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Title: Stressors and stressor response levels of Hong Kong Primary Schools Music Teachers

By Dr. Marina Wai-Yee Wong, Dr. Maria Pik-Yuk. Chik & Dr. Sze-Shing Edmund, Chan

Abstract

Responses from 309 randomly sampled Hong Kong primary school music teachers to the shortened version of the Chinese Teacher Stress Questionnaire were subjected to a descriptive percentage analysis, one-way ANOVA and independent t-test. Obtained results identify five key stressors: “changing education policy of the government”; “being observed by colleague, student teachers’ college tutors, inspectors or parents”; “too much subject matter to teach”; ‘inclusive education’ and “additional administrative work”. An explanation is offered identifying stressor-responses being underpinned by either global or contextual issues while others by a combination of both. Uniquely, results display no significant statistical evidence to link music teachers’ stressor response levels neither with age, teaching experience, education, specialization nor teaching-related workload. The evidence here supports the view that stressors are neutral and reported stressor response levels reflect global or contextual factors which can be intensified by a combination of both. (142 words)

Title: Stressors and stressor response levels of Hong Kong Primary Schools Music Teachers

By Dr. Marina Wai-Yee Wong, Dr. Maria Pik-Yuk. Chik & Dr. Sze-Shing Edmund, Chan

Background

An understanding of stress has developed over time. According to Cacioppo and Freberg (2013), “stress is an unpleasant emotional state that results from the perception of danger. The source of stress is referred to as a stressor” (p. 788). Selye (1974) categorized stress as four variations on one axis, there is good stress (eustress) and bad stress (distress); on the other is overstress (hyperstress) and understress (hypostress). Eustress and distress are the two main kinds of stressors. Developing this understanding, Selye (1983) subsequently noted that stress itself is neutral, but what varies is the degree of response. More recently, Hargrove et al., (2013) refine the terminology by noting that a stressor is inherently neutral, what induces either distress or eustress lies in individual response differences.

Over time, there have been differing views of the relationship between stressors and individual stressor responses – initially the focus centred on persistent stressors within unavoidable contexts (Pinquart & Sorensen, 2003); then broadened to consider stressor types and individual characteristics such as age and physical well-being (Schneiderman et al., 2005); subsequently the focus shifted to consider the individual’s coping resources (Schlotz et al., 2011) and individual's personality characteristics (such as level of neuroticism), genetics,

and childhood experiences (Jeronimus et al., 2014). However, as Kobasa (1982) reminds us, it is possible for individuals to exhibit hardiness—a term referring to the ability to be both chronically stressed and healthy. Explaining displays of hardiness is the significant role of individual belief – where one’s belief that stress does not affect health significantly decreases the risk of illness or disease (Keller et al., 2012). In sum, the relationship between stressors and individual stressor responses is complex and may contain a lot of personal and environmental variables.

Seeking clarity on the usage of the term ‘stress’, Koolhaas’ (2011) meta-analysis results display that stress should be restricted to conditions where the demand from the environment exceeds a person’s natural regulatory capacity. It is this negative view of stress that is adopted here, a view illustrated by Kyriacou’s (2001) definition of teacher stress as being the experience “of unpleasant, negative emotions, such as anger, anxiety, tension, frustration or depression, resulting from some aspect of their work as a teacher”(p. 28).

Current research studies suggest a global interest in teacher stress – Norway (Skaalvik & Skaalvik, 2015); USA (Richards, 2012); China (Liu & Onwuegbuzie, 2012); Australia (Howard & Johnson, 2004); Hong Kong (Chan, 2002); Sweden (Jacobsson et al., 2001); South Africa (Rigby & Bennett, 1996), Denmark (Schaufeli & Daamen, 1994) and Jamaica (Soyibo, 1994). Reflecting these cultural diversities, a range of research instruments are reported, such as the “Scale of vocational high school teachers’ work stress” (Chang et al.,

2015); the “Teacher Stress Inventory and the Coping Scale for Adults” (Richards, 2012), “Teachers’ Attribution of Responsibility for Stress Scale” (McCormick et al., 2006) and “Teacher Stress Inventory” (Fimian, 1984).

Despite these differing research instruments, their reported stressors are remarkably consistent - “students’ challenging behaviors” in inclusive schools (Pepe & Addimando, 2013); the “challenges of accountability” due to education reform and inadequate preparation time (Luk-Fong, 2009; Richards, 2012; Scheib, 2003); insufficient support for students’ learning and inadequate resources for teaching and learning (Ball & Anderson-Butcher, 2014; Richards, 2012). However, within the field of music teacher education, there are few current stress studies. Reported qualitative studies include Scheib (2003), Krueger (2000) and Cox (1999). Reported quantitative studies are marginally more current (Chan & Jamaludin, 2010; Drummond, 2001; Gordon, 2002; Hamann, 1990; Jamaludin & Ghazali, 2012; Scheib, 2006; Kelly, 1999).

These studies identify an array of music teachers’ stressors: non-teaching administrative duties; discipline problems; inadequate preparation time, insufficient school support, education reform, lack of social support and recognition, lack of confidence in music teaching and tensions between being a musician and an educator. However, this array of stressors reflects research grounded in Western countries. One exception here is the report by Chan & Jamaludin (2010) that identified two stressors of significance for music teachers in Malaysia –

“fear of music for going against the Islamic values” and “lack of confidence of teaching” among untrained music teachers. This paper now reports on research into stressors within another Asian context, that of music teachers in Hong Kong’s Primary schools.

Purpose of Study

The purpose of this research was to investigate three research questions:

- (1) What do Hong Kong primary music teachers consider to be their main stressors?
- (2) How responsive are Hong Kong primary music teachers to these stressors?
- (3) Does a music teacher’s age, teaching experience, training and workload have a significant impact on their response levels to these stressors?

Procedures and Results

Sampling

Employing a quantitative research method (Creswell 2015), of the 455 government funded primary schools in Hong Kong (circa 2013-2014), 200 schools (43.4%) across every school district were contacted on a random selection basis. Of these 200 school contacts, 94 schools (47%) responded positively. Within these 94 primary schools, the number of music teachers varied (ranging from 1 to 12 teachers of music), accordingly the number of questionnaires issued was 453. From this number, 309 questionnaires were returned giving a response rate of 0.68.

The instrument

The instrument used for this research was the shortened version of the Chinese Teacher Stress Questionnaire (CTSQ). The original version of the CTSQ by Kyriacou and Chien (2004) comprises a 55-item scored against a 5-point Likert scale (1 = no stress; 5 = extreme stress). Of these original 55 items, 20 items assessed the “sources of teacher stress”, one item assessed the “general level of teacher stress”, 25 items assessed respondents’ “coping strategies” and nine items assessed the “effectiveness of coping strategies”. The shortened version of the CTSQ employed here consists of 20 items. This shortened version was adapted for general primary teachers in Taiwan and secondary mathematics teachers in China by Meng & Liu (2008).

The CTSQ shortened version displayed satisfactory overall reliability ($N = 625$, $\alpha = 0.93$) and revealed three factors which included “organizational environment” ($\alpha = 0.89$), “discipline of students” ($\alpha = 0.88$) and “policy” ($\alpha = 0.75$) (results quoted from Chuang, 2009). One item – “In general, how stressful do you find being a primary school teacher?” was added to the questionnaire of the present study to investigate respondents’ stressor responsiveness. Following the practice of Ho (2013), the wording of the CTSQ was modified to suit the context of Hong Kong. The Cronbach’s alpha reliability of the 21-item scale used in the present study was 0.93, which was quite high and consistent with the findings of Chuang (2009). As the focus of the current study is to investigate the stressors and responses of primary music teachers in Hong Kong, the factor structure of the CTSQ is not reported here.

Data cleansing

To clarify or complete missing data, a total number of 104 respondents were contacted by fax and Whatsapp messages. This procedure of data cleansing was completed prior to data analysis.

Results

Three steps of analysis were conducted. First, a percentage analysis was conducted to display teachers' responsiveness to each stressor. Second, each participant's overall stressor responsiveness was displayed by adding together all of their individually reported Likert scores. Third, a series of one-way ANOVAs and independent *t*-test were conducted to address the third research question. Normality and homogeneity of the data were assessed employing respectively the Kolmogorov-Smirnov test and Levene test prior to the ANOVA tests, with no violations being found.

Addressing the first research question – “What do Hong Kong primary music teachers consider to be the main stressors?” Table 1 displays the percentages of the 309 primary schools music teachers' responses to each specific stressor. Following the practice of Meng and Liu (2008), teachers' responses to the sources of stress are presented as a column that sum up the mean of scores of “A lot of stress” and “Extreme stress”. As displayed in Table 1, there are five top-ranking stressors: (1) “changing education policy of the government” (58.6%; *n* =181), (2) “additional administrative work” (52.4%; *n* =162), (3) “being observed by

colleagues, student teachers, college tutors, inspectors or parents” (49.8%; $n = 154$), (4) “too much subject matter to teach”(42.7%; $n = 132$) and (5) “pupils with special education needs in the class (e.g. with autism, attention deficit and hyperactivity disorder [ADHD], low ability or low emotional intelligence)” (41.7%; $n = 129$).

INSERT TABLE 1 HERE

To address the second research question – “How responsive are Hong Kong primary music teachers to these stressors?” Table 1 additionally displays their responsiveness to these stressors. Respondents’ responsiveness to these stressors is expressed as being 25.6% ($n = 79$). Majority of the respondents reported some work-related stress (45.6%; $n = 141$).

Addressing the third research question – “Does a music teacher’s age, teaching experience, training and workload have a significant impact on their response to these stressors?” The ANOVA summary tables and Independent Sample t -tests tables are provided in Table 2.

INSERT TABLE 2 HERE

Impact of age and teaching experience

As displayed in Table 2, no significant difference in stress levels was found between the four age-groupings of these responding music teachers ($F 3, 305 = .497, p = .685$). There is no significant difference in stressor response levels between the four teaching-experience-groupings of music teachers ($F 3, 305 = .183, p = .908$).

Impact of education

Table 3 shows the impact of education and specialization on teachers' stressor responsiveness. Respondents' data were grouped according to their highest achieved levels of education, ranging from non-graduate certificate to Master Degree in Music level. To these groupings a one-way ANOVA test was applied whose results displayed no significant difference in stressor responsiveness between music teachers of differing education levels ($F_{3, 305} = 1.513, p = .21$).

INSERT TABLE 3 HERE

Impact of specialisation

Table 4 displays the results of a series of independent *t*-tests on respondents' data grouped according to those who studied music as major discipline and those who studied subjects other than music as their major discipline, and between those who received special education training and those who had not.

INSERT TABLE 4 HERE

Independent *t*-test results indicate no significant difference in stressor responsiveness between those music teachers who studied music as major discipline and those who studied other subjects as major discipline ($t(99.35) = -.67; p = .51$). Similarly, there was no significant difference in stress levels between those who received special education training and those who had no training in special education ($t(307) = .35; p = .73$).

Impact of workload

Table 5 displays independent *t*-test results for respondents' responses to the stressor 'workload'. These independent *t*-tests revealed no significant difference in stress level between groups of music teachers who were class teacher and those who were not ($t(307) = .35; p = .73$); those who had duties of extra-curricular activities and those who had no duties of extra-curricular activities ($t(307) = .60; p = .55$); as well as those teachers who taught only music and those who had to teach music and other subjects ($t(307) = -1.42; p = .68$).

INSERT TABLE 5 HERE

However, significant difference in responses to this stressor was found between those music teachers who had administrative duties ($M = 63.63, SD = 12.68$) and those who had no administrative duties, $M = 59.64, SD = 13.36; t(307) = 2.42, p = .02$ (two-tailed). The magnitude of the differences in the means of those teachers who had administrative duties was small (mean difference = 3.98, 95% CI: .75 to 7.22. eta squared = .02).

Table 5 also displays respondents grouped according to types of their administrative duties (Group 1: no administrative duties; Group 2: administrative duties related to music matters; administrative duties related to non-music matters; Group 3: administrative duties related to non-music matters and Group 4: administrative duties related to music and non-music matters). There was statistically significant difference at the $p < .05$ level in the CTSQ scores between the four groups: $F(3, 305) = 3.62, p = .01$. The actual difference in mean

scores was relatively small. The effect size, calculated using eta squared, was .03. Post-hoc comparisons using the Tukey HSD test indicated the mean score for Group 1 ($M = 59.62$, $SD = 13.36$) was significantly different from Group 3 ($M = 64.41$, $SD = 12.90$). Significantly, the highest stress responses reported are from those music teachers involved in non-music related administrative activities.

Discussion

The role of Music within the Hong Kong Primary curriculum is a non-core subject, similar to General Studies and Visual Art, when compared with the core subjects of Chinese Language, English Language, and Mathematics. As a non-core subject, Music can claim to offer enjoyment and satisfaction through learning (EDB, 2011). Given music teachers' non-core status the results displayed in Table 1, that 45.6% of these music teachers reported some work-related stress, 21.4% had "a lot of stress" and 4.2% "extreme stress" may seem surprising why non-core teaching produces such levels of stressor responses can now be discussed. Analysis of these Hong Kong primary schools music teachers CTSQ responses identifies five key stressors. Their prime stressor that reflects the findings of Jamaludin and Ghazali (2012) is the "changing education policy of the government" (Table 1).

Following the implementation of Hong Kong education reform in 2000, a series of "new" education policies have been enacted. First came the reforms of curriculum and assessment. Replacing the level-specific content-activity-based *Syllabuses for primary*

schools – Music (CDCHK, 1987), the *Music curriculum guide (Primary 1 – Secondary 3)*

(CDC, 2003) requires music teachers to design a school-based, student-centered curriculum.

This radical change placed teachers educated in and/or teaching within an established teacher-centered curriculum to create a curriculum which is also student-centered. The assessment of this radically new curriculum also changed from “assessment of learning” to “assessment for learning”. This mandated change in music teachers’ curriculum and assessment mindsets was problematic (Forrester & Wong, 2008). Responding to these stressors, music teachers’ commonly turned to music textbooks and ready-to-use teaching aids (Brand & Ho, 1999), a dependency-response that left many music teachers lacking any sense of ‘ownership’ of these published school-based student-centered music curriculum text books which in turn led music teachers nervously to squeeze all available materials from the music textbook into their music curriculum. This indiscriminate text-book use explains respondents reported fourth topmost source of stressor “too much subject matter to teach” (Table 1).

An explanation of why music teachers’ display this particular stressor response of nervously squeezing all available materials from the music textbook into their music curriculum can be found in the Hong Kong’s socio-cultural roots which honour learning that is achievement-oriented (Wong, 2002). Socio-cultural roots persist, as here illustrated where Hong Kong’s well-intended curriculum and assessment reforms are transformed into being the two principle stressors reported by these primary schools music teachers.

The transition from “assessment of learning” to “assessment for learning” mandates evidence-based teacher development and accountability. Acquiring this evidence has led to the use of multiple-faceted lesson observations as a tool for professional development, personal appraisal, school evaluation and to inform school-parent communication (Lee, 2008). Reflecting its multifaceted use, lesson observation is reported here as being music teachers’ third ranked stressor: “being observed by colleagues, student teachers, college tutors, inspectors or parents” (Table 1).

Notably, these two stressors, “being observed by colleague, student teachers, college tutors, inspectors or parents” and “too much subject matter to teach”, are apparently unique to the current education reforms in Hong Kong, as neither of these have been mentioned in the literature reporting music teachers’ stress in other countries.

Hong Kong’s curriculum reform mandates the provision of inclusive education. This inclusion of pupils with special education needs within mainstream classrooms is regarded as a way to enrich and to be enriched through a shared learning/teaching process (EDB, 2001).

Although resources have been invested to provide appropriate support for students with special educational needs [SEN] within mainstream schools (EDB, 2015), teachers still find this a challenging requirement (Pang, 2012). Accordingly, ‘inclusive education’ has here been reported as these music teachers’ 5th ranked stressor (Table 1). Teachers’ report two levels of response to this particular stressor: their first response reflects again Hong Kong’s socio-

cultural roots that have for generations, viewed SEN as stigmata to be borne with fortitude but significantly also with shame (Scior et al., 2010) their second response is at the level of noting that students with SEN may sometimes cause discipline problems in class. Whereas the socio-cultural response is context-specific, concerns with classroom discipline are global (Drummond, 2001; Gordon, 2002; Krueger, 2000).

As evidenced in the literature (Chan & Jamaludin, 2010; Hamann et al., 1987; Jamaludin & Ghazali, 2012; Kelly, 1999; Schieb, 2003 & 2006), another global stressor is “additional administrative work”, ranked 2nd by Hong Kong music teachers (Table 1). This stressor’s global status may reflect the absence amongst teaching qualifications of a prerequisite for administrative acumen. Within the context of Hong Kong, this stressor’s high ranking reflects the implementation both of education reform and school-based management (EDB, 2014). This combination has mandated the decentralizing of administrative and management work to involve classroom teachers on top of their daily teaching duties (Kwan & Li, 2015). “Administrative work” appeared to be an unavoidable stressor under the Hong Kong education system, which arguably explains its high ranking.

This study uniquely reports its exploration of certain variables that might be linked to stressor response levels. No significant statistical results were found to link music teachers’ stressor response levels with their age, teaching experience, education, specialization and teaching-related workload (Tables 2, 3 & 4). However, statistical results do indicate first, that

teachers who had administrative duties recorded higher stressor response levels than those who do not have these duties; and second, that music teachers involved in non-music related administrative activities reported even higher stressor response levels. To explain these disparate response levels to the stressor “administrative duties” it is helpful to consider the context. It is very common for Hong Kong primary schools to provide various types of music-related extra-curricular activities. These music-related activities include coaching choir, band and orchestra to performance and/or competition level within the school or other public venues. This context is also found globally and reportedly, it is music teachers’ fond interests in their subject, satisfaction from the process of music making and the joy of sharing an enjoyable music performance that mitigates stressor response levels to music-related administrative and coaching work (Bakker, 2005). In contrast, “non-music-related administration” does not appear to offer such mitigation; hence reported stressor response levels are higher in Hong Kong and globally (Conway et al., 2010).

Limitations

Reported data is derived from responses to the Chinese Teacher Stress Questionnaire (Kyriacou & Chien , 2004). It is subject to further research whether this instrument reflects participants’ feelings about or responses to specific stressors.

Conclusion

This study of Hong Kong primary music teachers reports their stressor-response levels -

45.6% reported “some work-related stress”, 21.4% had “a lot of stress” and 4.2% “extreme stress”, and identifies five key stressors along with an explanation of each stressors attraction. The prime reported stressor, “changing education policy of the government”, is a global stressor (Jamaludin & Ghazali, 2012). Similar education-policy-related stressors found in other countries include “education reform” (Jamaludin & Ghazali, 2012) and “challenges of accountability” due to education reform (Richards, 2012; Scheib, 2003). “Unlike the findings of Pepe and Addimando (2013) that teachers regard “students’ challenging behavior” in inclusive schools as a stressor, music teachers in Hong Kong did not rank “pupils misbehavior” as their top-five stressors. However, other stressors maybe context specific or perhaps not yet reported in other countries: “being observed by colleague, student teachers’ college tutors, inspectors or parents”, “too much subject matter to teach” and “pupils with special education needs in the class” are three stressors that reflect a local socio-cultural tension with Hong Kong’s education reform – specifically with the mandated “assessment for learning” and “inclusive education”.

A final identified stressor, “additional administrative work” which is similar to the stressor “non-teaching administrative duties” faced by music teachers of other countries, reflect in its second highest response level, both global and local tensions (Chan & Jamaludin, 2010; Scheib, 2003 & 2006; Kelly, 1999; Hamann et al., 1987). Additionally, this study uniquely reports that there is no significant statistical evidence to link music teachers’ stressor

response levels neither with age, teaching experience, education, specialization nor teaching-related workload. In summary, the evidence here supports the view that stressors are neutral, reported stressor response levels reflect global or contextual factors and can be intensified by a combination of both.

References

- Bakker, A. B. (2005). Flow among music teachers and their students: The crossover of peak experiences. *Journal of Vocational Behavior, 66*(1), 26-44.
- Ball, A. & Anderson-Butcher, D. (2014) Understanding teachers' perceptions of student support systems in relation to teachers' stress. *Children and Schools, 36*, 221-229.
- Bogunovic, B., Stankovic, I. & Stanisic, J. (2009) Coping styles of music teachers. *Proceedings of the 7th Triennial Conference of European Society for the Cognitive Sciences of Music*, 615-618.
- Brand, M. & Ho, W. C. (1999). China recaptures Hong Kong: A study of change for music education. *British Journal of Music Education, 16*, 227-236.
- Cacioppo, J. T. & Freberg, L. A. (2013). *Discovering psychology: The science of mind*. International Edition. Singapore: Cengage Learning.
- Chan, C. J. & Jamaludin, J. (2010). Stress in music teaching: Identifying the level and sources of stress in the context of Malaysian national primary schools. *Pertanika Journal of Social Sciences and Humanities, 18*(1), 81-92.

- Chan, D. W. (2002). Stress, self-efficacy, social support, and psychological distress among prospective Chinese teachers in Hong Kong. *Educational Psychology, 22*(5), 557-569.
- Chang, Y-C., Liao, C-W., Chiang, Y-T. & Shih, C-L. (2015). Exploring and developing the scale of vocational high school teachers' work stress and coping strategies under the trend of fewer children. *International Journal of Information and Education Technology, 5*(5), 382-386. DOI: 10.7763/IJiet.2015.V5.535.
- Chuang, M. H. (2009). *The relationship between job stress and job burnout about the staff of student affairs division of elementary schools in Tainan County and Tainan City*. Unpublished Master Dissertation, National University of Tainan, Taiwan.
- Conway, C., Eros, J., Pellegrino, K. & West, C. (2010). Instrumental music education students' perceptions of tensions experienced during their undergraduate degree. *Journal of Research in Music Education, 58*, 260-275.
- Cox, G. (1999). Secondary school music teachers talking. *Music Education Research, 1*(1), 37-45.
- Creswell, J. W. (2015). *Educational research: planning, conducting, and evaluating quantitative and qualitative research*. 5th ed. Boston: Pearson.
- Curriculum Development Committee Hong Kong [CDCHK] (1987). *Syllabuses for primary schools*. Hong Kong: CDCHK.
- Curriculum Development Council [CDC] (2003). *Music curriculum guide (Primary 1 –*

Secondary 3). Hong Kong: CDC.

Drummond, B. (2001). The classroom music teacher – inspirations, aspirations and realities.

The evidence from Northern Ireland. *British Journal of Music Education*, 18, 5-25.

Education Bureau [EDB] (2001). *Learning to learn - The way forward in curriculum*.

<http://www.edb.gov.hk/en/curriculum-development/cs-curriculum-doc-report/wf-in-cur/index.html>. Web Edition.

Education Bureau [EDB] (2011). Arts Education. <http://www.edb.gov.hk/en/curriculum-development/kla/arts-edu/index.html>

Education Bureau [EDB] (2014) School-based management. <http://www.edb.gov.hk/en/sch-admin/sbm/about-sbm/index.html>

Education Bureau [EDB] (2015). Support for ordinary school.

<http://www.edb.gov.hk/mobile/en/edu-system/special/support/wsa/index.html>

Fimian, M. J. (1984). The development of an instrument to measure occupational stress in teachers: The Teacher Stress Inventory. *Journal of Occupational Psychology*, 57, 277-293.

Forrester, V. and Wong, M. (2008). Curriculum reform in the Hong Kong primary classroom: what gives? *Music Education Research*, 10, 271-284.

Gordon, D. G. (2002). Discipline in the music classroom: one component contributing to teacher stress. *Music Education Research*, 4, 158-165.

- Hamann, D. L. (1990). Burnout – How to spot it, how to avoid it. *Music Educators Journal*, 77(2), 31-33.
- Hamann, D. L., Daughery, E. & Mills, C. R. (1987). An investigation of burnout assessment and potential job related variables among public school music educators. *Psychology of Music*, 15, 129-140.
- Hargrove, M. B., Nelson, D. L. & Cooper, C. L. (2013). Generating eustress by challenging employees: Helping people savor their work. *Organizational Dynamics* 42, 61–69.
- Ho, S. S. (2013). *Relationships among humor, stress, self-esteem and social support to burnout: A study of teachers in Hong Kong*. Restricted Access Theses and Dissertations. Paper 1523. http://repository.hkbu.edu.hk/etd_ra/1523.
- Howard, S. & Johnson, B. (2004). Resilient teachers: resisting stress and burnout. *Social Psychology of Education*, 7, 399-420.
- Jacobsson, C., Pousette, A. & Thyelfors, I. (2001). Managing stress and feelings of mastery among Swedish comprehensive school teachers. *Scandinavian Journal of Educational Research*, 45(1), 37-53.
- Jamaludin, J. & Ghazali, G. M. (2012). Job satisfaction and stress among secondary school music teachers in Malaysia. *Malaysian Music Journal*, 1(2), 72-86.
- Jeronimus, B.F., Riese, H., Sanderman, R. & Ormel, J. (2014). Mutual reinforcement between neuroticism and life experiences: A five-wave, 16-year study to test reciprocal causation.

Journal of Personality and Social Psychology, 107: 751–64.

Keller, A., Litzelman, K., Wisk, L. E., Maddox, T., Cheng, E.R., Creswell, P. D. & Witt, W. P.

(2012). Does the perception that stress affects health matter? The association with health and mortality. *Health Psychology*. 31, 677-84.

Kelly, J. (1999). What stress factors specific to music teaching are critical to 'Burnout' in

secondary school classroom music teachers in Queensland? *Conference Proceedings:*

Opening the umbrella; an encompassing view of music education. Australian Society for

Music education, XII National Conference. University of Sydney, 9-13 July, 1999.

Kobasa, S. C. (1982). The Hardy Personality: Toward a social psychology of stress and

health. In G. S. Sanders & J. Suls (Eds.), *Social Psychology of Health and Illness* (pp. 1–

25). Hillsdale, NJ: Lawrence Erlbaum.

Koolhaas J., Bartolomucci, A., Buwalda, B., De Boer, S. F., Flügge, G., Korte, S. M. &

Richter-Levin, G. (2011). Stress revisited: A critical evaluation of the stress concept.

Neuroscience and Biobehavioral Reviews, 35, 1291–1301.

Krueger, P. (2000) Beginning music teachers: Will they leave the profession? *Update*, 19(1),

22-26.

Kwan, P., & Li, B. Y. M. (2015). Empowerment or impediment? School governance in the

school-based management era in Hong Kong. *Asia Pacific Journal of Education*, 35, 319-

330.

- Kyriacou, C. (2001). Teacher stress: Directions for future research. *Educational Review*, 53(1), 27-35.
- Kyriacou, C. & Chien, P. Y. (2004). Teacher stress in Taiwanese primary schools. *The Journal of Educational Enquiry*, 5(2), 86-104.
- Lee, J. F. K. (2008). A Hong Kong case of lesson study—Benefits and concerns. *Teaching and Teacher Education*, 24, 1115-1124.
- Liu, S. & Onwuegbuzie, A. J. (2012). Chinese teachers' work stress and their turnover intention. *International Journal of Educational Research*, 53, 160-170.
- Luk-Fong, Y. Y. P. (2009) Teachers' stress and a teachers' development course in Hong Kong: turning 'deficits' into 'opportunities'. *Professional Development in Education*, 35, 613-634.
- McCormick, J., Ayres, P. L. & Beechey, B. (2006). Teacher self-efficacy, stress and coping in a major curriculum reform: applying theory to context. *Journal of Educational Administration*, 44(1), 53-70.
- Meng, L. & Liu, S. (2009). Mathematics teacher stress in Chinese secondary schools. *The Journal of Educational Enquiry*, 8(1), 73-96.
- Pang, I. (2012). Teacher stress in working with challenging students in Hong Kong. *Educational Research for Policy and Practice*, 11(2), 119-139.
- Pepe, A. & Addimando, L. (2013). Comparison of occupational stress in response to

- challenging behaviours between general and special education primary teachers in northern Italy. *International Journal of Special Education*, 28(1), 14-26.
- Pinquart, M. & Sörensen, S. (2003). Differences between caregivers and noncaregivers in psychological health and physical health: a meta-analysis. *Psychology and Aging*, 18, 250.
- Richards, J. (2012). Teacher stress and coping strategies: A national snapshot. *The Educational Forum*, 76, 299-316.
- Rigby, C. & Bennett, H. (1996). Teacher stress interventions: a comparative study. *South African Journal of Education*, 16(1), 38-45.
- Scheib, J. W. (2003). Role stress in the professional life of the school music teacher: A collective case study. *Journal of Research in Music Education*, 51(2), 124-136.
- Scheib, J. W. (2006). Tension in the life of the school music teacher: A conflict of ideologies. *Update*, 24(2), 5-13.
- Schlotz, W., Yim, I. S., Zoccola, P. M., Jansen, L. & Schulz, P. (2011). *The perceived stress reactivity scale: Measurement invariance, stability, and validity in three countries*. Psychol Assess.
- Schneiderman, N., Ironson, G. & Siegel, S. D. (2005). Stress and health: psychological, behavioral, and biological determinants. *Annual Review of Clinical Psychology* 1, 607-628.

Schaufeli, W. & Daamen, J. (1994). Burnout among Dutch teachers: an MBI-validity study.

Educational and Psychological Measurement, 54, 803-813.

Scior, K., Kan, K.-Y., McLoughlin, A. & Sheridan, J. (2010). Public attitudes toward people

with intellectual disabilities: A cross-cultural study. *Intellectual and Developmental*

Disabilities, 48, 278–289.

Selye, H. (1974). *Stress without distress*. Philadelphia: J.B. Lippincott.

Selye, H. (1983). The stress concept: Past, present and future. In Cooper, C. L. *Stress*

Research Issues for the Eighties, (pp. 1–20). New York: John Wiley & Sons.

Skaalvik, E. M. & Skaalvik, S. (2015). Job satisfaction, stress and coping strategies in the

teaching profession—What do teachers say? *International Education Studies*, 8(3), 181.

Soyibo, K. (1994). Occupational stress factors and coping strategies among Jamaican high

school science teachers. *Research in Science and Technological Education*, 12(2), 187-

193.

Wong, M. W. (2002). Music lessons in the elementary schools of Vancouver and Hong Kong:

content and pedagogy. *Asia-Pacific Journal for Arts Education*, 1(1), 27-41.