



Received: 13 June 2019
Accepted: 24 October 2019
First Published: XX XXX XXXX

*Corresponding author: Michelle Chin Chin Lee, Department of Psychology, Sunway University, Malaysia
E-mail: michellel@sunway.edu.my

Reviewing editor:
Gabriela Topa, Social and Organizational Psychology, Universidad Nacional de Educacion a Distancia, Spain

Additional information is available at the end of the article

APPLIED PSYCHOLOGY | RESEARCH ARTICLE

Testing the relevance, proximal, and distal effects of psychosocial safety climate and social support on job resources: A context-based approach

Michelle Chin Chin Lee^{1*} and Judith Lunn²

Abstract: Building on and extending the proximal-distal theoretical framework of motivation, we investigated the relevance of the role and effectiveness of psychosocial safety climate (PSC) and social support as contextual factors in assisting faculty members' and university students' cognitive and emotional resources. Three hundred and fifty faculty members (N = 175) and university students (N = 175) from 37 departments of 15 universities in Malaysia participated in this dual-rater multi-level study. Data analysis involved Hierarchical Linear Modeling. Individual-level analyses showed that social support influences faculty members' and university students' job resources. Cross-level analyses showed that PSC was effective in providing job resources to faculty members, but only to university students' emotional resources. Between PSC and social support, PSC showed lesser influence as compared to social support. There was a stronger influence of PSC and social support on the provision of emotional resources to both faculty members and university students as compared to cognitive resources. In conclusion, positive organizational factors such as PSC and social



Michelle Chin Chin Lee

ABOUT THE AUTHOR

Dr Michelle Chin Chin Lee is a senior lecturer at Sunway University, Department of Psychology, Malaysia. Graduated from University Malaya, her PhD was on organizational contexts and job resources. Her research interests include organizational climate, organizational leadership, organizational culture, job resources, and work engagement. She has published in journals such as *International Journal Stress Management*, *Human Resource Development International*, and *Personnel Review*. She is currently an article editor and a reviewer to several journals. She is also currently a scientific committee for the Asia Pacific Academy for Psychosocial Factors at Work (APA-FPAW) and the organizing chair for the APA-FPAW conference 2020. The current study findings further extend the applicability and the relevancy of psychosocial safety climate in different work contexts. This shows organizational climates have to be considered from multiple lenses based on its functionality and purposes.

PUBLIC INTEREST STATEMENT

How one perceives their environment influences his/her attitude and behaviors. University is a place where faculty members and students face a high level of stress albeit different tasks were undertaken by both faculty members and students. More importantly, faculty members also have to handle non-study-related issues faced by students, making them both cognitively and emotionally drained. Focusing within an Asian context, the aim of this research is to see how psychosocial safety climate and social support relate to faculty members' resources and if their effects are able to extend to students' job resources. We also investigate if these resources are more beneficial cognitively or emotionally to faculty members and students. We propose that as social support can be obtained easier than psychosocial safety climate, social support would influence job resources more. Nevertheless, we also hypothesized the role of psychosocial safety climate in providing higher job resources to faculty members.

support are important in affecting faculty members and university students' job resources, especially emotional resources.

Subjects: School Leadership, Management & Administration; School Psychology; Educational Psychology

Keywords: psychosocial safety climate; social support; job resources; faculty member; university student; Malaysia

Job resources have been widely discussed in the literature (Bakker & Demerouti, 2007; Schaufeli & Bakker, 2004) as it evokes work motivation within employees which subsequently increases work engagement and job performance (Bakker & Demerouti, 2007), in addition to ensuring the well-being of employees (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007). The antecedents for the provision of job resources have become a recent focus in the job resources literature (Bakker & Schaufeli, 2008). Organizational climate, defined as “the shared meaning organizational members attach to the events, policies, practices, and procedures they experience and the behaviors they see being rewarded, supported, and expected” (Ehrhart, Schneider, & Macey, 2014, p. 69), is closely related to job resources. Within the university setting, university climate is suggested to play an important role in influencing both faculty members and university students daily functioning and well-being (Bradshaw, Waasdorp, Debnam, & Johnson, 2014). O'Brennan, Pas, and Bradshaw (2017) reported that university climate relates to faculty members' burnout while a study by Reis, Trockel, and Mulhall (2007) showed that university climate relates to university students' well-being. The findings overall indicate the importance of having a positive university climate for both faculty members and university students. Its importance becomes more pertinent as both faculty members and university students face high workloads, both cognitively and emotionally. Faculty members, for example, are busy with teachings, research, administrative work and ensuring the well-being of university students (Comm & Mathaisel, 2003; Lackritz, 2004). University students, on the other hand, are busy with studying, identity searching, and relationship problems (Gibbons, 1998).

Whilst many studies have addressed the broader concept of university climate, there is variation in how university climate is defined and operationalised. For example, in one study university climate comprised of safety, engagement, and environment (Bradshaw et al., 2014) whilst in another it comprised of faculty member support, clarity of roles and expectations, peer interactions, support for cultural pluralism, achievement orientation, and instructional innovation (Brand, Felner, Shim, Seitsinger, & Dumas, 2003). Hart and Fellabaum (2008) commented on the lack of consensus in terms of definition and measurement. The authors point out that the more general the definition of university climates, the greater the likelihood of non-specific issues becoming a research focus. In addition, while studies have observed that a positive university climate benefits both faculty members and university students (Virtanen et al., 2009), they have yet to investigate the intricate relationship between the university climate, faculty members, and university students. In particular, there is a lack of studies looking at how a university climate may affect the providence of job resources for both faculty members and university students.

The proximal-distal theoretical perspective views an individual's behavior from the motivation through the availability of resources, its construct, and mechanisms within it (Kanfer, 1990). Organizational climates have been viewed as important factors in the motivation literature in the providence of job resources (cf. Lee & Idris, 2019). Given the different types of social support available within the university setting (Bernardon, Babb, Hakim-Larson, & Gragg, 2011), studies thus far have not identified which types of social support will be more conducive for job resources, especially in respect to university students. We also bring attention to the issue that, while studies on job resources have been conducted among faculty members, they were not able to distinguish the different types of job resources, including cognitive resources and emotional resources (cf. De

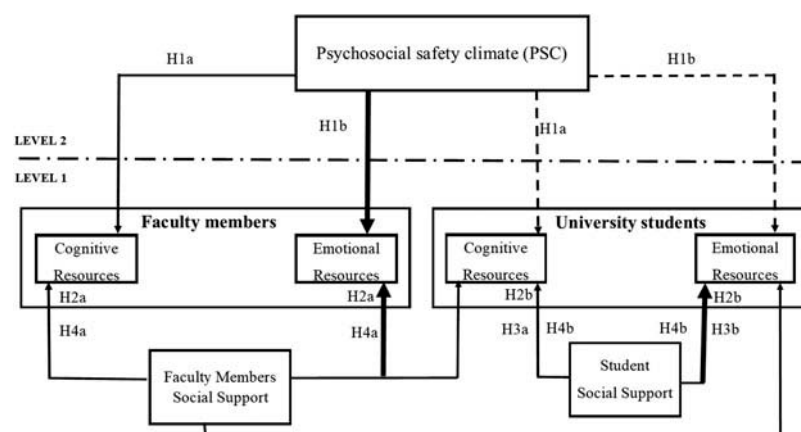
Neve, Devos, & Tuytens, 2015). This is pertinent to understanding the nature of job resources and the roles each type of job resource may play in a particular context, hereby, the university setting.

Based on the current literature gaps, four research questions arise for this study: 1) What's the relationship between psychosocial safety climate (PSC), social support for both faculty members and university students, and their job resources? 2) How relevant is PSC to university students? More specifically, 3) Between PSC and social support, which plays a more important role to faculty members and university students in the providence of job resources? and 4) Does social support provide more cognitive or emotional resources for faculty members and university students? Since the overgeneralization of university climate precludes literature from further refinement and rallying the call of university climate to be more specific and align with existing theory (Wang & Degol, 2016), we propose the use of PSC and social support as antecedents of job resources. Between the two, we predict that social support will show a stronger effect, as it displays one component of PSC (i.e., management commitment and support) (Havermans et al., 2017). We argue that social support from faculty members' peers will have a greater influence on faculty members than university students; whereas for university students, the social support derived from the peers, rather than social support from faculty members' will have greater influence.

Furthermore, since PSC largely explains the motivational aspect of work and individual well-being (Hall, Dollard, & Coward, 2010), we propose that the importance of resources is more influential on faculty members than university students, due to the relevancy and proximal-distal effects of the organizational climate. In other words, university students derive their job resources from their environment (i.e., social support from their university peers), and lesser from the organizational setting (i.e., PSC and social support from faculty members) (Malecki & Demaray, 2003). Finally, in a further examination on the role of PSC and social support, we propose that these two factors provide a higher level of emotional resources (as compared to cognitive resources), as this is a resource that is often lacking within the academic setting (Ogbonna & Harris, 2004).

The current study will test the applicability of proximal-distal effects of the PSC, and social support from faculty members and university students' peers in influencing their perceptions of job resources, within the organizational climate of the university setting. We will therefore further elucidate upon the challenges faced by faculty members and university students in tertiary institutions. Overall, the findings will bring additional understanding within the Asian setting, where university students face high academic stress (Tan & Yates, 2011) and faculty members report increased suffering from high workloads (Ahsan, Abdullah, Fie, & Alam, 2009). The proposed model is shown in Figure 1:

Figure 1. Hypotheses and Research Model.



1. Review of the literature and hypotheses development

1.1. *Psychosocial safety climate and job resources*

Psychosocial safety climate (PSC) has been regarded as a specific organizational climate that functions to provide a safe working environment for employees to work within (Hall et al., 2010). It focuses on four aspects of organizational contexts which include management commitment, management priority, organizational communication, and organizational participation. Most of the studies done on PSC has been on employees' health and well-being. Thus far, PSC has been linked to different types of sample size such as community service employees (Dollard & McTernan, 2011), health-care staff (Idris, Dollard, Coward, & Dormann, 2012), and police constables (Dollard, Tuckey, & Dormann, 2012). We propose the use of PSC within tertiary institutions as its function and purpose is suggested to be viewed as a gatekeeper in the provision of job resources, in other words, it becomes the antecedent of job resources but also functions as a type of job resources in and of itself (Loh, Idris, Dollard, & Isahak, 2018).

Job resources are defined as those physical, psychological, social, or organizational aspects of the job that either/or (1) reduce job demands and the associated physiological and psychological costs; (2) are functional in achieving work goals; (3) stimulate personal growth, learning and development (Schaufeli & Bakker, 2004), and serve an important job characteristic for employees such as faculty members, as academicians suffer from high-stress level (Ismail & Noor, 2016). Job resources can be furthered broken into three aspects; physical, cognitive, and emotional (De Jonge & Dormann, 2006). We view cognitive and emotional resources as two job resources closely linked to faculty members and university students. While literature rarely considers applying the concept of job resources to university students, we argue that student may require necessary resources (i.e., cognitive and emotional resources), in order to perform well in university (Wang & Eccles, 2012). From an organizational context, this is possible through PSC and social support, as their absence is associated with the thwarting of psychological need, and they are also able to provide higher job resources to faculty members and indirectly, to university students (Huyghebaert, Gillet, Fernet, Lahiani, & Fouquereau, 2018).

From a relevance perspective, although faculty members and university students co-exist within the same university, they will view organizational climate differently. We propose that PSC has significantly greater relevant to faculty members than university students, and it provides higher resources, cognitively and emotionally. This reasoning is based on two arguments: Firstly, PSC is viewed as an organizational climate that affects employees (i.e., faculty members), hence it would affect faculty members more than university students. Secondly, PSC has closer linkages to faculty members as compared to university students given its occupational connotation (i.e., management commitment, management priority, organizational communication, and organizational participation) (Hall et al., 2010). As such, PSC may not be as relevant to university students, notwithstanding the climate's usefulness in creating a conducive environment for learning within the university setting (Ogbonna & Harris, 2004). Hence, it is hypothesized that:

H1: Psychosocial safety climate (PSC) influences a) faculty members' cognitive resources more than university students' cognitive resources, and b) faculty members' emotional resources more than university students' emotional resources.

1.2. *Psychosocial safety climate, faculty members' and university students' social support*

Social support is defined as "verbal and nonverbal communication between recipients and providers that reduces uncertainty about the situation, the self, the other, or the relationship, and functions to enhance a perception of personal control in one's life experience" (pp. 19) (Albrecht & Adelman, 1987). It is suggested that social support contains social and emotional elements, and serves as a type of job resources for individuals (Cutrona & Russell, 2017; Halbesleben, 2006). Social support is suggested to be a component of PSC (Havermans et al.,

2017), and we propose that social support is more closely related to cognitive and emotional resources than PSC.

While PSC is an overall policy implemented at the workplace that ensures the wellbeing of employees, social support is more closely linked to employees where communication, care, and concern are shown throughout the day (Eisenberger, Armeli, Rexwinkel, Lynch, & Rhoades, 2001). It is therefore suggested that PSC will create a higher level of social support among faculty members and university students that will indirectly increase faculty members' cognitive and emotional job resources. Social support, especially within the Asian context, is important given individuals are more relationship-focused, and social support would address their emotional needs especially with high demands at the workplace (Mohd Roslin & Melewar, 2004).

Since PSC is proposed to increase faculty members' and university students' cognitive and emotional resources due to the providence of social support, we propose that university students may benefit from their cognitive and emotional resources due to social support from their peers (rather than social support from faculty members) (Weyns, Colpin, De Laet, Engels, & Verschueren, 2018). Literature has shown that faculty members are able to provide a conducive environment for peers to support one another, which can in turn affect university students' engagement, competence, and motivation in class (Ruzek et al., 2016; Wentzel, Russell, & Baker, 2016). In other words, while faculty members' job resources are obtained through the providence of PSC, university students' job resources are initiated by faculty members, as well as influences from peers to show higher social support for one another. Amongst peers, university students feel psychologically safe as they are able to be themselves more, and open up their feelings to their close peers. This is in contrast to faculty members, where there is still a certain level of power distance on display within an Asian setting (Hew, 2015).

We suggest here that while job resources have been previously viewed as following the motivational pathway within the job-demands resources theory (Bakker & Demerouti, 2017), it has been looked at from the perspective of the wider organizational context. Within the workplace perspective, literature has expanded the analysis to include organizational factors such as PSC (Lee & Idris, 2017b) as the antecedent for employees' motivation. That is, in tandem with the motivational pathway in the job demands-resources theory. Hence, the following is hypothesized;

H2: When combining PSC and individual social support (i.e., social support from faculty members' peers and university students' university peers), individual social support has a larger influence than PSC on a) faculty members' cognitive resources and emotional resources, and b) university students' cognitive resources and emotional resources.

H3: University students' social support from university peers is more related to university students' a) cognitive and b) emotional resources as compared to social support from faculty members.

1.3. Emotional resources vs. cognitive resources

Job resources can be viewed from the physical aspect, cognitive aspect, and emotional aspect (De Jonge & Dormann, 2003). Between cognitive and emotional resources, we argue that the presence of social support also specifically works to provide faculty members with more emotional resources than cognitive resources. While issues such as higher workload and external demands may affect faculty members' ability to perform well at work, the presence of social support allows faculty members to feel included, heard, and cared for (Avanzi, Schuh, Fraccaroli, & van Dick, 2015). As such, it may lead to higher emotional resources than cognitive resources. Because faculty members may not be well equipped to handle matters relating to university students' personal issues, social support helps in providing good advice (Fiorilli et al., 2015). Within the Malaysian context, individuals exist within close-knit relationships (Sorensen & Oyserman, 2009), and at the workplace, the relationships between colleagues become a mixture of professional and personal (Berman, West, Richter, & Maurice, 2002)

where some individuals find their closest friends from within the workplace (Sias & Cahill, 1998). Hence, we suggest that social support is emotionally focused, rather than cognitively focused.

In addition, cognitive resources form part of a faculty member's job, where they are equipped with the necessary knowledge and information. This can be derived from and provided by the job itself and may be more useful if there is the provision of external cognitive resources. Prior literature has stated that factors that are relevant to cognitive resources are job crafting—another cognitive resource that exists from job perspective, rather than from the social perspective (Bakker & Demerouti, 2017). Therefore, as social support is seen as a form of bonding for both faculty members and university students, we propose the following;

H4: a) Faculty members' social support has larger influence on faculty members' emotional resources than cognitive resources, and b) University students' social support has larger influence on university students' emotional resources than cognitive resources.

2. Methods

2.1. Participants

Three hundred and fifty faculty members ($N = 175$) and university students ($N = 175$) from 37 departments of various universities in Malaysia participated in the study. This translates to 9.46 faculty member-student pairings per department. Faculty members are majority female ($N = 112$; 64%), married ($N = 96$; 54.86%), are local ($N = 149$; 85.14%), and have at least a Master's degree ($N = 145$; 82.86%). The mean age for faculty members is 34.39 ($SD = 14.04$), the average working years with the current university are 6.94 ($SD = 8.39$), and average working hours per week are 31.45 ($SD = 15.79$). University students are majority female ($N = 105$; 60%), single ($N = 166$; 94.86%), and are local ($N = 157$; 89.71%). The mean age for the student is 19.87 years old ($SD = 6.59$) (see Table 1). The study first obtained ethics approval from ethics board of the university prior to the initiation of data collection. Subsequent to approval from head of departments of 15 universities within Malaysia recruited to participate in the study, each faculty member was then handed an envelope consisting of two small envelopes where one is for the faculty member and the other envelope to be passed to one of the faculty members' student whom the faculty member had taught during the current semester. Upon completion, both questionnaires were sealed and passed back to the research assistants. Both questionnaires contained identical questions, except for changing of terms from "faculty member" in the faculty members' packages to "student" in the university students' packages.

2.2. Instruments

2.2.1. Psychosocial safety climate (PSC)

PSC was measured using 12 items from Hall et al. (2010) which consists of four aspects: management commitment (e.g. "In my workplace senior management acts quickly to correct problems/issues that affect employees" psychological health); management priority (e.g. "Senior management clearly considers the psychological health of employees to be of great importance"); organizational communication (e.g. "Information about workplace psychological well-being is always brought to my attention by my manager/supervisor"); and organizational participation (e.g. "Participation and consultation in psychological health and safety occurs with employees, unions and health and safety representatives in my workplace"). The questions were rated on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). The scale has shown adequate reliability ($\alpha = .94$) and validity (Hall et al., 2010).

2.2.2. Social support

Faculty members' and university students' social support was measured using six items from the Perceived Social Support Questionnaire (Fydrich, Geyer, Hessel, Sommer, & Braehler, 1999). The items have been rephrased to indicate the appropriate social support in that particular

Table 1. Demographic details of participants (N = 350)

	n	%	Mean (SD)
Faculty member (n = 175)			
Sex			
Male	63	36	
Female	112	64	
Age (years)			34.39 (14.04)
Marital status			
Single	79	45.14	
Married	96	54.86	
Nationality			
Local	149	85.14	
International	26	14.86	
Highest Education Level			
PhD or equivalent	56	32.00	
Master's or equivalent	89	50.86	
Bachelor Degree or equivalent	25	14.29	
Diploma or equivalent	5	2.86	
Time taken to travel from home to university (min)			24.76 (20.27)
Distance from home to university (km)			17.91 (17.16)
Work tenure in current company (years)			6.94 (8.39)
Total working hours/week			31.45 (15.79)
Tertiary student (n = 175)			
Sex			
Male	70	40	
Female	105	60	
Age (years)			19.87 (6.59)
Marital status			
Single	166	94.86	
Married	9	5.14	
Nationality			
Local	157	89.71	
International	18	10.29	
Highest Education Level			
PhD or equivalent	3	1.71	
Master's or equivalent	5	2.86	
Bachelor Degree or equivalent	99	56.57	
Diploma or equivalent	68	38.86	
Time taken to travel from home to university (min)			29.29 (100.13)
Distance from home to university (km)			19.05 (44.22)

Note: SD = standard deviation.

context. A sample of social support question for faculty members is “I receive a lot of understanding and security from others (my colleagues)”. A sample question of peer social support for university students is “I receive a lot of understanding and security from others (my university peers)”. The questions were rated on a 5-point Likert scale (1 = does not apply to 5 = apply exactly). The scale has shown adequate reliability ($\alpha = .94$) and validity (Fydrich et al., 1999)

2.2.3. Job resources

Faculty members' and university students' cognitive and emotional resources were measured using six cognitive items and five emotional resource items from the Demand Induced Strain Compensation (DISC) model (De Jonge & Dormann, 2006). A sample question for cognitive resources is "Do you have the opportunity to take a mental break when tasks require a lot of concentration?". A sample question for emotional resources is "Are you able to stop emotionally-laden interactions with others for a while whenever you want to?". The questionnaire was rated on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). The scale has shown adequate reliability ($\alpha = .94$) and validity (De Jonge & Dormann, 2006).

2.3. Analysis strategy

We analyzed the hypotheses using hierarchical linear modelling (HLM) software as PSC is a higher-level construct in which climate results from "... espoused values and shared tacit assumptions and reflects the surface organizational experience ..." (Ostroff, Kinicki, & Muhammad, 2013). We ran a preliminary analysis to see if PSC fulfilled the conditions needed to be a higher-level variable. Overall, PSC fulfilled all conditions. The $r(WG)(J)$ (index of agreement) values for PSC was .93. This indicates a high level of within-group agreement (LeBreton & Senter, 2008). The intraclass correlation coefficient (ICC[I]) value for PSC was .15. This states that 15% of the PSC construct was due to group factors. The value fulfilled recommended value by Bliese (2000) which is between .05 and .20, and by Mathieu and Taylor (2007) which is between .15 and .30. The $F_{(III)}$ value was significant ($PSC = 2.14, p < .001$), indicating justification of the aggregation of PSC as a higher-level construct.

To test our hypotheses, two types of analyses were conducted comprising: lower-level direct effects and cross-level direct effects. Lower-level direct effects and cross-level direct effects were tested using Mathieu and Taylor (2007) recommendations.

3. Results

Table 2 presents the descriptive analysis and correlations between all measures at level 1 (i.e., student level) and level 2 (i.e., faculty member and PSC level). Results for hierarchical linear modeling (HLM) analyses (i.e. lower-level analyses and cross-level analyses) are shown in Tables 3 and 4. A summary of the findings is presented in Figure 2.

Hypothesis 1 predicts PSC influences a) faculty members' cognitive resources more than student's cognitive resources, and b) faculty members' emotional resources more than university students' cognitive resources. Psychosocial safety climate shows a significant cross-level effect on faculty members' cognitive and emotional resources ($\gamma = .18; p < .05; \gamma = .29; p < .05$) (see Model 1 and Model 4, respectively). However, it did not have any significant cross-level effect on university students' cognitive and emotional resources ($\gamma = .03; p > .05; \gamma = .06; p > .05$) (see Model 7 and Model 12, respectively). Between cognitive and emotional resources, PSC shows higher influence on faculty members' emotional resources. Hence, hypothesis 1a and 1b are supported.

Hypothesis 2 predicts when combining PSC and individual social support, individual social support has a larger influence than PSC on a) faculty members' cognitive resources and emotional resources, and b) university students' cognitive resources and emotional resources. Faculty members' social support shows larger influence on faculty members' cognitive and emotional resources ($\beta = .20; p < .05; \beta = .38; p < .05$) (see Model 3 and Model 6, respectively). Psychosocial safety climate also shows significant, but lesser, cross-level influence on faculty members' cognitive and emotional resources ($\gamma = .17; p < .05; \gamma = .29; p < .05$) (see Model 3 and Model 6, respectively). As for university students, university students' social support also shows the influence on university students' cognitive resources ($\beta = .22^*$) and emotional resources ($\beta = .42; p < .05$) and (see Model 10 and Model 14, respectively). Psychosocial safety climate did not show a significant cross-level effect on university students' cognitive resources ($\gamma = .01; p > .05$) emotional resources ($\gamma = .08; p > .05$) and (see Model 10 and Model 14, respectively). Hence, hypothesis 2a and 2b are supported.

Table 2. Means, standard deviations, reliability, and Pearson's bivariate correlations

Variables	Mean	SD	α	No. Items	1	2	3	4	5	6	F	ICC(I)
1. Psychosocial safety climate	3.14	0.7	0.94	12	1						2.264**	0.1589
2. Social Support (Faculty members)	4.07	0.54	0.82	6	0.03	1					1.518*	0.1054
3. Social support (University Student)	4.09	0.57	0.82	6	0.07	.19*	1				1.679*	0.1176
4. Cognitive resources (Faculty members)	3.62	0.47	0.73	6	.23**	.29**	0.02	1			1.3	0.0983
5. Emotional resources (Faculty members)	3.5	0.59	0.83	5	.38**	.40**	0.08	.57**	1		1.520*	0.0932
6. Cognitive resources (University Student)	3.76	0.53	0.75	6	0.05	0.02	.31**	0.1	0.11	1	1.18	0.0183
7. Emotional resources (University Student)	3.59	0.64	0.77	5	.16*	0.12	.46**	0.03	.20*	.62**	1.596*	0.1341

Notes: SD = standard deviation; ICC = intraclass correlation coefficient; N (individual) = 500; **p < .05; ***p < .001.

Table 3. Hierarchical Linear Modelling (HLM) analyses of lower-level outcomes and cross-level effect of PSC and team climate on lower-level outcomes										
Effect	LCR	LCR	LCR	LER	LER	LER	SCR	SCR	SCR	SCR
Model	1	2	3	4	5	6	7	8	9	10
Lower-Level Effects										
Social Support (University students)										
Social Support (Faculty members)		.27(.06)***	.20(.09)*		.39(.06)***	.38(.07)***		.30(.07)***	.22(.11)*	.22(.11)*
Cross-Level Effects										
PSC	.18(.08)*		.17(.07)*	.29(.09)**		.29(.05)***	.03(.07)			.01(.09)

Notes: The first value is the unstandardized parameter estimate, and the value in parentheses is the standard error; PSC = psychosocial safety climate; LCR = Lecturer's cognitive resources; LER = Lecturer's emotional resources; SCR = Student's cognitive resources; SER = Student's emotional resources. N (individual) = 350; N (team) = 37; + = significant at one-tailed; *p < .05; **p < .01; ***p < .001.

Table 4. Hierarchical Linear Modelling (HLM) analyses of lower-level outcomes and cross-level effect of PSC and team climate on lower-level outcomes

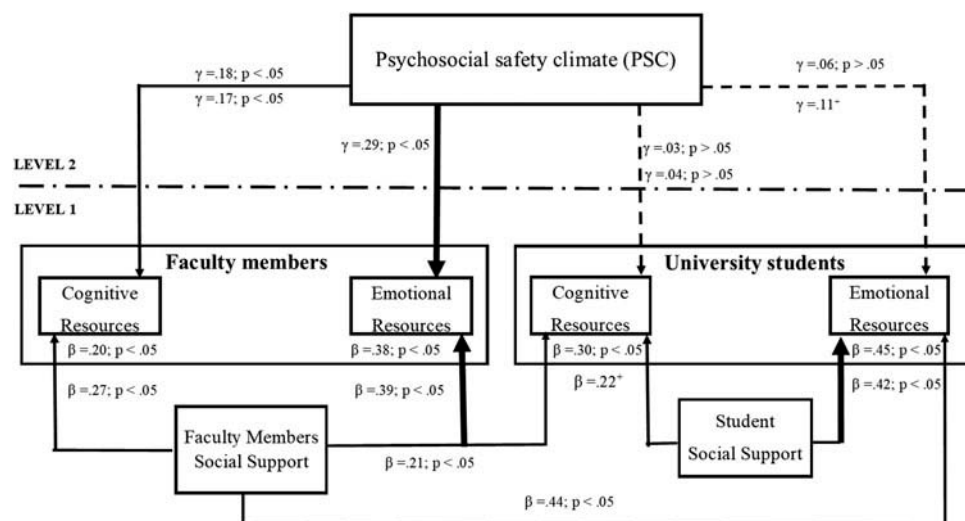
Effect	SER	SER	SER	SER
Model	11	12	13	14
Lower-Level Effects				
Social Support (Students)	.42(.09)***		.45(.06)***	.42(.09)***
Social Support (Lecturers)			.44(.08)***	
Cross-Level Effects				
PSC		.06(.04)		.08(.06)

Notes: The first value is the unstandardized parameter estimate, and the value in parentheses is the standard error; PSC = psychosocial safety climate.

SER = university student's emotional resources.

N (individual) = 350; N (team) = 37; * $p < .05$; ** $p < .01$; *** $p < .001$.

Figure 2. Final Model.



Hypothesis 3 predicts university students' social support from university peers more related to university students' a) cognitive and b) emotional resources as compared to social support from faculty members. University students' social support is significantly related to university students' cognitive and emotional resources ($\beta = .30$; $p < .05$; $\beta = .45$; $p < .05$) (see Model 8 and Model 13, respectively). Faculty members' social support is significantly related to university students' cognitive and emotional resources ($\beta = .21$; $p < .05$; $\beta = .44$; $p < .05$) (see Model 8 and Model 13, respectively). Hence, hypothesis 3a and 3b are supported.

Hypothesis 4 predicts a) faculty members' social support has a larger influence on faculty members' emotional resources than cognitive resources, and b) University students' social support has a larger influence on university students' emotional resources than cognitive resources. Faculty members' social support is higher and significantly associated with faculty members' emotional resources than cognitive resources ($\beta = .39$; $p < .05$; $\beta = .27$; $p < .05$) (see Model 2 and Model 5, respectively). University students' social support is higher and significantly associated with faculty members' emotional resources than cognitive resources ($\beta = .42$; $p < .05$; $\beta = .22^*$) (see Model 9 and Model 11, respectively). Hence, hypothesis 4 is supported.

4. Discussion

The purpose of this study was to investigate how organizational-based resources and social support may influence the perceived job resources for faculty members and university students. Specifically, we compare the role of PSC, faculty members' and university students' respective social support in providing job resources to faculty members and university students. We argue that organizational-based resources (i.e., PSC) will be more beneficial and relevant to faculty members than to university students, and that university students receive more job resources from their peers than faculty members, thus further enhancing our understanding on how job resources function based on a distal perspective.

The study has also shown that the subject target is important when investigating a phenomenon: to whom it is relevant and who and what is able to be influenced. When we look at PSC, and its function and effectiveness in relation to faculty members and university students, we see that PSC is relevant to faculty members but not to university students. It thereby addresses more of faculty members' concerns than those of university students. Past literature has emphasized the relevance of climates in affecting individuals, and the current finding resonates with these past findings. Contextual factors such as university climate and leadership were found not to affect university students in prior research (Allen, Grigsby, & Peters, 2015). However, we offer two explanatory accounts to reconcile the differences between the present and past findings. First, PSC concerns employees' welfare and well-being. The current finding enhances our understanding on PSC where it is mostly applicable to faculty members. We acknowledge the importance of job resources as it allows individuals to be engaged with work and leads to higher work productivity (Lee, Idris, & Delfabbro, 2017).

From another lens of explanation, we argue for an absence of effects of PSC on university students' cognitive and emotional resources. We suggest that this is due to the distal effect of PSC on university students, which happens when the relationship between the antecedent and the outcome is further apart, as compared to between antecedent and job characteristics for example. The findings here also indicate that while PSC may not relate to university students directly, university students benefit from PSC via faculty members. Webster and Fisher (2003) proposed that university students' outcomes were influenced by faculty members' behaviors, which is in turn a reflection of the university climate.

In addition, in between PSC and faculty members' social support, we can see that faculty members' social support has a further relationship with faculty members, as compared to PSC at the workplace. From an organizational perspective, even though climate plays an important role in regulating the provision of job resources, an aspect of PSC, social support (Havermans et al., 2017) plays a more significant role on faculty members' job resources. The same also applies to university students. Overall, the findings resonate with the extended version of distal-proximal theoretical framework of motivation (Kanfer, 1990), and which may support the relevance of PSC as a type of organizational contexts that influence an individual's motivation in relation to job resources.

We also take into consideration the importance of social support, as this has been suggested as an important job resource in terms of emotional factors, especially in the context of faculty members' and university students' social support. From a student's perspective, they function differently, as social support from faculty members tends to be from someone that can provide advice on a more formal basis in obtaining professional advice (Hew, 2015) while social support from university students tend to be more informal and occurs among a close circle of peers to whom they can relate (Legault, Green-Demers, & Pelletier, 2006). When comparing faculty members' and university students' social support on university students' job resources, the finding shows that university students' social support plays a more important role than faculty members. Past literature suggested that during university life, university students' peers are their main social circle and that determines the quality of their relationships (Lee & Padilla, 2016). Peer social support addresses more of the emotional resources for university students, as found in prior studies (Clements &

Kamau, 2018; Malecki & Demaray, 2003), when these supportive environments are initiated by the faculty members (Ruzek et al., 2016). Similar findings are observed in the present study, whereas we also suggest that tertiary institution faculty members are to set a supportive environment for the university students who are faced with multiple challenges in life (Rosenthal, Russell, & Thomson, 2008), to encourage university students to be supportive of one another.

When we compare cognitive and emotional aspects of job resources for faculty members (i.e., PSC and social support) and university students (i.e., social support), both PSC and respective social support showed higher provision of emotional resources than cognitive, albeit both are significant in the context of faculty members and university students. We argue that these are psychological needs in perceiving the workplace to be safe. For university students that there are friends to depend on in times of difficulties. Overall, we argue that factors of the external environment that include the organization's policies, as well as close friendships become an important source of job resources in our lives (Lee & Idris, 2017a).

Overall, the findings looked at the distal-proximal continuum of factors which may affect an individual's job resources by comparing PSC and social support on faculty members and university students. We found that the closer the relationship of the variables of interest within the target individual, the stronger the influence. This is observed with respect to social support that has a larger influence on faculty members and university students, respectively, when compared with PSC. In addition, we argue that PSC is a more suitable concept to be used for faculty members than university students, although both reside in the university setting. Therefore, we conclude that when investigating any phenomena in relation to organizational climates, it is important to look at the nature and context of the concepts investigated, to which subjects they are applied, and the distal-proximal "distance" between any variables of interest.

4.1. Strength, weakness and future studies

This study adopted the use of multiple respondents' multilevel approach allowing the issues to be investigated from a more objective viewpoint (Cantrell & Kane, 2013), thereby reducing the potential for subjective view bias that is associated with single respondent methods. The multilevel approach enabled us to investigate PSC from a higher level multi-site perspective across different universities, supporting the argument that university climate should be investigated using multi-level modeling (Bryk & Raudenbush, 1992) and should be based on responses from different individuals within the context under investigation (i.e., faculty members).

Nevertheless, the study was still not able to address the cross-sectional issue using only a one-time data collection method. As such, we were not able to determine if PSC indeed affects faculty members' resources, as well as university students' peer support on university students' job resources. We could only infer the relationships based on past literature, in which organizational factors were found to affect job resources, rather than job resources affecting organizational factors. In line with recommendations by Zapf, Dormann, and Frese (1996), when investigating cause-and-effect relationships, a longitudinal study with a time gap of a minimum of 3 months is required. Aldridge and McChesney (2018) also concur with this suggestion with respect to university climate research.

While PSC has shown to be an important organizational factor in providing faculty members with greater job resources, and this study has shown how university may function in relation to faculty members and university students, the study did not obtain PSC from university students. This may well have allowed a better understanding of the alignment of PSC throughout the university setting, which in turn influences both faculty members and university students. Future studies may wish to include PSC response from university students' perspective. In addition, since organizational settings play an influential role in affecting individuals within the university setting, more organizational factors such as leadership within the university should be investigated, and whether these factors are more applicable to faculty members, university students, or both (Lee & Idris, 2017b).

4.2. Practical implications

The study findings have shown that although job resources are viewed as a general term in the literature, it should be further distinguished based on the types of job resources. These types of job resources can be viewed in terms of the nature and the target group under investigation. Within the university setting, the university may provide resources in order for faculty members to perform well at their tasks. As for university students, it is recommended that the university sets up a system that allows university students to be close to one another to provide peer social support, rather than faculty members' social support, as this has shown to benefit university students.

The university may need to pay attention to the different kinds of resources needed to provide to faculty members, and thus indirectly, university students, given the lack of emotional awareness and management among faculty members. This is particularly important given that this is a vulnerable phase, in which university students are searching for identities, meaningful relationships, all whilst coping with the demands of studies (Stoliker & Lafreniere, 2015). Universities may want to conduct more workshops in order to increase awareness and create new avenues in which faculty members and university students are able to increase their emotional resources. For example, avenues such as counselling.

While faculty members do not affect university students' resources and well-being, they have an indirect effect on student well-being. Hence, university has a role in providing faculty members and university students a conducive and healthy environment, in order for everyone to do their tasks well. Overall, university management should ensure that there is a high PSC within the university to ensure appropriate resource provision for employees, and indirectly to the university students (Becher, Dollard, Smith, & Li, 2018). To implement such a climate, it is important to have key stakeholders to review existing policies to ensure it is aligned with the climate, this includes faculty members and university students (Tang, Leka, Hunt, & MacLennan, 2011).

Declarations

The data have not been published elsewhere. This work was supported by the Lancaster-Sunway Small Grant under Grant [number DOP-0115-04]. The authors declare no competing interest.

Funding

This work was supported by the Lancaster University [DOP-0115-04].

Author details

Michelle Chin Chin Lee¹

E-mail: michelle@sunway.edu.my

ORCID ID: <http://orcid.org/0000-0002-8192-3776>

Judith Lunn²

E-mail: j.lunn1@lancaster.ac.uk

ORCID ID: <http://orcid.org/0000-0001-9281-2126>

¹ Department of Psychology, Sunway University, Petaling, Malaysia.

² Department of Psychology, Lancaster University, Bailrigg, UK.

Citation information

Cite this article as: Testing the relevance, proximal, and distal effects of psychosocial safety climate and social support on job resources: A context-based approach, Michelle Chin Chin Lee & Judith Lunn, *Cogent Psychology* (2019), 6: 1685929.

References

Ahsan, N., Abdullah, Z., Fie, D. Y. G., & Alam, S. S. (2009). A study of job stress on job satisfaction among university staff in Malaysia: Empirical study. *European Journal of Social Sciences*, 8(1), 121–131.

- Albrecht, T. L., & Adelman, M. B. (1987). *Communicating social support*. Thousand Oaks, CA, US: Sage Publications, Inc.
- Aldridge, J. M., & McChesney, K. (2018). The relationships between school climate and adolescent mental health and wellbeing: A systematic literature review. *International Journal of Educational Research*, 88, 121–145. doi:10.1016/j.ijer.2018.01.012
- Allen, N., Grigsby, B., & Peters, M. L. (2015). Does leadership matter? Examining the relationship among transformational leadership, school climate, and student achievement. *International Journal of Educational Leadership Preparation*, 10(2), 1–22.
- Avanzi, L., Schuh, S. C., Fraccaroli, F., & van Dick, R. (2015). Why does organizational identification relate to reduced employee burnout? The mediating influence of social support and collective efficacy. *Work & Stress*, 29(1), 1–10. doi:10.1080/02678373.2015.1004225
- Bakker, A. B., & Demerouti, E. (2007). The job demands-resources model: State of the art. *Journal of Managerial Psychology*, 22, 309–328. doi:10.1108/02683940710733115
- Bakker, A. B., & Demerouti, E. (2017). Job demands-resources theory: Taking stock and looking forward. *Journal of Occupational Health Psychology*, 22(3), 273–285. doi:10.1037/ocp0000056
- Bakker, A. B., & Schaufeli, W. B. (2008). Positive organizational behavior: Engaged employees in flourishing organizations. *Journal of Organizational Behavior: the International Journal of Industrial, Occupational and Organizational Psychology and Behavior*, 29(2), 147–154. doi:10.1002/job.515

- Becher, H., Dollard, M. F., Smith, P., & Li, J. (2018). Predicting circulatory diseases from psychosocial safety climate: A prospective cohort study from Australia. *International Journal of Environmental Research and Public Health*, 15(3), 415–426. doi:10.3390/ijerph15030415
- Berman, E. M., West, J. P., Richter, J., & Maurice, N. (2002). Workplace relations: Friendship patterns and consequences. *Public Administration Review*, 62, 217–230. doi:10.1111/0033-3352.00172
- Bernardon, S., Babb, K. A., Hakim-Larson, J., & Gragg, M. (2011). Loneliness, attachment, and the perception and use of social support in university students. *Canadian Journal of Behavioural Science/Revue Canadienne Des Sciences Du Comportement*, 43(1), 40–51. doi:10.1037/a0021199
- Bliese, P. D. (2000). Within-group agreement, non-independence and reliability: Implications for data aggregation and analysis. In K. J. Klein & S. W. J. Kozlowski (Eds.), *Multilevel theory, research and methods in organizations* (pp. 349–381). San Francisco: Jossey-Bass.
- Bradshaw, C. P., Waasdorp, T. E., Debnam, K. J., & Johnson, S. L. (2014). Measuring school climate in high schools: A focus on safety, engagement, and the environment. *Journal of School Health*, 84(9), 593–604. doi:10.1111/josh.12186
- Brand, S., Felner, R., Shim, M., Seitsinger, A., & Dumas, T. (2003). Middle school improvement and reform: Development and validation of a school-level assessment of climate, cultural pluralism, and school safety. *Journal of Educational Psychology*, 95(3), 570–588. doi:10.1037/0022-0663.95.3.570
- Bryk, A. S., & Raudenbush, S. W. (1992). *Hierarchical linear models for social and behavioral research: Applications and data analysis methods*. Newbury Park, CA: Sage.
- Cantrell, S., & Kane, T. J. (2013). *Ensuring fair and reliable measures of effective teaching: Culminating findings from the MET project's three-year study*. Retrieved from <https://www.edweek.org/media/17teach-met1.pdf>
- Clements, A. J., & Kamau, C. (2018). Understanding students' motivation towards proactive career behaviours through goal-setting theory and the job demands-resources model. *Studies in Higher Education*, 43(12), 2279–2293. doi:10.1080/03075079.2017.1326022
- Comm, C. L., & Mathaisel, D. F. X. (2003). A case study of the implications of faculty workload and compensation for improving academic quality. *International Journal of Educational Management*, 17(5), 200–210. doi:10.1108/095135403104849
- Cutrona, C. E., & Russell, D. W. (2017). Autonomy promotion, responsiveness, and emotion regulation promote effective social support in times of stress. *Current Opinion in Psychology*, 13, 126–130. doi:10.1016/j.copsyc.2016.07.002
- De Jonge, J., & Dormann, C. (2003). The DISC model: Demand induced strain compensation mechanisms in job stress. In M. F. Dollard, A. H. Winefield, & H. R. Winefield (Eds.), *Occupational stress in the service professions* (pp. 43–74). London: Taylor & Francis.
- De Jonge, J., & Dormann, C. (2006). Stressors, resources, and strain at work: A longitudinal test of the triple-match principle. *Journal of Applied Psychology*, 91(6), 1359–1374. doi:10.1037/0021-9010.91.5.1359
- De Neve, D., Devos, G., & Tuytens, M. (2015). The importance of job resources and self-efficacy for beginning teachers' professional learning in differentiated instruction. *Teaching and Teacher Education*, 47, 30–41. doi:10.1016/j.tate.2014.12.003
- Dollard, M. F., & McTernan, W. (2011). Psychosocial safety climate: A multilevel theory of work stress in the health and community service sector. *Epidemiology and Psychiatric Sciences*, 20(4), 287–293. doi:10.1017/s2045796011000588
- Dollard, M. F., Tuckey, M. R., & Dormann, C. (2012). Psychosocial safety climate moderates the job demand-resource interaction in predicting work-group distress. *Accident Analysis & Prevention*, 45, 694–704. doi:10.1016/j.aap.2011.09.042
- Ehrhart, M. G., Schneider, B., & Macey, W. H. (2014). *Organizational climate and culture: An introduction to theory, research, and practice*. New York: Routledge.
- Eisenberger, R., Armeli, S., Rexwinkel, B., Lynch, P. D., & Rhoades, L. (2001). Reciprocation of perceived organizational support. *Journal of Applied Psychology*, 86(1), 42–51. doi:10.1037/0021-9010.86.1.42
- Fiorilli, C., Gabola, P., Pepe, A., Meylan, N., Curchod-Ruedi, D., Albanese, O., & Doudin, P. A. (2015). The effect of teachers' emotional intensity and social support on burnout syndrome: A comparison between Italy and Switzerland. *European Review of Applied Psychology*, 65(6), 275–283. doi:10.1016/j.erap.2015.10.003
- Fydrich, T., Geyer, M., Hessel, A., Sommer, G., & Brahler, E. (1999). Social support questionnaire (F-SozU): Norms of a representative sample. *Diagnostica*, 45(4), 212–216. doi:10.1026/0012-1924.45.4.212
- Gibbons, R. (1998). Incentives in organizations. *Journal of Economic Perspectives*, 12(4), 115–132. doi:10.1257/jep.12.4.115
- Halbesleben, J. R. (2006). Sources of social support and burnout: A meta-analytic test of the conservation of resources model. *Journal of Applied Psychology*, 91(5), 1134–1145. doi:10.1037/0021-9010.91.5.1134
- Hall, G. B., Dollard, M. F., & Coward, J. (2010). Psychosocial safety climate: Development of the PSC-12. *International Journal of Stress Management*, 17(4), 353–383. doi:10.1037/a0021320
- Hart, J., & Fellabaum, J. (2008). Analyzing campus climate studies: Seeking to define and understand. *Journal of Diversity in Higher Education*, 1(4), 222–234. doi:10.1037/a0013627
- Havermans, B. M., Boot, C. R. L., Houtman, I. L. D., Brouwers, E. P. M., Anema, J. R., & van der Beek, A. J. (2017). The role of autonomy and social support in the relation between psychosocial safety climate and stress in health care workers. *BMC Public Health*, 17(1). doi:10.1186/s12889-017-4484-4
- Hew, K. F. (2015). Student perceptions of peer versus instructor facilitation of asynchronous online discussions: Further findings from three cases. *Instructional Science*, 43(1), 19–38. doi:10.1007/s11251-014-9329-2
- Huyghebaert, T., Gillet, N., Fernet, C., Lahiani, F. J., & Fouquereau, E. (2018). Leveraging psychosocial safety climate to prevent ill-being: The mediating role of psychological need thwarting. *Journal of Vocational Behavior*, 107, 111–125. doi:10.1016/j.jvb.2018.03.010
- Idris, M. A., Dollard, M. F., Coward, J., & Dormann, C. (2012). Psychosocial safety climate: Conceptual distinctiveness and effect on job demands and worker psychological health. *Safety Science*, 50(1), 19–28. doi:10.1016/j.ssci.2011.06.005
- Ismail, N. H., & Noor, A. (2016). Occupational stress and its associated factors among academicians in a research university, Malaysia. *Malaysian Journal of Public Health Medicine*, 16(1), 81–91.

- Kanfer, R. (1990). Motivation theory and industrial and organizational psychology. In M. D. Dunnette (Ed.), *Handbook of industrial and organizational psychology* (Vol. 1, 2nd ed., pp. pp. 75–130). Palo Alto, CA: Consulting Psychologists Press.
- Lackritz, R. (2004). Exploring burnout among university faculty: Incidence, performance, and demographic issues. *Teaching and Teacher Education*, 20(7), 713–729. doi:10.1016/j.tate.2004.07.002
- LeBreton, J. M., & Senter, J. L. (2008). Answers to 20 questions about interrater reliability and interrater agreement. *Organizational Research Methods*, 11(4), 815–852. doi:10.1177/1094428106296642
- Lee, D. S., & Padilla, A. M. (2016). Predicting South Korean university students' happiness through social support and efficacy beliefs. *International Journal for the Advancement of Counselling*, 38(1), 48–60. doi:10.1007/s10447-015-9255-2
- Lee, M. C. C., & Idris, M. A. (2017a). Job resources as a mediator between management trust climate and employees' well-being: A cross-sectional multilevel approach. *Asian Academy of Management Journal*, 22(2), 27–52. doi:10.21315/aamj2017.22.2.2
- Lee, M. C. C., & Idris, M. A. (2017b). Psychosocial safety climate versus team climate. *Personnel Review*, 46(5), 988–1003. doi:10.1108/pr-01-2016-0003
- Lee, M. C. C., & Idris, M. A. (2019). The presence of psychosocial safety climate in the theory of proactive motivation on employees' job engagement and personal initiative. In M. Dollard, C. Dormann, & M. A. Idris (Eds.), *Psychosocial safety climate: A new work stress theory* (pp. 149–168). Springer. doi:10.1007/978-3-030-20319-1
- Lee, M. C. C., Idris, M. A., & Delfabbro, P. H. (2017). The linkages between hierarchical culture and empowering leadership and their effects on employees' work engagement: Work meaningfulness as a mediator. *International Journal of Stress Management*, 24(4), 392–415. doi:10.1037/str0000043
- Legault, L., Green-Demers, I., & Pelletier, L. (2006). Why do high school students lack motivation in the classroom? Toward an understanding of academic amotivation and the role of social support. *Journal of Educational Psychology*, 98(3), 567–582. doi:10.1037/0022-0663.98.3.567
- Loh, M. Y., Idris, M. A., Dollard, M. F., & Isahak, M. (2018). Psychosocial safety climate as a moderator of the moderators: Contextualizing JDR models and emotional demands effects. *Journal of Occupational and Organizational Psychology*, 91(3), 620–644. doi:10.1111/joop.12211
- Malecki, C. K., & Demaray, M. K. (2003). What type of support do they need? Investigating student adjustment as related to emotional, informational, appraisal, and instrumental support. *School Psychology Quarterly*, 18(3), 231–252.
- Mathieu, J. E., & Taylor, S. R. (2007). A framework for testing meso-mediational relationships in organizational behavior. *Journal of Organizational Behavior*, 28(2), 141–172. doi:10.1002/job.436
- Mohd Roslin, R., & Melewar, T. C. (2004). Linking practices reflective of “Asian values” and relationship marketing in the grocery distribution channels in Malaysia. *International Journal of Retail & Distribution Management*, 32(1), 33–44. doi:10.1108/09590550410515533
- O'Brennan, L., Pas, E., & Bradshaw, C. (2017). Multilevel examination of burnout among high school staff: Importance of staff and school factors. *School Psychology Review*, 46(2), 165–176. doi:10.17105/SPR-2015-0019.V46-2
- Ogbonna, E., & Harris, L. C. (2004). Work intensification and emotional labour among UK university lecturers: An exploratory study. *Organization Studies*, 25(7), 1185–1203. doi:10.1177/0170840604046315
- Ostroff, C., Kinicki, A. J., & Muhammad, R. S. (2013). Organizational culture and climate. In N. W. Schmitt, S. Highhouse, & I. B. Weiner (Eds.), *Handbook of psychology: Industrial and organizational psychology* (pp. pp. 643–676). Hoboken, NJ, US: John Wiley & Sons Inc.
- Reis, J., Trockel, M., & Mulhall, P. (2007). Individual and school predictors of middle school aggression. *Youth & Society*, 38(3), 322–347. doi:10.1177/0044118x06287688
- Rosenthal, D. A., Russell, J., & Thomson, G. (2008). The health and wellbeing of international students at an Australian university. *Higher Education*, 55(1), 51. doi:10.1007/s10734-006-9037-1
- Ruzek, E. A., Hafen, C. A., Allen, J. P., Gregory, A., Mikami, A. Y., & Pianta, R. C. (2016). How teacher emotional support motivates students: The mediating roles of perceived peer relatedness, autonomy support, and competence. *Learning and Instruction*, 42, 95–103. doi:10.1016/j.learninstruc.2016.01.004
- 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. doi:10.1002/job.248
- Sias, P. M., & Cahill, D. J. (1998). From coworkers to friends: The development of peer friendships in the workplace. *Western Journal of Communication*, 62(3), 273–299. doi:10.1080/10570319809374611
- Sorensen, N., & Oyserman, D. (2009). Collectivism, effects on relationships. In *Encyclopedia of human relationships* (Vol. 2). SAGE Publications. Retrieved from http://www.sageereference.com.proxy.lib.umich.edu/humanrelationships/article_n80.html
- Stoliker, B. E., & Lafreniere, K. D. (2015). The influence of perceived stress, loneliness, and learning burnout on university students' educational experience. *College Student Journal*, 49(1), 146–160.
- Tan, J. B., & Yates, S. (2011). Academic expectations as sources of stress in Asian students. *Social Psychology of Education*, 14(3), 389–407. doi:10.1007/s11218-010-9146-7
- Tang, J. J., Leka, S., Hunt, N., & MacLennan, S. (2011). Occupational psychosocial health policies in Hong Kong schools: A review and exploration of key stakeholder perceptions. *Health Policy*, 103(2–3), 266–275. doi:10.1016/j.healthpol.2011.07.003
- Virtanen, M., Kivimäki, M., Luopa, P., Vahtera, J., Elovainio, M., Jokela, J., & Pietikainen, M. (2009). Staff reports of psychosocial climate at school and adolescents' health, truancy and health education in Finland. *The European Journal of Public Health*, 19(5), 554–560. doi:10.1093/eurpub/ckp032
- Wang, M. T., & Degol, J. L. (2016). School climate: A review of the construct, measurement, and impact on student outcomes. *Educational Psychology Review*, 28(2), 315–352. doi:10.1007/s10648-015-9319-1
- Wang, M. T., & Eccles, J. S. (2012). Social support matters: Longitudinal effects of social support on three dimensions of school engagement from middle to high school. *Child Development*, 83(3), 877–895. doi:10.1111/j.1467-8624.2012.01745.x
- Webster, B. J., & Fisher, D. L. (2003). School-level environment and student outcomes in mathematics. *Learning Environments Research*, 6(3), 309–326.
- Wentzel, K. R., Russell, S., & Baker, S. (2016). Emotional support and expectations from parents, teachers,

- and peers predict adolescent competence at school. *Journal of Educational Psychology*, 108(2), 242–255. doi:[10.1037/edu0000049](https://doi.org/10.1037/edu0000049)
- Weyns, T., Colpin, H., De Laet, S., Engels, M., & Verschueren, K. (2018). Teacher support, peer acceptance, and engagement in the classroom: A three-wave longitudinal study in late childhood. *Journal of Youth and Adolescence*, 47(6), 1139–1150. doi:[10.1007/s10964-017-0774-5](https://doi.org/10.1007/s10964-017-0774-5)
- Xanthopoulou, D., Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2007). The role of personal resources in the job demands-resources model. *International Journal of Stress Management*, 14(2), 121–141. doi:[10.1037/1072-5245.14.2.121](https://doi.org/10.1037/1072-5245.14.2.121)
- Zapf, D., Dormann, C., & Frese, M. (1996). Longitudinal studies in organizational stress research: A review of the literature with reference to methodological issues. *Journal of Occupational Health Psychology*, 1(2), 145–169.



© 2019 The Author(s). This open access article is distributed under a Creative Commons Attribution (CC-BY) 4.0 license.



You are free to:

Share — copy and redistribute the material in any medium or format.

Adapt — remix, transform, and build upon the material for any purpose, even commercially.

The licensor cannot revoke these freedoms as long as you follow the license terms.

Under the following terms:

Attribution — You must give appropriate credit, provide a link to the license, and indicate if changes were made.

You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use.

No additional restrictions

You may not apply legal terms or technological measures that legally restrict others from doing anything the license permits.

Cogent Psychology (ISSN: 2331-1908) is published by Cogent OA, part of Taylor & Francis Group.

Publishing with Cogent OA ensures:

- Immediate, universal access to your article on publication
- High visibility and discoverability via the Cogent OA website as well as Taylor & Francis Online
- Download and citation statistics for your article
- Rapid online publication
- Input from, and dialog with, expert editors and editorial boards
- Retention of full copyright of your article
- Guaranteed legacy preservation of your article
- Discounts and waivers for authors in developing regions

Submit your manuscript to a Cogent OA journal at www.CogentOA.com

