial support for counsellors. *AUSTRALIAN COUNSELLING RESEARCH*.
- Bronfenbrenner, U. (2005). *Making human beings human: Bioecological perspectives on human development*: Sage.
- Bryk, A. S., & Schneider, B. (2003). Trust in schools: A core resource for school reform. *Educational leadership*, 60(6), 40-45.

- Butt, R., & Retallick, J. (2009). Professional well-being and learning: a study of administrator-teacher workplace relationships. *The Journal of Educational Enquiry*, 3(1).
- Cefai, C., & Cavioni, V. (2014). *Social and emotional education in primary school: Integrating theory and research into practice*: Springer Science & Business Media. <https://doi.org/10.1007/978-1-4614-8752-4>
- Cohen, J., McCabe, L., Michelli, N. M., & Pickeral, T. (2009). School climate: Research, policy, practice, and teacher education. *Teachers college record*, 111(1), 180-213.
- Collie, R. J., Shapka, J. D., & Perry, N. E. (2011). Predicting teacher commitment: The impact of school climate and social-emotional learning. *Psychology in the Schools*, 48(10), 1034-1048. <https://doi.org/10.1002/pits.20611>
- Collie, R. J., Shapka, J. D., & Perry, N. E. (2012). School climate and social-emotional learning: Predicting teacher stress, job satisfaction, and teaching efficacy. *Journal of Educational Psychology*, 104(4), 1189. <https://doi.org/10.1037/a0029356>
- Cooper, C., & Marshall, J. (1978). Sources of managerial and white collar stress. *Stress at work*, 81-105.
- Dahlkamp, S., Peters, M., & Schumacher, G. (2017). Principal self-efficacy, school climate, and teacher retention: A multi-level analysis. *Alberta Journal of Educational Research*, 63(4), 357-376.
- Day, C. (2008). Committed for life? Variations in teachers' work, lives and effectiveness. *Journal of educational change*, 9(3), 243-260. <https://doi.org/10.1007/s10833-007-9054-6>
- Day, C., & Gu, Q. (2013). *Resilient teachers, resilient schools: Building and sustaining quality in testing times*: Routledge. <https://doi.org/10.4324/9780203578490>
- DeVellis, R. F. (2016). *Scale development: Theory and applications* (Vol. 26): Sage publications.
- Education, N. C. C. G. f. I. (2002). *Creating Inclusive Schools: Guidelines for the Implementation of the National Curriculum Policy on Inclusive Education*. Malta.
- Ford, T. G., & Youngs, P. A. (2018). Creating organizational structures to facilitate collegial interaction among teachers: Evidence from a high-performing urban Midwestern US district. *Educational Management Administration & Leadership*, 46(3), 424-440. <https://doi.org/10.1177/1741143216682501>
- Fredrickson, B. L., & Joiner, T. (2002). Positive emotions trigger upward spirals toward emotional well-being. *Psychological science*, 13(2), 172-175. <https://doi.org/10.1111/1467-9280.00431>
- Friedman-Krauss, A. H., Raver, C. C., Morris, P. A., & Jones, S. M. (2014). The Role of Classroom-Level Child Behavior Problems in Predicting Preschool Teacher Stress and Classroom Emotional Climate. *Early Education and Development*, 25(4), 530-552. <https://doi.org/10.1080/10409289.2013.817030>
- Galderisi, S., Heinz, A., Kastrup, M., Beezhold, J., & Sartorius, N. (2015). Toward a new definition of mental health. *World Psychiatry*, 14(2), 231-233. <https://doi.org/10.1002/wps.20231>
- Geving, A. M. (2007). Identifying the types of student and teacher behaviours associated with teacher stress. *Teaching and Teacher Education*, 23(5), 624-640. <https://doi.org/10.1016/j.tate.2007.02.006>
- Goddard, R., & Goddard, M. (2006). Beginning teacher burnout in Queensland schools: Associations with serious intentions to leave. *The Australian Educational Researcher*, 33(2), 61-75. <https://doi.org/10.1007/BF03216834>
- Gray, C., Wilcox, G., & Nordstokke, D. (2017). Teacher mental health, school climate, inclusive education and student learning: A review. *Canadian Psychology/Psychologie Canadienne*, 58(3), 203. <https://doi.org/10.1037/cap0000117>

- Grayson, J. L., & Alvarez, H. K. (2008). School climate factors relating to teacher burnout: A mediator model. *Teaching and teacher education*, 24(5), 1349-1363.  
<https://doi.org/10.1016/j.tate.2007.06.005>
- Gu, Q., & Day, C. (2013). Resilient Teachers, Resilient Schools: Building and sustaining quality in testing times.
- Halawah, I. (2005). The relationship between effective communication of high school principal and school climate. *Education*, 126(2).
- Harvey, S. B., Joyce, S., Tan, L., Johnson, A., Nguyen, H., Modini, M., & Groth, M. (2014). Developing a mentally healthy workplace: A review of the literature. Sydney: University of New South Wales.
- Harvey, S. B., Joyce, S., Tan, L., Johnson, A., Nguyen, H., Modini, M., & Groth, M. (2015). Developing a mentally healthy workplace: A review of the literature.
- Hastings, R. P., & Bham, M. S. (2003). The relationship between student behaviour patterns and teacher burnout. *School Psychology International*, 24(1), 115-127.  
<https://doi.org/10.1177/0143034303024001905>
- Hu, L. t., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural equation modeling: a multidisciplinary journal*, 6(1), 1-55. <https://doi.org/10.1080/10705519909540118>
- Johnson, Z. T. (2017). *Teacher Perceptions of Administrator Leadership Styles Regarding Job Satisfaction*. Lindenwood University.
- Kahneman, D., Diener, E., & Schwarz, N. (1999). *Well-being: Foundations of hedonic psychology*: Russell Sage Foundation.
- Kidger, J., Brockman, R., Tilling, K., Campbell, R., Ford, T., Araya, R., . . . Gunnell, D. (2016). Teachers' wellbeing and depressive symptoms, and associated risk factors: A large cross sectional study in English secondary schools. *Journal of affective disorders*, 192, 76-82. <https://doi.org/10.1016/j.jad.2015.11.054>
- Konu, A., Viitanen, E., & Lintonen, T. (2010). Teachers' wellbeing and perceptions of leadership practices. *International Journal of Workplace Health Management*, 3(1), 44-57. <https://doi.org/10.1108/17538351011031939>
- Lai, E., & Cheung, D. (2015). Enacting teacher leadership: The role of teachers in bringing about change. *Educational Management Administration & Leadership*, 43(5), 673-692. <https://doi.org/10.1177/1741143214535742>
- Lendrum, A., Humphrey, N., & Wigelsworth, M. (2013). Social and emotional aspects of learning (SEAL) for secondary schools: implementation difficulties and their implications for school-based mental health promotion. *Child and Adolescent Mental Health*, 18(3), 158-164. <https://doi.org/10.1111/camh.12006>
- Louis, K. S., Leithwood, K., Wahlstrom, K. L., Anderson, S. E., Michlin, M., & Mascall, B. (2010). Learning from leadership: Investigating the links to improved student learning. *Center for Applied Research and Educational Improvement/University of Minnesota and Ontario Institute for Studies in Education/University of Toronto*, 42, 50.
- Lovibond, S., & Lovibond, P. (1995). *Manual for the depression anxiety stress scales*. Sydney: Psychology Foundation. <https://doi.org/10.1037/t39835-000>
- MacTavish, M. D., & Kolb, J. A. (2006). Encouraging Teacher Engagement: A New Approach to Performance Improvement in Schools. *Online Submission*.
- Malinen, O.-P., & Savolainen, H. (2016). The effect of perceived school climate and teacher efficacy in behavior management on job satisfaction and burnout: A longitudinal study. *Teaching and teacher education*, 60, 144-152.  
<https://doi.org/10.1016/j.tate.2016.08.012>
- Margolis, J., & Nagel, L. (2006a). Education reform and the role of administrators in mediating teacher stress. *Teacher Education Quarterly*, 143-159.



- Margolis, J., & Nagel, L. (2006b). Education reform and the role of administrators in mediating teacher stress. *Teacher Education Quarterly*, 33(4), 143-159.
- Matters, M. (2012). Whole School Matters: Commonwealth of Australia.
- McGrath, K. F., & Van Bergen, P. (2017). Are male teachers headed for extinction? The 50-year decline of male teachers in Australia. *Economics of Education Review*, 60, 159-167. <https://doi.org/10.1016/j.econedurev.2017.08.003>
- Milfont, T. L., Denny, S., Ameratunga, S., Robinson, E., & Merry, S. (2008). Burnout and wellbeing: Testing the Copenhagen burnout inventory in New Zealand teachers. *Social Indicators Research*, 89(1), 169-177. <https://doi.org/10.1007/s11205-007-9229-9>
- Moye, M. J., Henkin, A. B., & Egley, R. J. (2005). Teacher-principal relationships: Exploring linkages between empowerment and interpersonal trust. *Journal of Educational Administration*, 43(3), 260-277. <https://doi.org/10.1108/09578230510594796>
- Murphy, J. (2005). *Connecting teacher leadership and school improvement*: Corwin Press.
- Naghieh, A., Montgomery, P., Bonell, C. P., Thompson, M., & Aber, J. L. (2013). Organisational interventions for improving wellbeing and reducing work-related stress in teachers. *The Cochrane Library*. <https://doi.org/10.1002/14651858.CD010306>
- Netterstrøm, B., Conrad, N., Bech, P., Fink, P., Olsen, O., Rugulies, R., & Stansfeld, S. (2008). The relation between work-related psychosocial factors and the development of depression. *Epidemiologic reviews*, 30(1), 118-132. <https://doi.org/10.1093/epirev/mxn004>
- Nieuwenhuijsen, K., Bruinvels, D., & Frings-Dresen, M. (2010). Psychosocial work environment and stress-related disorders, a systematic review. *Occupational medicine*, 60(4), 277-286. <https://doi.org/10.1093/occmed/kqq081>
- Organization, W. H. (2010). Mental health: strengthening our response. *Fact sheet*, 220.
- Organization, W. H. (2019). Mental health in the workplace. *Information sheet*, 220.
- Owen, S. (2014). Teacher Professional Learning Communities: Going beyond Contrived Collegiality toward Challenging Debate and Collegial Learning and Professional Growth. *Australian journal of adult learning*, 54(2), 54-77.
- Papatraianou, L. H., & Le Cornu, R. (2014). Problematising the role of personal and professional relationships in early career teacher resilience. *Australian Journal of Teacher Education*, 39(1), 7. <https://doi.org/10.14221/ajte.2014v39n1.7>
- Promoting resilience and well-being. (2014). Retrieved from Commonwealth of Australia:
- Reinke, W. M., Stormont, M., Herman, K. C., Puri, R., & Goel, N. (2011). Supporting children's mental health in schools: Teacher perceptions of needs, roles, and barriers. *School Psychology Quarterly*, 26(1), 1. <https://doi.org/10.1037/a0022714>
- Riley, P. (2014). Principals' psychological health: It's not just lonely at the top, it's dangerous. *Australian Psychological Society*.
- Riley, P. (2017). *The Australian Principal Health and Wellbeing Survey*. Retrieved from Clayton, Victoria, Australia:
- Roorda, D. L., Koomen, H. M., Spilt, J. L., & Oort, F. J. (2011). The influence of affective teacher-student relationships on students' school engagement and achievement: A meta-analytic approach. *Review of educational research*, 81(4), 493-529. <https://doi.org/10.3102/0034654311421793>
- S Yoon, J. (2002). Teacher characteristics as predictors of teacher-student relationships: Stress, negative affect, and self-efficacy. *Social Behavior and Personality: an international journal*, 30(5), 485-493. <https://doi.org/10.2224/sbp.2002.30.5.485>
- Schaufeli, W. B., & Bakker, A. B. (2004). Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study. *Journal of organizational Behavior*, 25(3), 293-315. <https://doi.org/10.1002/job.248>

- Skaalvik, E. M., & Skaalvik, S. (2014). Teacher self-efficacy and perceived autonomy: Relations with teacher engagement, job satisfaction, and emotional exhaustion. *Psychological reports*, 114(1), 68-77. <https://doi.org/10.2466/14.02.PR0.114k14w0>
- Smith, B., Dalen, J., Wiggins, K., Tooley, E., Christopher, P., & Bernard, J. (2008). The brief resilience scale: assessing the ability to bounce back. *International journal of behavioral medicine*, 15(3), 194-200. <https://doi.org/10.1080/10705500802222972>
- Spilt, J. L., Koomen, H. M., & Thijs, J. T. (2011). Teacher wellbeing: The importance of teacher–student relationships. *Educational Psychology Review*, 23(4), 457-477. <https://doi.org/10.1007/s10648-011-9170-y>
- Stansfeld, S., & Candy, B. (2006a). Psychosocial work environment and mental health--a meta-analytic review. *Scandinavian journal of work, environment & health*, 32(6), 443-462. <https://doi.org/10.5271/sjweh.1050>
- Stansfeld, S., & Candy, B. (2006b). Psychosocial work environment and mental health—a meta-analytic review. *Scandinavian journal of work, environment & health*, 443-462. <https://doi.org/10.5271/sjweh.1050>
- Stansfeld, S., Rasul, F., Head, J., & Singleton, N. (2011). Occupation and mental health in a national UK survey. *Social psychiatry and psychiatric epidemiology*, 46(2), 101-110. <https://doi.org/10.1007/s00127-009-0173-7>
- Swafford, J. (1998). Teachers supporting teachers through peer coaching. *Support for learning*, 13(2), 54-58. <https://doi.org/10.1111/1467-9604.00058>
- Tran, V. D. (2015). Effects of Gender on Teachers' Perceptions of School Environment, Teaching Efficacy, Stress and Job Satisfaction. *International Journal of Higher Education*, 4(4), 147-157. <https://doi.org/10.5430/ijhe.v4n4p147>
- Ungar, M. (2012). Social ecologies and their contribution to resilience *The social ecology of resilience* (pp. 13-31): Springer. [https://doi.org/10.1007/978-1-4614-0586-3\\_2](https://doi.org/10.1007/978-1-4614-0586-3_2)
- Van Petegem, K., Creemers, B. P., Rossel, Y., & Aelterman, A. (2005). Relationships between teacher characteristics, interpersonal teacher behaviour and teacher wellbeing. *The Journal of Classroom Interaction*, 34-43.
- Watt, H. M., & Richardson, P. W. (2008). Motivations, perceptions, and aspirations concerning teaching as a career for different types of beginning teachers. *Learning and instruction*, 18(5), 408-428. <https://doi.org/10.1016/j.learninstruc.2008.06.002>
- Wentzel, K. R. (1991). Relations between social competence and academic achievement in early adolescence. *Child development*, 62(5), 1066-1078. <https://doi.org/10.2307/1131152>
- Wilson, D. (2004). The interface of school climate and school connectedness and relationships with aggression and victimization. *Journal of School Health*, 74(7), 293-299. <https://doi.org/10.1111/j.1746-1561.2004.tb08286.x>
- Wilson, J., Pentecoste, J., & Bailey, D. (1984). The influence of sex, age, teacher experience and race on teacher perception of school climate. *Education*.
- Yıldırım, K. (2014). Main factors of teachers' professional well-being. *Educational Research and Reviews*, 9(6), 153-163. <https://doi.org/10.5897/ERR2013.1691>