Employee and workplace well-being: A multi-level analysis of teacher personality and organisational climate in Norwegian teachers from rural, urban and city schools

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Abstract

Teaching is a stressful profession though limited recent Norwegian data is available. This study addressed the extent organisational climate and individual and organisational well-being outcomes vary between schools in rural, urban and city locations. Participants were predominantly female (68%), aged 45+ years (63.2%) and reported 20+ years of teaching experience (51%). Teachers from rural, schools reported smaller pupil and teacher numbers, more positive organisational climate and better organisational well-being. Multi-level analyses, with teachers grouped within school location, indicated personality most strongly associated with employee well-being, and organisational climate most strongly related to school morale and distress. Schools in rural locations are smaller and possess workplace climates that are conducive to positive workplace climate and subsequently better workplace well-being outcomes.

KEYWORDS: Organisational climate, Personality, Teacher stress, Teacher Well-being.

Teaching has frequently been described as a stressful profession. Significant adverse effects on teacher health and well-being have been consistently reported world-wide (e.g. Borg, Riding, & Falzon, 1991; Travers & Cooper, 1996). As a population of focus in this study, stress-related health problems amongst Scandinavian school teachers have also been reported. A significant proportion of Swedish comprehensive school teachers reported elevated levels of work-related stress (Jacobsson, Pousette & Thylefors, 2001). The collection of catecholamine excretion has also demonstrated the stress response that Scandinavian teachers exhibit over the duration of a school term (Kinnunen, 1987; Kinnunen & Vihko, 1991). Reliable Norwegian findings are scarce, but those available support results from other Western and Scandinavian teacher populations. One study of Norwegian comprehensive school teachers indentified work overload, pupil behaviour, workload, class-sizes and quality of collegial relationships as reporting negative effects on teacher quality of life (Mykletun, 1984). Further, organisational change has been associated with increased exhaustion scores and an increased likelihood of working only part-time or receiving a disability pension (Mykletun & Mykletun, 1999). Almost 85 % of teachers sampled in the Mykletun and Mykletun (1999) study reported their workplace as stressful, whilst over half reported excessive tiredness, physical complaints and reported increased sickness leave due to workplace stress. One adverse consequence of increased stress appraisals is the significant increase in teacher turnover intentions (Singh & Billingsley, 1996).

The importance of organisational climate in the school context

Perceptions of organisational climate relate to employees' awareness of enduring organisational policy, practice and procedures (Kallestad, 2010). Organisational climate has been indicated as a most important factor in positive organisational and employee outcomes (Lindell & Brandt, 2000). Specifically within an educational context, climate has been

identified as a significant factor in school and student achievement (McEvoy, 2000; Kelley, Thornton & Daugherty, 2005). Comparisons between academically successful and less-academically successful schools have indicated perceived school climate, and less so the experience of stress amongst teachers, as significantly associated with student academic achievement (Milner & Khoza, 2008). Such findings can be attributed to the impact of a school's underlying organisational structure and procedures. When climate is perceived as negative, the effect can have adverse effects on teacher health and well-being, impeding teaching performance with subsequent negative degradation of student academic outcomes.

In a Norwegian context, it has been argued that changes in educational policy and procedures at a governmental level have impacted on perceived climate within individual schools (Kallestad, 2010). Kallestad (2010) concluded, that whilst between-school variability in climate may have been the norm in the early 1980s, school leaders have been obliged to develop normative workplace climates that are less authoritative, more collegial and open to change, recognising the impact of healthy workplaces on healthy teacher and school outcomes. However, Kallestad's conclusions were drawn from one municipal sample and the extent to which this can be inferred as the norm across Norway, in city, urban and rural areas, is unclear. This study will seek to delineate whether perceptions of climate are uniform between teachers across Norwegian schools.

A number of workplace factors impact on organisational climate (Lindell & Brandt, 2000). For example, work overload, the excessive and continual workplace demands which impacts on the number of working hours and the amount of work teachers complete at home, reduces down-time for relaxation and non-work related activities and can increase conflict with family members (Fimian & Santoro, 1983). There are unique work overload features in the teaching profession. This is reflected in the constant vigilance for students' welfare, even

during scheduled breaks. Such feelings of responsibility have long been identified as inducing larger amounts of strain than intense one-off stressors (Kyriacou, 1987). Role conflict is also frequently reported by teachers (Travers & Cooper, 1996) and may involve the need to balance organisational demands with a teacher's beliefs about educational practice and the needs of their pupils. Such conflict can increase strain and lower job satisfaction (Byrne, 1999). Also, increasingly, there is a need to meet externally-driven benchmarks of educational outcomes. Whilst meeting the demands of external validation, teachers must also strive to maintain a high standard of work within the constraints of the available and with diverse pupil populations where individual student needs may typically reflect quite diverse ability levels. Balancing these demands and conflicts can negatively impact on the day-to-day workload and on the teacher-evaluation process; a stressful experience for many, especially when these evaluations impact on career progression (Webb et al. 2004).

In Britain, Travers and Cooper (1996) highlighted the effect of the teacher appraisal process with the British School Inspectorate, on top of the daily evaluation they face by colleagues, pupils and parents, and the increasing likelihood of governments worldwide implementing 'pay for performance' policies. These effects are magnified where resources and facilities are limited. For instance, those new entrants to the profession who report the most depressive symptoms, work in the most adverse schools (Schonfeld, 1992). Clearly, factors that drive organisational climate can increase appraisals of the workplace as stressful which subsequently impact on teachers' health, teaching performance and school academic outcomes.

Teacher characteristics related to stressful appraisals

Employee characteristics are related to employee well-being (Sturman, 2003). Age may moderate teachers' responses to stress as limited life experience may increase individuals' vulnerability and likelihood of experiencing stressful experiences (Travers & Cooper, 1996). Age may also influence the amount of workload a person is capable as increasing age may prohibit the capacity to work the same long hours or perform the same workload as younger employees. Conversely, increasing age may indicate sufficient experience with stressful situations so that the older and more experienced are better able to cope than those younger and less experienced (Shirom et al., 2008). In contrast, younger and less experienced teachers typically report higher levels of stress, in relation to discipline problems, low ability pupils, and general responsibility for pupils, than their older and more experienced colleagues (Griffith, Steptoe & Cropley, 1999). Research into the effect of teaching experience also reports contradictory findings. Whilst Taylor and Tashakkori (1995) reported that increased teaching experience was associated with higher levels of job satisfaction, Xin and MacMillan (1999) concluded that more experienced teachers were less satisfied with their jobs. We would seek to determine whether age or experience impact within a Norwegian context.

Differences in reported stress and well-being between gender are frequently reported (Shirom et al., 2008). Whilst female teachers typically report classroom situations and pupil behaviour as their greatest source of stress, male teachers report administration and organisational demands as being most stressful (Griffith et al. 1999). Other factors are more prominently experienced by women, and include the 'glass-ceiling effect', job insecurity, increased level of competition, social isolation, and a lack of social support (Davidson & Cooper, 1992;). Differences between gender also occur in relation to the types of negative health outcomes reported, with higher incidences of headaches, tearfulness and exhaustion amongst female teachers who are also more likely to report clinical mood disorders, including

depression (Tamres, Janicki & Helgeson, 2002; Dunham, 1984;). Other variables may moderate/mediate these sex differences since lack of gender effects are reported when controlling for personality traits (Fontana & Abouserie, 1993). Teachers with Type-A personality characteristics are more likely to work long hours, take work home and work on weekends, find it difficult to unwind, be competitive with themselves and others, set high and unrealistic standards, and express feelings of frustration and irritability with colleagues and pupils (Pithers & Fogerty, 1995). Two of the 'big five' personality traits, neuroticism and extraversion, appear to be key determinants in how organisational climate is perceived (Hart, 2000). This study will control for a range of individual characteristics, including personality, in determining well-being across Norwegian schools.

Employee and organisational well-being

The organisational literature, in particular studies of teacher health, typically focuses on models of negative well-being states, such as burnout and depression (Maslach, & Jackson, 1984). However, subjective well-being is typically reflected by two independent dimensions, positive and negative affect (Watson, Clark & Tellegen, 1988; Ryan & Deci, 2001). Positive affect is often described by enthusiasm and energy, whilst negative affect relates to states such as anger, anxiety, and guilt. Rather than occurring at separate ends of a continuum of emotion, Watson et al. (1988) demonstrated these constructs to be mostly independent. That is, an individual's level of affect on one dimension does not, to any large degree, indicate the level on the other affect dimension. There is increasing evidence for the independence of the precursors of positive and negative well-being (Huppert & Whittington, 2003) and the importance of positive affect has been identified (Lyubomirsky, King & Diener, 2005). The role of positive SWB states like vigor and enthusiasm within the workplace has been reported (e.g. Shirom, 2007). Also, Wright and Quick (2009a; 2009b) have emphasized the positive

psychological capacities that would impact on individual and organisational performance and well-being.

Similar to individual well-being, organisational well-being is a multifaceted construct that can incorporate employees' subjective feelings about their jobs and their organisation, attitudes to work and the organisation, or more objective measures as indicated by work performance, absence levels, and intentions to quit (Parker et al., 2003). Similar to the delineation of positive and negative well-being constructs, staff distress and morale are independent well-being constructs with differential associations with a range of factors (Hart & Conn, 1992). Consequently, programs designed to reduce stress may not necessarily enhance morale and vice-versa (Hart & Cooper, 2001).

Aim of the study: Teacher and organisational well-being in a Norwegian context

Employee and workplace factors can impact on both positive and negative facets of employee and workplace well-being. Limited investigations of the relationship between individual and workplace characteristics on teacher and school well-being outcomes within Norwegian teachers, have been reported. Therefore, this study will investigate the effects of individual characteristics and school workplace climate on employee and school well-being in a sample of Norwegian high-school teachers. Several issues may be of particular importance for teachers in the Norwegian context. The issue of school location is a particularly important one for a Norwegian society where a decentralised settlement policy means that both rural and urban lifestyles are encouraged and directly supported by government policies, particularly in the northern extremities of the country. Also, in periods of economic rationalisation, and with an increasing student-aged population, the effect of increasing school sizes may be indicated on both individual and workplace well-being outcomes. This is important to consider, especially in a Norwegian context, since the numbers of primary and

secondary school students has increased from 750,000 in 1984 to 860,000 in 2007, whilst the number of educational institutions has declined from 4460 to 3497 over the same time period (Statistics Norway, 2009). Furthermore, it has been suggested that climate has become more homogenous in Norwegian schools although these findings were limited to schools in one Norwegian town (Kallestad, 2010). In summary, we will seek to determine the extent to which perceptions of organisational climate are associated with school location. Subsequently, we will determine the extent to which employee and organisational well-being vary across school location, adjusting for demographics, personality and organisational climate, factors which have been described as being important in determining employee and organisational well-being outcomes.

Methods

Participants and Design

Participants for this study were members of the Union of Education, Norway. Invitations to participate were sent out to 1,000 members who had provided email contact to the Union of Education, with a 33% response rate. Only teachers (n = 250) who taught at the "ungdomskulen" and "videregående" level (lower and upper high school levels) were included in this analysis. Predominantly female (68%), 63.2% were aged 45 years and older. Whilst 45% reported working in schools in city locations, 33% and 22% of respondents worked in urban and rural locations, respectively. Just over half of the participants reported more than 20 years of teaching experience. Participants were sent questionnaires by email and returned them to a secure email address at the University of Southern Queensland's Department of Psychology. The University of Southern Queensland's Human Research Ethics Committee provided approval for the study.

Measures

Teacher and School Demographic Characteristics

Our questionnaire included several questions pertaining to the demographic characteristics of both the teacher and school, including age, years of experience, school location and school size.

Age: Teachers indicated their age be selecting one of several age ranges (i.e. aged under 30; 30-44; 44 -54; 55+).

Years of Experience: Teachers indicated the numbers of years of experience in the teaching profession by be selecting one of several year ranges (i.e. 0-4; 5-10; 11-20; 20+)

School Location: Teachers indicated the location of their school as either 'city', 'urban' or 'rural'.

School Size: Several variables were used to indicate size of school (number of pupils, number of teachers, pupil-teacher ratio). For this study, school size is reflected by number of pupils which comprised three levels (i.e. < 250 students; 250-749 students; 750+ students).

Subjective Well-Being (SWB)

The Positive And Negative Affect Schedule (PANAS; Watson et al. 1988) assessed affective dimensions of SWB with 20-items relating to positive affect (α = .881) and negative affect (α = .838). Individuals indicated their response on a 5-point Likert-type scale, with higher scores on each scale indicating greater well-being on each dimension.

Personality: Neuroticism and Extraversion

Measures of neuroticism (α = .861) and extraversion (α = .836) were obtained from a 20-item, 5-point Likert-type scale, personality measure from the International Personality Item Pool (IPIP: Grucza & Goldberg, 2007). Comparative analysis of eleven personality

inventories suggests that the IPIP scales are well-validated measures of the Five-Factor personality structure (Grucza & Goldberg, 2007).

Organisational Climate and Well-being

School organisational climate was assessed using the original version of School Organisational Health Questionnaire (SOHQ; Hart et al., 2000). The SOHQ comprises items that tap several generic factors that relate to organisational climate including appraisal and recognition, excessive work demands, goal congruence, participative decision-making, professional growth, professional interaction, role clarity, and supportive leadership. The school specific components of organisational climate include effective discipline policy, curriculum co-ordination, school misbehaviour, and student orientation.

Principal Axis Factoring with a direct oblimin rotation revealed that all climate variables, except excessive work demands, were reflected by a single factor (variance explained = 61%) and reflected positive organisational climate. Excessive work demands failed to load >.32) onto this factor, but was retained in subsequent analyses as an indicator of negative organisational climate. A Kaiser-Meyer-Olkin's Measure of Sampling Adequacy score of .289, and Bartlett's Test of Sphericity (χ^2 = 1933.021, df = 55, p < .001) revealed the organisational climate variables as adequate for factor analysis.

The SOHQ also includes a measure of positive organisational well-being, school morale. School distress, a measure of negative organisational well-being, was assessed using items from the Queensland Public Agency Staff Survey (QPASS; Hart et al. 1996) with the terms 'employees' and 'workplace' replaced with 'teachers' and 'school' in order to maintain school-specific descriptive anchors in the items. All organisational climate and well-being measures were assessed using a 5-point Likert scale.

Statistical Analysis

Statistical Analysis was undertaken using STATA v10. Chi-Square tested for differences between school locations on gender, age, level of education, years of experience, and student and teacher numbers. ANOVA then tested for differences between school location on organisational climate and the employee and organisational well-being variables. We considered analysing our data within a multi-level context given teachers could be nested within school location. We used the STATA *loneway* command to approximate the amount of variance in our four well-being outcomes variables. We then used *xtmixed* command to estimate both fixed and random effects, with a random intercept at the grouping level – school location.

Results

Teacher and school socio-demographic characteristics are reported in table 1 by school location. Chi-square analyses indicated no socio-demographic differences between school locations in terms of teacher gender, age or years of experience. Similarly, differences between school locations in terms of teachers' time spent on teaching, marking, administrative or other duties were not reported. Differences between school locations were reported in respect to school sizes, assessed in terms of both the number of students and teachers; rural schools reported much smaller school sizes. Correlations between the well-being, climate and personality variables indicated stronger associations between personality and the individual well-being variables and between organisational climate and the organisational well-being variables (Table 2).

We then used ANOVA to test for differences between school locations on the organisational climate variables. Descriptive statistics and the results of several ANOVA are reported in Table 3. Several differences between school locations were reported. Rural

teachers reported higher levels of Curriculum Co-ordination, Effective Discipline Policy, Goal Congruence, Participative Decision Making, Student Orientation, and Supportive Leadership in comparison with teachers in city and urban schools. Rural school teachers also reported higher levels of Professional Interaction and Role Clarity in comparison with teachers in urban schools. Similar to many of the analyses of the individual climate factors, analysis of the higher-order latent factor Positive Organisational Climate indicated rural teachers as reporting more positive organisational climates in comparison with teachers from schools in city or urban locations.

Differences between school locations were extended to analyses of the well-being variables (Table 4). No differences between school locations on the employee well-being variables were reported, but differences between school locations were reported on the school well-being variables. Similar to the results for the organisational climate variables, teachers in rural schools reported higher levels of morale in comparison with their peers in urban schools, whilst reporting lower levels of school distress in comparison to teachers in both city and urban schools.

Given the differences between school locations on the organisational climate and the organisational well-being variables, school morale and distress variables, we considered undertaking our analyses within a multi-level framework. ICC values for school location on the four well-being variables: pa (ICC = .01); na (ICC = .02); distress (ICC =.08); morale (ICC = .05), were obtained from the STATA *loneway* command, and indicated varying degree of variance accounted for by the nested nature of the data. For the employee well-being variables, little variance would be accounted for by modelling random intercepts for the school locations. However, for the organisational well-being variables, between 5 and 8% of the variance in organisational well-being was accounted for by the school location. Choosing

to ignore even these small effects of nested data can have deleterious effects on significance values. Therefore, we analysed data utilising a multi-level model framework whereby participants were nested within school location. However, when adjusting the mixed models with the fixed effects for personality and organisational climate, the random effects at the grouping level for the school morale and distress were greatly reduced from the unadjusted ICC values (Tables 5 & 6). This clearly indicates that whatever differences that may exist between teachers in different schools, is influenced not by the location of a school, but by the characteristics that underscore its workplace practices and climate.

A number of demographic characteristics were related to our well-being outcomes (Tables 5 & 6). For example, teachers with higher levels of education reported significantly higher levels of negative affect and school distress. However the size of the corresponding standard errors indicates a great degree of variability in these effects. In addition, the effects for size of school, dichotomised as more than 250 students and more than 50 teachers, reflect suppression effects since their effects were not reported in the first step. Several stepwise models were run in which the personality and organisational variables were separately introduced and indicated that the effects for school size became significant with the inclusion of the organisational climate variables. In contrast, effects for personality on employee well-being and organisational climate on organisational well-being, indicate strong effects with much smaller standard error. More specifically, results indicate extraversion as a strong predictor of positive affect, neuroticism with negative affect, positive climate with school morale, and negative organization climate with school distress. Whilst positive organisational climate reported a moderate negative effect on school distress, a converse effect for negative organization climate on school morale was not reported.

Discussion

This study explored the relationship between school location and organisational climate and the effects on well-being outcomes for individual teachers and their schools in a Norwegian sample of lower and upper high school teachers. As a major focus of this study, school location appeared to be strongly associated with perceptions of organisational climate and organisational well-being, morale and distress, but unrelated to individual teacher well-being. However, fixed effects for demographics, school size, personality and organisational climate which were modelled in a mixed models framework that included random intercept parameters for school location, appeared to account for most of the intercept variability. Still, there are still important implications for government policy makers as it is clear that rural schools possess qualities which reflect better organisational well-being outcomes. Characteristics of rural schools include smaller school sizes and increased positive organisational climate indicated by workplace factors such as greater supportive leadership, increased participative decision making, effective discipline policies, and goal congruence. Importantly, there was no difference in the degree to which teachers from rural, urban or city schools reported negative organisational climate in terms of increased excessive work demands. This is particularly important to consider in the light of the largest differences between school locations being reported for Participative Decision Making. Given the propensity for rural schools to be smaller in size in comparison with their city and urban counterparts, there is clearly a greater likelihood that smaller schools are able to facilitate better communication and ownership of school policies and practices between the school administration and its teaching staff. However, regardless a school's size, there are still bureaucratic and other official business that must be undertaken. Whilst smaller pupil numbers may impact on the size of this demand, smaller schools also reflect smaller numbers of staff. Consequently, smaller schools may place greater responsibilities on more teachers to

distribute workload more equitably. In such circumstances, school leaders would do well to recognise the virtue in enabling its staff to commit not just to the teaching of its students but to encourage participation in the full spectrum of the school activities, beyond that typically expected. Following the results from this study, it is clear that teachers in rural schools do report greater participation and control of the workplace, yet at no adverse risk in terms of work demands, in comparison with their colleagues in larger urban and city schools.

The results of this study also clearly indicate that broad socio-demographic characteristics are mostly unrelated to individual and school well-being. What differences were initially reported, appeared to be explained in adjusted models that controlled for personality and school climate. Instead, individual personality characteristics appeared to explain differences on the individual well-being outcomes, whilst the organisational climate variables appeared to explain differences on the organisational outcome variables. Further, it appears that those variables with a negative nuance (work demands and neuroticism) were more strongly related to negative well-being, whilst the positive control variables (extraversion and positive organisational climate) were more strongly related with the positive well-being outcomes. The influence of positive organisational climate on both positive and negative school well-being outcomes in the adjusted models should be emphasised. This provides some support for the importance of bolstering positive workplace conditions as a method by which to improve organisational health, and not simply alleviating the presence of negative stressors (Hart & Cooper, 2001). The creation of positive and healthy workplace environments however, is not the sole responsibility of the organisation and its leaders. Teachers themselves have an impact in determining the perceptions of positive organisational climate, and to a less degree perceptions of excessive work demands. Although not accounting for a large proportion of variance, the role of neuroticism and

extraversion in determining perceptions of school distress and morale respectively, does indicate that teachers themselves do have some impact on the work-stress relationship. In contrast, that positive and negative organisational climate were related to positive and negative employee well-being respectively, indicates that workplaces must accept some responsibility for the teacher well-being.

Whilst participants were randomly selected from the membership of the Norwegian Teachers' Union, an inadequate sample size precludes generalising these findings to the Norwegian school teacher population. Also, our operational definitions for school location and size were based on a questionnaire designed for a larger cross-cultural investigation of teacher well-being. Clearly, more specific characteristics of school demographic characteristics, within a Norwegian context, should be considered. Consequently, the findings from this study need to be balanced by the design of this study. Future research will need to consider the use longitudinal designs to delineate whether the cross-sectional associations reported in this study are invariant across time. Furthermore, complex modelling of longitudinal data will enable researchers to describe possible cause and effect relationships. The findings from this study were drawn from a single self-report questionnaire and responses are likely to be influenced by common method variance (Lindell & Whitney, 2001) although the extent to which this seriously undermines validity of a study's findings have been questioned (Spector, 1987; 2006).

Implications

There are still important implications for teacher and organisational well-being. For instance, this study has delineated employee and organisational well-being in terms of both positive and negative valence, that is, school morale and distress. Whilst considerable focus typically links negative organisational factors only with negative dimensions of employee

and organisational outcomes, this study has supported prior research that morale is a distinct construct from distress (e.g. Hart & Cooper, 2001; Shirom, 2007). Instead healthy workplaces are not those that just seek to minimise the impact of adverse experiences, but rather focus on building organisational resources and capacities that support and nurture employee morale and teacher well-being (Wilson et al., 2004).

Healthy organisations are those which possess organisational structures and processes that promote a positive and healthy climate by creating job designs that focus on workload, degree of autonomy, role clarity and environmental conditions that employees work under, focusing on job future and on areas including job security, pay and promotion opportunities, and flexible work arrangements, and by promoting positive dialogue with leaders and co-workers, and encouraging employee participation and involvement. In addition, this study has supported the proposition that it is important to recognise the role employees themselves have in determining the success of implementing such strategies and highlights the importance of considering both employee well-being and organisational outcomes concurrently (Hart & Cooper, 2001).

Conclusions

This study has identified the extent to which school location, teacher and school socio-demographic characteristics, personality and organisation climate were related to individual and school well-being outcomes in a sample of Norwegian high school teachers. It was identified that teacher personality and school climate characteristics exert differential effects on both teacher and school positive and negative well-being dimensions. Importantly, it was the effect of positive organisational characteristics and less so the impact of negative work demands that was most highly related to organisational well-being outcomes. Whilst limitations may preclude generalising these results to the whole Norwegian sample and are

limited to cross-sectional relationships, both individual and school characteristics impact on individual and school well-being dimensions. Interventions that seek to address well-being outcomes need to recognise these independent effects on both well-being dimensions at the individual and school level concurrently.

Acknowledgements

The authors thank the participants from both studies, Mr Ross Bool and the Technical Services staff for organizing the online questionnaires, and the Norwegian Union of Education for their help in contacting the participants.

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Table 1

Proportions of participants by socio-demographic status and by school location

	City (n = 114)	Urban (n = 82)	Rural (n = 54)	Tests of Difference
	N (%)	N (%)	N (%)	
Female	76 (66.7)	57 (69.5)	38 (70.4)	χ^2 (2) = .302; p = .860
Age				
Under 30 Years	8 (7.0)	6 (7.3)	6 (11.1)	
30 to 44 Years	32 (28.1)	26 (31.7)	14 (25.9)	χ^2 (6) = 2.300; p = .890
45 to 54 Years	32 (28.1)	24 (29.3)	18 (33.3)	
55 Years and Over	42 (36.8)	26 (31.7)	16 (29.6)	
Education				
Post-Graduate Diploma	6 (5.3)	8 (9.8)	2 (3.7)	χ^2 (2) = 2.443; p = .295
Years of Experience				
0 - 4 years of experience	12 (10.5)	12 (14.6)	8 (14.8)	
5 - 10 years of experience	22 (19.3)	14 (17.1)	8 (14.8)	χ^2 (6) = 4.798; p = .570
11 - 20 years of experience	24 (21.1)	18 (46.3)	6 (11.1)	
21+ years of experience	56 (49.1)	38 (46.3)	32 (59.3)	
# of pupils				
1 - 99 students	5 (4.4)	2 (2.4)	14 (25.9)	
100 - 249 students	13 (11.4)	18 (22.0)	30 (55.6)	χ^2 (8) = 89.497; p < .001
250 - 499 students	38 (33.3)	38 (46.3)	6 (11.1)	
500 - 749 students	30 (26.3)	12 (14.7)	4 (7.4)	
750+ students	28 (24.5)	12 (14.7)	-	
# of Teachers				
0 - 25 teachers	16 (14.0)	20 (24.4)	42 (77.8)	
26 - 50 teachers	44 (38.6)	34 (41.5)	8 (14.8)	χ^2 (6) = 75.654; p < .001
51 - 100 teachers	28 (24.6)	16 (19.5)	4 (7.4)	
100+ teachers	26 (22.8)	12 (14.6)	-	
Time Teaching				
0 - 9 hours	12 (10.5)	14 (17.1)	8 (14. 8)	
10 - 15 hours	26 (22.8)	18 (22.0)	12 (22.2)	χ^2 (6) = 4.614; p = .594
16 - 20 hours	58 (50.9)	32 (39.0)	22 (40.7)	
21 hours and more	18 (15.8)	18 (22.0)	12 (22.2)	
Time Marking				
0 - 9 hours	48 (42.1)	38 (46.3)	28 (51.9)	
10 - 15 hours	48 (42.1)	28 (34.1)	20 (37.0)	χ^2 (6) = 5.443; p = .488
16 - 20 hours	12 (10.5)	10 (12.2)	6 (11.1)	
21 hours and more	6 (5.3)	6 (7.3)		
Time Administration				
0 - 9 hours	86 (75.4)	56 (68.3)	46 (85.2)	χ^2 (6) = 8.578; p = .199
10 - 15 hours	18 (15.8)	12 (14.6)	6 (11.1)	

16 - 20 hours	2 (1.8)	4 (4.9)	2 (3.7)	
21 hours and more	8 (7.0)	10 (12.2)		
Time Other Duties				
0 - 9 hours	98 (86.0)	74 (90.2)	48 (88.9)	
10 - 15 hours	12 (10.5)	4 (4.9)	4 (7.4)	χ^2 (6) = 13.573; p = .035
16 - 20 hours	2 (1.8)	4 (4.9)	2 (3.7)	
21 hours and more	2 (1.8)			

Table 2
Correlations between school climate and personality and the well-being outcome variables

	1.	2.	3.	4.	5.	6.	7.
1. Positive Affect	1						
2. Negative Affect	-.145*	1					
3. School Morale	.358***	-.296***	1				
4. School Distress	-.237***	.476***	-.598***	1			
5. Extraversion	.524***	-.127*	.331***	-.183**	1		
6. Neuroticism	-.431***	.500***	-.426***	.417***	-.417***	1	
7. Positive Climate$	.373***	-.388***	.741***	-.667***	.258***	-.482***	1
8. Excessive Demands	-.210**	.339***	-.181**	.627***	-.175**	.206**	-.185**

* $p < .05$; ** $p < .01$; *** $p < .001$; $Positive Organisational Climate variable was computed and saved using the regression method (mean-centred) following a factor analysis. Other variables were also mean-centred

Table 3
Comparison of workplace climate factors by school location

	City (n =114)		Urban (n =82)		Rural (n =54)		Tests of Difference
	M	SD	M	SD	M	SD	
Appraisal and Recognition	17.18	5.01	18.15	3.91	18.44	5.82	F (2, 247) = 1.61; p = .202
Curriculum Co-ordination	5.46	1.85	5.46	1.39	6.37	1.78	F (2, 247) = 6.09; p = .003; Rural > City & Urban
Effective Discipline Policy	12.58	3.44	11.80	3.22	13.96	3.80	F (2, 247) = 6.37; p = .002; Rural > City & Urban
Excessive Work Demands	12.60	3.14	12.96	3.49	11.93	3.21	F (2, 247) = 1.64; p = .196
Goal Congruence	16.67	3.80	16.34	3.34	18.70	3.41	F (2, 247) = 8.03; p < .001 ; Rural > City & Urban
Participative Decision Making	12.40	3.19	13.23	2.55	15.00	3.43	F (2, 247) = 13.28; p < .001 ; Rural > City & Urban
Professional Growth	15.44	4.21	16.00	3.20	16.96	4.00	F (2, 247) = 2.87; p = .059
Professional Interaction	25.51	4.85	24.82	3.22	26.96	4.85	F (2, 247) = 3.94; p = .031 ; Rural > Urban
Role Clarity	14.89	2.53	14.23	2.27	15.41	2.46	F (2, 247) = 4.00; p = .020 ; Rural > Urban
Student Orientation	11.18	2.48	10.78	1.93	12.26	1.92	F (2, 247) = 7.63; p <.001 ; Rural > City & Urban
Supportive Leadership	16.37	5.20	16.28	4.37	18.80	4.52	F (2, 247) = 5.59; p = .004; Rural > City & Urban
Positive Organisational Climate	-.08	1.05	-.18	.72	.44	.99	F (2, 247) = 7.75; p < .001; Rural > City & Urban

Table 4
Comparison of employee and workplace well-being by school location

	City (n =114)		Urban (n =82)		Rural (n =54)		Tests of Difference
	M	SD	M	SD	M	SD	
Positive Affect	36.89	5.63	36.54	5.79	38.44	7.23	F (2, 247) = 1.75; p = .176
Negative Affect	17.19	6.55	18.59	4.90	16.85	4.87	F (2, 247) = 1.97; p = .142
School Morale	18.18	3.32	17.39	3.01	19.11	3.45	F (2, 247) = 7.67; p <.001 ; Rural > City & Urban
School Distress	14.21	4.63	14.61	3.76	11.85	4.12	F (2, 247) = 4.59; p = .011; Rural < Urban

Table 5
Mixed models analyses of employee well-being outcomes with participants nested within school location

	Positive Affect				Negative Affect			
	β	SE	*β*	SE	*β*	SE	*β*	SE
Intercept	-0.224	0.322	-.159	.280	0.241	0.289	.406	.2515
Female	0.104	0.143	.031	.115	0.005	0.142	.099	.121
30 to 44 Years	-0.256	0.320	-.276	.259	-0.279	0.317	-.473	.271
45 to 54 Years	-0.010	0.378	.199	.308	-0.522	0.374	-.589	.322
55 Years and Over	-0.260	0.396	-.095	.323	-0.712	0.391	-.782*	.337
Post-Graduate Diploma	0.206	0.268	.359	.214	0.777**	0.264	.662**	.223
250+ students	0.316	0.174	.459**	.140	0.143	0.161	.029	.139
50+ teachers	-0.166	0.154	-.247*	.124	0.109	0.153	.031	.130
5-10 years of experience	0.349	0.288	.182	.233	0.032	0.286	.000	.244
11-20 years of experience	0.444	0.301	.078	.245	-0.067	0.299	.015	.257
21+ years of experience	0.080	0.336	-.095	.279	0.112	0.333	.085	.291
Extraversion			.471***	.059			.135*	.061
Neuroticism			-.155*	.063			.475***	.066
Positive Climate			.199**	.075			-.111	.078
Negative Climate			.095	.075			.154*	.078
var (_cons)	.056	.080	.071	.087	.006	.018	.013	.029
var(Residual)	.968	.089	.605	.056	.955	.088	.311	.029
AIC	738.7384		646.4669		733.1841		665.7779	
BIC	784.5174		706.3317		778.9631		725.6428	

Reference categories: Age: aged less than 30; Student Numbers: less than 250 students; Teacher Numbers: less than 50 students; Experience: less than 5 years. * p < .05; ** p < .01; *** p < .001

Table 6
Mixed models analyses of school well-being outcomes with participants nested within school location

	School Morale				School Distress			
	β	SE	*β*	SE	*β*	SE	*β*	SE
Intercept	-0.230	0.317	.068	.154	-0.135	0.324	-.205	.173
Female	0.120	0.142	-.199**	.076	-0.073	0.141	.111	.084
30 to 44 Years	0.461	0.318	.378*	.170	-0.405	0.315	-.075	.189
45 to 54 Years	0.217	0.376	.105	.202	-0.697	0.372	-.029	.224
55 Years and Over	0.442	0.393	.295	.211	-0.938*	0.389	-.227	.234
Post-Graduate Diploma	-0.157	0.266	.146	.140	0.478	0.264	.475**	.155
250+ students	-0.028	0.172	.055	.085	0.205	0.172	.188*	.096
50+ teachers	-0.211	0.153	.008	.0817	0.058	0.152	-.171	.091
5-10 years of experience	0.012	0.286	-.199	.153	0.402	0.283	.089	.170
11-20 years of experience	0.107	0.299	-.342*	.161	0.434	0.296	.249	.179
21+ years of experience	-0.198	0.334	-.244	.183	0.871**	0.331	.153	.203
Extraversion			.109**	.038			.069	.043
Neuroticism			.015	.041			.121**	.046
Positive Climate			.925***	.049			-.286***	.054
Negative Climate			.079	.049			.656***	.054
var (_cons)	.051	.070	.002	.005	.068	.091	.004	.008
var(Residual)	.956	.088	.262	.024	.937	.086	.323	.030
AIC	735.634		446.3799		731.229		495.7213	
BIC	781.413		506.2447		777.008		555.5861	

Reference categories: Age: aged less than 30; Student Numbers: less than 250 students; Teacher Numbers: less than 50 students; Experience: less than 5 years.