

Abstract

Despite ample research on commitment in industrial settings, there has been no systematic attempt to investigate outcomes associated with teacher commitment. Therefore, the aim of this study was to examine the relationship between teacher commitment and psychological well-being in the work place using questionnaires. Hong Kong teachers (N = 857) participated. Hierarchical regression analyses were used to investigate how the three aspects of commitment pertaining to the organization and occupation predicted relevant outcomes. Results showed that affective and normative commitment positively predicted psychological well-being in the work place: interpersonal fit at work, thriving at work, feeling of competency, perceived recognition at work, desire for involvement at work, and job satisfaction. Continuance commitment was a negative predictor of some outcomes. Results of the current study provide support to Meyer's 3 X 2 factor model of commitment. Findings are discussed in relation to the situation of teachers in the Hong Kong context.

Keywords: teacher commitment, psychological well-being, Hong Kong teachers

1
2
3 Commitment refers to the psychological bond a person feels toward an organization
4
5 (Ebmeier & Nicklaus, 1999; Firestone, 1996). Teacher commitment in particular reflects
6
7 teachers' sense of fidelity and adherence to the institution they serve. It has been found to be
8
9 an important predictor of a myriad of educational and psychological outcomes (Day, 2008;
10
11 Dee, Henkin, & Singleton, 2006; Fink, 1992). Extant research has shown that committed
12
13 teachers put more effort in their jobs, focus on attainment of school goals, and stay in their schools.
14
15 Commitment has also been found to be related to teaching performance, absenteeism, burnout and
16
17 turnover. Moreover, commitment has been shown to exert an influence on students'
18
19 achievement gains and their attitude towards school (Ebmeier, 2003; Firestone, 1996; Ingersoll,
20
21 2001; Park, 2005; Somech & Bogler, 2002; Tsui & Cheng, 1999; Weiss, 1999).
22
23
24

25 A number of studies concerning teacher commitment have been conducted (see, for
26
27 example, Abd Razak, Darmawan, & Keeves, 2010; Chan, Lau, Nie, Lim, & Hogan, 2008;
28
29 Choi & Tang, 2009; Dee, Henkin, & Singleton, 2006; Shin & Reyes, 1991; Henkin &
30
31 Holliman, 2009; Sezgin, 2009b). However, most of these studies considered commitment as a
32
33 generalized identification with either the school or the teaching profession and not as a
34
35 multidimensional construct. Recent theorizing and research in industrial and organizational
36
37 psychology has shown that commitment is a multidimensional construct which has
38
39 differential impacts on various outcome measures (Meyer, Stanley, Herscovitch, &
40
41 Topolnytsky, 2002).
42
43
44

45 In this context there has been, to our knowledge, no large scale and systematic attempt
46
47 within Hong Kong or elsewhere to map the multidimensional nature of teacher commitment
48
49 and its relationship to multiple measures of teachers' psychological well-being within the
50
51 school setting. Yet it would seem that self-beliefs about why one is committed to teaching,
52
53 and the multidimensional nature of teachers' commitment to their schools, as well as to the
54
55
56
57
58
59
60

1
2
3 teaching profession as a whole, should have a strong influence on both teaching effectiveness
4
5 and psychological well-being.
6

7
8 Extensive examination of how the multidimensional nature of teacher commitment
9
10 relates to multiple measures of psychological well-being is important. Doing this provides us
11
12 with a more nuanced picture of the dynamics of the multidimensional nature of teacher
13
14 commitment and multiple measures of well-being (e.g., interpersonal fit at work, feeling of
15
16 competency, perceived recognition at work, desire for involvement at work). Previous
17
18 research has mostly clarified how commitment is associated with a narrower set of constructs
19
20 (e.g., life satisfaction). Involving multiple measures of psychological well-being is an
21
22 opportunity for us to understand clearly how they are influenced by the two objects of
23
24 commitment, the organization and the occupation. This study makes an additional important
25
26 contribution by exploring the relationship between commitment and its eventual outcomes
27
28 (i.e., psychological well-being) among Hong Kong teachers. Setting the current investigation
29
30 in a collectivist culture like Hong Kong different from the typical Western context allows us
31
32 to expand our understanding about employees' commitment beyond the Western context.
33
34
35

36
37 Allen and Meyer (1990) developed the three-component model of commitment which
38
39 has been widely used in the Industrial and Organizational Psychology literature. *Affective*
40
41 commitment is defined as the employee's positive emotional attachment to the organization;
42
43 *continuance* commitment, is defined as the employee's attachment to the organization
44
45 because of the perceived high costs of leaving the organization (such as retirement benefits,
46
47 leave benefits), and *normative* commitment is defined as an employee's attachment to the
48
49 organization because of feelings of obligation, loyalty and duty. To further highlight
50
51 conceptual differences among the three dimensions of commitment Allen and Meyer (1990, p.
52
53 3) said that "employees with strong affective commitment remain because they *want* to, those
54
55 with strong continuance commitment because they *need* to, and those with strong normative
56
57
58
59
60

1
2
3 commitment because they feel they *ought* to do so”. Each of these has presumed differential
4 effects on job satisfaction, employee psychological well-being and their intent to stay in their
5 current profession and organisation.
6
7

8
9
10 While initially the focus was on commitment to the organization in which a person
11 worked, in a subsequent refinement of their model, Meyer et al, (1993) added a second
12 dimension, affective, continuance and normative commitment to the occupation, career or
13 profession as a whole. They argued that organizational and occupational commitments are
14 distinct constructs, with each contributing to the understanding of, and ability to predict work
15 behavior. As Meyer et al., (1993, p 540) said adding occupational commitment “provides a
16 more complete understanding of a person’s tie to his or her occupation” which may pave the
17 way to understand differential commitment to organization (i.e., school) and occupation (i.e.,
18 teaching). In spite of this, the literature is never explicit as to the importance given to targets
19 or foci of commitment: organization or occupation. Rather, the questions of which one
20 influence the other is an open research question (e.g., Cohen, 1999, 2000, 2003; Hunt &
21 Morgan, 1994, Morrow, 1993; Mueller & Lawler, 1999). To partly attend to this gap in the
22 commitment literature, an ancillary objective of this investigation was to estimate the
23 incremental contribution of both targets of commitment (organization and occupation) in the
24 prediction of psychological well-being of HK teachers.
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42

43 *Psychological well-being*

44
45 The teaching profession is a demanding and stressful occupation (Borg, 1990; Dunham
46 & Varma, 1998; Kyriacou, 2001; Stoeber & Rennert, 2008). Research suggests that the stress
47 in the teaching profession affects the general health, teaching career, students’ achievement
48 gains, and well-being of teachers (Chan, 2006; Hakanen, Bakker, & Schaufeli, 2006;
49 O’Connor & Clarke, 1990; Skaalvik & Skaalvik, 2009). Teacher stress and burnout have
50 received increasing attention given their impact on a wide range of important outcomes such
51
52
53
54
55
56
57
58
59
60

1
2
3 as impairment of teaching quality, job dissatisfaction, work alienation, physical and
4
5 emotional ill-health, and teachers' leaving the profession (e.g., Boyle, Borg, Falzon, &
6
7 Baglioni, 1995; Kyriacou, 2001; Vandenberghe & Huberman, 1999). In the Hong Kong
8
9 context, the study of Chan and Hui (1995) involving secondary school teachers indicated that
10
11 heavy workload, among other sources, was the major source of stress for teachers. If one is to
12
13 believe that students' scholastic success is largely dependent on teachers' quality and
14
15 well-being (see for example Good & Brophy, 2003; Helmke, 2001; Rowan, Correnti, &
16
17 Miller, 2002; Wentzel, 1998) then this must inform policies in the teaching-learning
18
19 environment because this will impact on teachers' capacity to be effective teachers.
20
21
22

23 Specific to the teaching profession, the literature defines teacher well-being as “a
24
25 positive emotional state that is the result of a harmony between the sum of specific
26
27 environmental factors on the one hand and the personal needs and expectations of the pupils
28
29 vis-à-vis the school on the other” (Engels, Aelterman, Van Petegem & Schepens, 2004 p.
30
31 128). Psychological well-being at work (PWBW) is a construct describing an individual's
32
33 subjective positive work experience, and is composed of five eudemonic dimensions:
34
35 interpersonal fit at work, thriving at work, feeling of competency, perceived recognition at
36
37 work, and desire for involvement at work (Dagenais-Demerais & Sovoie, 2011).
38
39

40 *The Hong Kong context*

41
42
43 In this study, we focus on Hong Kong teachers' commitment and psychological
44
45 well-being. Thus, it might be helpful to present certain facts about the HK context to set the
46
47 stage for the current study. It is commonly thought that the Hong Kong teaching profession is
48
49 a highly stressful one (see Lau, Yuen, & Chan, 2005; Mo, 1991), with heavy teaching loads
50
51 (Titus & Ora, 2005), forced downsizing of schools, and potential staff redundancies. On the
52
53 other hand, the teaching profession is still very highly regarded and relatively well paid
54
55 (Education Bureau, 2013).
56
57
58
59
60

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

Given that the Hong Kong school context is characterized by strong inducements to teach (relatively high status and salary) and strong social obligations (the issues of not losing face and not giving-up because of discontent), it is quite likely that affective, normative, and continuance commitments may work differently than in some Western contexts (see for example Eisinga, Teelken & Doorewaard, 2010). More specifically, in Hong Kong, the teaching profession is regarded very highly and teacher's salary is comparable to other professionals (Carnoy et al., 2009). This is very different from the situations in a number of Western countries. For example, in the USA, considerable shortages of teachers have been reported due to low teacher salary in comparison with other professionals (Carnoy et al., 2009).

Research on East-West cultural differences has shown that cultures differ in terms of their value emphases (e.g., Schwartz, 1999), power distance (e.g., Hofstede, 1980), and self-construals (e.g., Markus & Kitayama, 1991). In Eastern cultures, social conformity, interdependence and hierarchy are more highly valued. Given this, it is possible that continuance and normative commitment may also be positively related to psychological well-being in Hong Kong. While we know of no specific study testing the various components of commitment and their relationship to psychological well-being in the Asian culture, research on cross-cultural psychology research has shown that Asians are more likely to conform to societal norms and less likely to emphasize the value of agency, personal choice, and liking relative to their Western counterparts (Markus & Kitayama, 1991). They put a higher value on conformity to societal norms and on fulfilling one's obligations (Markus & Kitayama, 2010).

Given these societal differences, it is possible that normative and continuance commitment may be more strongly related to various aspects of psychological well-being than affective commitment. In other words, whether one likes or does not like the school one

1
2
3 is teaching in, or the teaching profession as a whole (affective commitment), is less likely to
4
5 be a determining factor in how a Hong Kong teacher feels about teaching than continuance
6
7 and normative commitments, and hence these two are more likely strongly related to
8
9 psychological well-being than affective commitment. Because of culture associated with the
10
11 East, we anticipated that continuance and normative factors may be more strongly related to
12
13 various aspects of psychological well-being than affective commitment. In other words,
14
15 whether one likes or does not like the school one is teaching in, or the teaching profession as
16
17 a whole (affective commitment), is less likely to be a determining factor of Hong Kong
18
19 teachers' well-being than continuance and normative commitments, and hence these two are
20
21 more likely strongly related to psychological well-being than affective commitment.
22
23
24

25 In much research on Western culture, affective commitment has been found to be the
26
27 most dominant predictor of job performance and organizational citizenship. These results
28
29 have been found in countries like Canada, United States, Hungary, and Italy (Eisinga,
30
31 Teelken, & Doorewaard, 2010; Glazer, Daniel & Short, 2004; Meyer et al., 2012). In Hong
32
33 Kong, it was anticipated that continuance commitment may be negatively related to both
34
35 normative and affective commitment, as well as to psychological well-being because the
36
37 reasons for remaining in the profession and job relate to external pressures such a preserving
38
39 face, earning an income, preserving superannuation and so on. For example, a teacher may
40
41 dislike teaching, and not be particularly concerned about normative obligations, but
42
43 nevertheless remain in the profession because it is too hard to leave. In this case continuance
44
45 commitment should be a negative predictor of, for example, thriving at work. In line with
46
47 previous research, affective commitment is posited to be positively related to psychological
48
49 well-being (e.g., Brunetto et al., 2013).
50
51
52
53

54 Examination of the relationships between psychological well-being and affective,
55
56 normative and continuance commitment is, therefore, especially important for the Hong
57
58
59
60

1
2
3 Kong school system as it strives to provide the strongest teaching force while facing teacher
4
5 unrest due to perceived heavy workloads, and teaching redundancies through downsizing of
6
7 schools (Education Bureau, 2013). Commitment to work is operationalized in terms of
8
9 commitment to organization (such as a particular school) and commitment to occupation (that
10
11 is, the teaching profession). Psychological well-being is operationalized through five
12
13 dimensions: interpersonal fit at work, thriving at work, feeling of competency, perceived
14
15 recognition at work, and desire for involvement at work.
16
17

18
19 *The present study*

20
21 Using the three component model of commitment this study hopes to contribute to the
22
23 ongoing scholarly conversation on teacher commitment in a number of ways. First, it
24
25 attempts to identify the dimensions of teacher commitment and psychological well-being of
26
27 Hong Kong teachers by validating the Affective, Continuance and Normative Organizational
28
29 Scale (Allen & Meyer, 1990) and the Psychological well-being Scale (Dagenais-Desmarais &
30
31 Savoie, 2011) in an Asian setting specifically in the Hong Kong context. It was noted by
32
33 Meyer et al., (2002) in their meta-analysis of organizational commitment studies that an
34
35 important next step in establishing the generalizability of the three-component commitment
36
37 model is to do a cross-cultural validation in other countries outside North America, and
38
39 therefore research involving other cultural settings is warranted. The importance of
40
41 establishing the cross-cultural validity of instruments has been emphasized by a number of
42
43 researchers (see for example Hambleton, 2001; Maneesriwongul & Dixon, 2004; van
44
45 deVijver & Hambleton, 1996; van de Vijver & Hambleton, 1996; van de Vijver & Leung,
46
47 1997; and van de Vijver & Tanzer, 2004).
48
49
50

51
52 Second, this study will provide an understanding of the nature and level of psychological
53
54 well-being of Hong Kong teachers. This study will also examine the relationships of six
55
56 commitment predictors to the psychological well-being of Hong Kong teachers to determine
57
58
59
60

1
2
3 the relative salience of each. Finally, this study may partly address Meyer et al.'s, (2002)
4
5 observation that more work is needed to understand the nature of normative commitment and
6
7 whether it contributes uniquely to the prediction of work-related behavior and experiences.
8

9 Specifically, the study sets out to:

- 10
11
12 1. Establish the construct validity and reliability of the three-component model of
13
14 organizational and occupational commitment, and the construct validity and reliability
15
16 of the Psychological Well-being scales for a sample of teachers in Hong Kong;
17
18 2. Examine the nature and level of commitment and psychological well-being among a
19
20 sample of teachers in Hong Kong; and
21
22
23 3. Examine the relationships among affective, normative and continuance commitment
24
25 to organization (school) and occupation (teaching), and their relationships to
26
27 psychological well-being.
28

31 Method

32 Participants

33
34 The participants of this study were 859 Hong Kong teachers from 15 primary and 15
35
36 secondary schools located in a cross section of educational regions in Hong Kong. Of these
37
38 participants, 295 (34.3%) were males and 560 (65.2%) were females, (4 or .4% failed to
39
40 indicate their sex). The mean age was 41.13 years ($SD = 9.08$). The average year of teaching
41
42 experience was 15.15 with a range of 1-40 years.
43
44

45 In terms of family income, there were 13.50% whose income ranged from 15,000 –
46
47 29,999 HKD; 35.97% from 30,000 – 49,999 HKD and 47.26% from 50,000 – 79,999 HKD.
48
49 The remaining 3.27% failed to indicate their family income. The high proportion (47.26%) of
50
51 HK teachers in our data set received a monthly salary over 50,000 HKD which fall within the
52
53 top 10% income group of Hong Kong. In general, these teachers received at least monthly
54
55 salary of 15,000 HKD which is higher than the median monthly income of 11,000 HKD
56
57
58
59
60

(Census & Statistics Department, 2012) and higher than 60% of the monthly salary of workforce in HK. In terms of highest education attainment, 2.44% of participants completed diploma or associate degrees, 51.29% completed college degrees, 44.47% completed master's degrees, 0.6% received doctoral degrees while 1.8% did not indicate their highest education attained.

Measures and Procedures

Affective, Continuance, and Normative Commitment. An adaptation of The Affective, Continuance, and Normative Organizational and Occupational Commitment Scales (Meyer, Allen, & Smith, 1993) was used to measure teacher commitment. Commitment has three components: affective, continuance, and normative.

Affective – defined as the employee's positive emotional attachment. Affective commitment has the following dimensions: affective commitment to occupation (3 items, e.g. "Being in the teaching profession is important to my image"; $\alpha = .80$) and affective commitment to the organization (3 items, e.g. "I do not feel like part of the family at my school" (reverse scored); $\alpha = .85$).

Continuance – defined as the employee's attachment due to the perceived high cost of leaving such as retirement benefits and leave benefits and lack of alternatives. Continuance commitment has the following dimensions: continuance commitment to occupation (3 items, e.g. "Changing professions now would be difficult for me to do"; $\alpha = .73$), and continuance commitment to organization (3 items, e.g., "It would be very hard for me to leave my school right now, even if I wanted to"; $\alpha = .75$).

Normative – defined as an employee's attachment due to feelings of obligation, loyalty, and duty. Normative has the following dimensions: normative commitment to the occupation (3 items, "I feel a responsibility to the teaching profession to continue in it"; $\alpha = .67$) and normative commitment to the organization (3 items "This school deserves my loyalty"; α

1
2
3 =.80).

4
5 Note that the original scales had six items each (Meyer, Allen & Smith, 1993), but
6
7 because the full survey contained a number of other dimensions measuring a wide range of
8
9 teacher attributes it was decided to reduce the number of items used for brevity and ease of
10
11 completion by the teachers. In order to reduce the number of items we selected the three
12
13 highest loading items from the Meyer et al (1993) CFA analyses.
14

15
16 The original commitment to occupation scale was designed for nurses and each question
17
18 referred to the nursing profession (Meyer et al., 1993). This original questionnaire was
19
20 developed and tested in Canada. To make the questionnaire appropriate to teachers and
21
22 schools a slight adaptation was made to the scales by adding the word 'school' or 'teaching
23
24 profession' to the stems of the questions. This approach was consistent with the suggestion of
25
26 Meyer et al., (1993). Teachers contributing to this study were invited to complete a paper and
27
28 pen version of the survey. Teachers were also given the choice to answer the surveys in either
29
30 English or Chinese. However, all teachers chose to answer the Chinese versions. The Chinese
31
32 version of the scale had been translated from the English using forward and backward
33
34 translation procedures (Maneesriwongul & Dixon, 2004).
35
36
37

38
39 *Psychological Well-Being at Work*. Psychological well-being at work is comprised of
40
41 five dimensions (Dagenais-Desmarais & Savoie, 2011). These include *interpersonal fit at*
42
43 *work* – perception of experiencing positive relationships with individuals interacting with
44
45 oneself within the work context (5 items, e.g. “I value the people I work with”; $\alpha = .90$),
46
47 *thriving at work* – perception of accomplishing a significant and interesting job that allows
48
49 one to fulfill oneself as an individual (5 items, e.g. “I find my job exciting”; $\alpha = .92$), *feeling*
50
51 *of competency* – perception of possessing the necessary aptitudes to do one’s job efficiently
52
53 and have mastery of the tasks to perform (5 items, e.g. “I know I am capable of doing my
54
55 job” ; $\alpha = .88$), *perceived recognition at work* – perception of being appreciated within the
56
57
58
59
60

1
2
3 organization for one's work and one's personhood (5 items, e.g. "I feel that my work is
4 recognized"; $\alpha = .88$), and *desire for involvement at work* – will to involve oneself in the
5 organization and to contribute to its functioning and success (5 items, e.g. "I want to take
6 initiative in my work"; $\alpha = .81$). This scale was developed in Canada and is a generic scale for
7 all occupations.
8
9

10
11
12
13
14 The English version of both the commitment and psychological well-being scales had
15 been translated to Chinese using forward and backward translation procedures
16 (Maneesriwongul & Dixon, 2004). The *a priori* measurement models estimated through
17 confirmatory factor analyses (CFA) provided an adequate fit to the data: The Affective,
18 Continuance, and Normative Organizational and Occupational Commitment Scales (χ^2
19 =799.596, $df=118$, RMSEA=.08, TLI=.90, CFI=.91, NFI=.90, IFI=.91); and Psychological
20 Well-being Scale: ($\chi^2 =1965.10$, $df=254$; RMSEA=.08, TLI=.90, CFI=.93, NFI=.92, IFI=.93).
21
22 A 7-point Likert-type scale was used for the self-report questionnaires ranging from 1
23 (strongly disagree) to 7 (strongly agree) with higher values indicating a greater degree of
24 endorsement.
25
26
27
28
29
30
31
32
33
34
35
36

37 Statistical analysis

38
39 In order to establish construct validity evidence for the hypothesized six-factor structure
40 of the Affective, Continuance and Normative Occupational and Organizational Commitment
41 Scales and the five-factor Psychological Well-being scales for use with Hong Kong teachers
42 we conducted a series of CFAs using AMOS 16 (Arbuckle, 2007).
43
44
45
46
47

48 Hierarchical regression analysis was conducted to determine the relationship between
49 the six dimensions of teacher commitment and the various indices of psychological
50 well-being. Teacher commitment to organization (affective commitment, normative
51 commitment, continuance commitment) and to occupation (affective commitment, normative
52 commitment, continuance commitment) were used as predictor variables while psychological
53
54
55
56
57
58
59
60

1
2
3 well-being (interpersonal fit at work, thriving at work, feeling of competency perceived
4
5 recognition at work, desire for involvement at work) served as the criterion variables.
6

7
8 In order to control for any effects of gender, income and educational level, these three
9
10 variables were entered at the first step of the regression equation as covariates. Following
11
12 procedures used by Meyer, Allen and Smith (1993), we entered commitment to organization
13
14 at the second step. At step 3, we entered commitment to occupation. We were interested to
15
16 know whether commitment to occupation would account for a significant amount of variance
17
18 in predicting psychological well-being of Hong Kong teachers after controlling for the effects
19
20 of demographics and commitment to organization. Recall that in the study of Meyer et al.,
21
22 (1993), they controlled for commitment to organization to evaluate if subscales of
23
24 commitment to occupation are independent constructs which can contribute uniquely in
25
26 predicting work behavior. Therefore, in this paper we adopted a similar approach.
27
28
29
30

31 **Results**

32 *Preliminary analyses*

33
34 We checked the normality of data by first assessing the skewness and kurtosis values for
35
36 each item. Absolute values of skewness and kurtosis beyond 2 and 7, respectively, may imply
37
38 a lack of univariate normality (Finney & DiStefano, 2006). A look at the skewness and
39
40 kurtosis values showed that there does not seem to be a violation of normality assumptions.
41
42 We also checked for outliers by looking at the Mahalanobis distance (D^2). Values that stand
43
44 distinctively apart from other values can be considered outliers. No such outliers were found.
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
Maximum likelihood was used as the method of estimation.

51
52
53
54
55
56
57
58
59
60
Descriptive statistics, reliability coefficients and correlations among study variables are
shown in Table 1. Internal consistency for each scale was established by calculating
Cronbach's alpha coefficients. Subscales of the Affective, Continuance, and Normative
Organizational and Occupational Commitment scales had alpha values ranging from .67

1
2
3 to .85. Subscales of the Well-Being scale had alpha values ranging from .75 to .92. The
4
5 internal consistency of the scales were generally acceptable.
6

7
8 An examination of the means for the commitment scales indicated that the two highest
9
10 ranked scales in order of mean size were normative commitment to the organization followed
11
12 by normative commitment to the occupation. The two lowest ranked scales were continuance
13
14 commitment to the occupation followed by continuance commitment to the organization. The
15
16 mean distribution of the commitment scales was quite wide ranging from 5.24 ($SD=.69$) for
17
18 normative commitment to the organization and the lowest, 3.61 ($SD=1.21$) for continuance
19
20 commitment to the organization.
21
22

23
24 Mean scores for the psychological well-being scales did not have a large range with the
25
26 highest endorsed scale being thriving at work ($M=5.13$; $SD=.75$) and the least endorsed scale
27
28 being perceived recognition at work ($M=4.62$; $SD=.63$).
29

30
31 An examination of the zero order correlations showed that continuance commitment to
32
33 the organisation was negatively related to all other commitment subscales (range $-.40$ to $-.64$,
34
35 $p<.001$), and negatively related to all five psychological well-being scales (range $-.24$ to $-.57$,
36
37 $p<.001$). Normative commitment to the organization was positively related to all other
38
39 variables (range $r = .17$ to $r = .89$, $p < .001$) except for continuance commitment to
40
41 organization to which it was negatively related ($r = -.24$, $p < .001$). Affective commitment to
42
43 the organization was significantly and positively related to normative and continuance
44
45 commitment to organization, affective and normative commitment to occupation,
46
47 interpersonal fit at work, thriving at work (range $.11$ to $.48$, $p<.01$ to $p<.001$) and negatively
48
49 related to continuance commitment to the occupation and feelings of competency (range $-.13$
50
51 to $-.44$, $p<.001$). Of particular interest is the negative relationship between continuance
52
53 commitment to the organization and psychological well-being, and the positive relationship
54
55 between continuance commitment to occupation and psychological well-being.
56
57
58
59
60

1
2
3 ***Insert Table 1 about here***
4

5 *Confirmatory factor analysis*
6

7 Confirmatory factor analyses for commitment and psychological well-being scales
8 exhibited an adequate fit to the data (see Table 2). All factor loadings were significant at the
9 $p < .001$ level (Byrne, 2010; MacCallum, Browne, & Sugawara, 1996). The fit indexes
10 indicated that the five-factor model of psychological well-being and the six-factor model of
11 teacher commitment provided acceptable better fit.
12
13

14
15
16
17
18 ***Insert Table 2 about here***
19

20
21 *Regression analyses*
22

23 To examine the relationships between affective, normative and continuance commitment
24 to organization and occupation, and their relationships to psychological well-being, we
25 conducted a series of hierarchical multiple regression analyses. To control for the effects of
26 different demographic backgrounds of the teachers we entered three demographic variables
27 (gender, income, and level of education) at the first step. These three variables accounted for
28 a negligible amount of variance in the outcome measures of psychological well-being, $.003 <$
29 $\Delta R^2 < .02$, $.002 < p < .55$. At step 2, we entered the subscales of the teacher commitment to
30 organization (affective commitment, normative commitment, continuance commitment).
31 These three variables were able to explain a significantly high amount of variance across the
32 five outcome variables, ranging from 36% to 81.8%. An analysis of the beta weights
33 indicates that across the five psychological well-being scales normative commitment to the
34 organization was consistently the strongest predictor. Specifically at step 2, *normative*
35 *commitment to organization* was the strongest predictor of all psychological well-being
36 subscales: interpersonal fit at work, ($\beta = .60$); thriving at work, ($\beta = .79$); feeling of competency,
37 ($\beta = .66$); perceived recognition at work, ($\beta = .66$); and desire for involvement at work, ($\beta = .76$).
38
39 This was followed by affective commitment to the organization (predicting feeling of
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

1
2
3 competency, ($\beta=.41$); perceived recognition at work, ($\beta=-.28$); and desire for involvement at
4
5 work, ($\beta=-.35$). Continuance commitment to the organization negatively predicted
6
7 interpersonal fit at work, ($\beta=-.41$); and thriving at work, ($\beta=-.22$); while positively predicting
8
9 feeling of competency, ($\beta=.36$); and desire for involvement at work, ($\beta=.24$), $.36 < \Delta R^2 < .82$,
10
11 $p < .000$. In step 3, the subscales of the teacher commitment to occupation (affective
12
13 commitment, normative commitment, continuance commitment) were entered. The addition
14
15 of these variables contributed a small, yet significant amount to the overall variance
16
17 explained by the equation across the five psychological well-being scales from 3.4% to
18
19 18.2% after controlling for the effect of demographic variables and organizational
20
21 commitment, $.03 < \Delta R^2 < .18$, $p < .000$ (refer to Table 3).
22
23
24
25
26

27
28 The full block of variables explained from 54.4% to 89.9% of the variance across the
29
30 five outcome variables. Based upon the ranked order of standardized beta weights,
31
32 normative commitment to the organization and normative commitment to the occupation
33
34 were the strongest predictors of psychological well-being. Affective commitment to the
35
36 organization and the occupation was a weak positive predictor of psychological well-being,
37
38 although affective commitment to the occupation was the strongest predictor of interpersonal
39
40 fit at work. Continuance commitment to the occupation was not a strong predictor except for
41
42 desire for involvement at work. Continuance commitment was a negative predictor of
43
44 interpersonal fit at work and thriving at work
45
46
47

48
49
50
51
52
53
54
55
56
57
58
59
60
INSERT TABLE 3 ABOUT HERE

The order of entry of variables in hierarchical regression may provide different patterns
of prediction (Ho, 2006). It is possible that, although we entered our blocks of variables
following the logic of Meyer et al. (1993), the order of entry of the commitment variables
blocks (organization and occupation) could be reversed with occupational commitment

1
2
3 variables being entered first, followed by the organizational commitment variables (refer to
4 Table 4). To examine the independent effects of the occupational variables when not
5
6
7 controlling for the organization variables, we entered the occupational variables as a second
8
9
10 block after the demographic variables. What clearly emerged from this analysis was the
11
12 importance of normative values, with normative commitment to the occupation being the
13
14 strongest predictor across all five psychological well-being variables (refer to Table 4).
15
16 Indeed, across the five sets of analyses there were very few significant predictor variables
17
18 other than for the normative commitment to occupation. Results of our regression analyses
19
20 were complementary which provided consistent results.
21

22
23 INSERT TABLE 4
24

25 Discussion

26
27 The primary aim of this study was to investigate the relationships between Hong Kong
28
29 teachers' affective, normative and continuance commitments and their relationships to
30
31 psychological well-being. We also wanted to examine the nature and level of commitment
32
33 and psychological well-being among these teachers.
34
35

36
37 Our initial CFA analyses demonstrated that commitment is multi-dimensional,
38
39 comprising three of elements: affective commitment (AC), normative commitment (NC) and
40
41 continuance commitment (CC). Commitment can also be construed either as commitment to
42
43 the organization or commitment to the teaching profession. Although we expected
44
45 continuance commitment to be endorsed more strongly than affective and normative
46
47 commitments, the ranking of the mean scores suggested otherwise. Continuance commitment
48
49 was the least endorsed construct ($MO_{rg} = 3.61$; $MO_c = 4.29$; refer to Table 1).
50

51
52 Normative commitment (that is an attachment to the organization and occupation
53
54 because of feelings of obligation, loyalty and duty), was the most highly endorsed type of
55
56 commitment. Affective commitment was also highly endorsed. Our finding is consistent with
57
58
59
60

1
2
3 the earlier finding of Fischer and Mansell's (2009) meta-analysis which showed that
4
5 normative commitment is more salient in societies with high degrees of collectivism,
6
7 compliance to authority, and power distance which is the case for the Hong Kong Chinese
8
9 culture (Hofstede, 1993; Hofstede, 2001; Hofstede & Bond, 1988; Tseng, 2004).
10

11
12 In line with our hypothesis, the zero order correlations showed that continuance
13
14 commitment to the organization was negatively related to all five psychological well-being
15
16 scales and to all other commitment scales. This indicates that to the extent one is motivated
17
18 by continuance commitment the more negative the effect on psychological well-being, affect
19
20 towards teaching, and normative commitment to teaching. This finding expands previous
21
22 research on the negative relationship between continuance commitment to organization and
23
24 job performance and organizational citizenship behavior but positive relationship with stress
25
26 and work-family conflict (Meyer et al., 2002; Meyer et al., 2012).
27
28

29
30 Using hierarchical regression, we were able to demonstrate that both commitment to the
31
32 organization and commitment to one's occupation predicted psychological well-being even
33
34 after controlling for demographic variables. In line with expectations, normative commitment
35
36 to the organization was found to be the most important positive predictor of well-being.
37
38 Normative commitment is believed to develop as the result of socialization experiences that
39
40 underscores the appropriateness of remaining loyal to one's employer (Dunham, Grube, &
41
42 Castaneda, 1994; Meyer et al., 1993).
43
44

45
46 Normative commitments to organization and occupation were the most significant
47
48 predictors of four out of the five psychological well-being scales: thriving at work, feeling of
49
50 competency, perceived recognition at work and desire for involvement at work. Affective
51
52 commitment to occupation was the strongest positive predictor of one of the indicators of
53
54 well-being – interpersonal fit at work suggesting that feelings toward the teaching profession
55
56 made them value harmonious interpersonal relationships.
57
58
59
60

1
2
3 Normative commitment may be triggered by employees' experiences either prior to and
4 following entry to work (Allen & Meyer, 1990; Meyer et al., 2012). While research findings
5 among Western samples consistently suggest the importance of affective commitment in
6 influencing organization- and employee-relevant outcomes (e.g., Eisinga, et al., 2010;
7 Rhoades, Eisenberger & Armeli, 2001), our present findings demonstrate that for Hong Kong
8 teachers, normative commitment was more important in influencing their psychological
9 well-being. This suggests the importance of understanding the influence of cultural elements
10 in the study of commitment to organizations and occupations.
11
12
13
14
15
16
17
18
19

20 Cross-cultural research has shown that normative commitment is more salient in
21 collectivist and/or high power distance cultures (Fischer & Mansell, 2009; Hofstede, 2001;
22 Meyer et al., 2012) such as Hong Kong while affective commitment is more salient in more
23 individualistic cultures. Our result on the importance of normative commitment in
24 determining the well-being of Hong Kong Chinese teachers suggests the importance of
25 understanding commitment within the lens of cultural variability. Building on this, it may be
26 conjectured that the promotion of loyalty and obligation to the workplace may enhance
27 psychological well-being among Hong Kong teachers. Of course, the converse may be true;
28 teachers with high levels of psychological well-being may also be the ones who develop
29 stronger loyalty to their organizations. A longitudinal study is needed to test out the direction
30 of effect.
31
32
33
34
35
36
37
38
39
40
41
42
43
44

45 We hypothesized that continuance commitment to the organization and the occupation
46 would be significant negative predictors of psychological well-being because the reasons for
47 remaining in the profession such as 'changing professions now would be difficult for me to
48 do' are rather extrinsically oriented. In line with our hypothesis, continuance commitment to
49 the organization was a negative predictor of interpersonal fit at work and thriving at work.
50
51
52
53
54
55
56 However, it was a positive predictor of feeling of competency and perceived recognition at
57
58
59
60

1
2
3 work. This ambiguity associated with continuance commitment shows that in Asian cultures,
4
5 a more extrinsic type of commitment does not always lead to negative consequences. Culture
6
7 may be an important moderator of the effects of continuance commitment.
8

9
10 Affective commitment to the organization did not predict interpersonal fit at work. It
11
12 did however significantly and positively predict thriving at work and feeling of competency.
13
14 It was a negative predictor of perceived recognition at work and desire for involvement at
15
16 work, suggesting that those teachers who are positively emotionally aligned with their
17
18 schools do not feel strong recognition and desire for involvement, a somewhat
19
20 counter-intuitive finding. It may be possible that teachers who are high in affective
21
22 commitment to their organization might already be highly involved in school-work endeavors.
23
24 Therefore, they may not want to have any extra involvement or earn extra recognition from
25
26 doing their school duties. Affective commitment to the occupation was generally a low order
27
28 predictor; teachers having a high affective commitment to the occupation also had better
29
30 interpersonal fit at work and feelings of competency. Although affective commitment was
31
32 significantly related to well-being in terms of bivariate correlations (refer to Table 1) it was
33
34 not a significant predictor of most of the well-being variables. Normative commitment is
35
36 more salient than affective commitment in predicting the well-being of Chinese teachers.
37
38
39

40
41 The ‘take home’ message from these analyses is the important role played by
42
43 normative commitment to the organization and occupation in Hong Kong teachers’
44
45 psychological well-being. Teachers who feel that their school deserves their loyalty, and feel
46
47 that they owe a great deal to their schools and the teaching profession, have better
48
49 psychological well-being. Normative commitment to both organization and occupation was,
50
51 by far, the most important predictor. Hence, it is essential that school administrators provide
52
53 teachers with a working environment that facilitates the development and maintenance of
54
55 loyalty to both their schools and the teaching profession in general.
56
57
58
59
60

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

Conversely, continuance commitment can have a negative influence on psychological well-being; hence the inducements to continue with teaching need to go beyond the mere constraints people assume they may have in changing professions. Finally, it is interesting to note that affective commitment, in contrast to some Western findings (Eisinga et al., 2010), was not a significant predictor for most variables, perhaps indicating that whether one feels emotionally attached or not to one's school or profession is not so relevant in a culture in which values of loyalty and responsibility are paramount. This finding may be understood within the context of a collectivist culture (see Triandis, 2001) where a person's identity is defined by his or her group membership.

This study showed commitment to organization functioned as an important predictor of teachers' psychological well-being. In this way the study extends the existing literature by focusing on the consequences of teacher commitment. We found that commitment to organization and occupation (especially normative commitment) has an important impact on the psychological well-being of Hong Kong teachers. Specifically, Hong Kong teachers who express commitment through a sense of loyalty and responsibility to their school and the teaching profession have enhanced psychological well-being. This has important practical implications since social relationships may be more malleable to change through intervention compared to more stable trait variables.

Limitations and Future Directions

We would like to acknowledge a number of limitations. First, the data were obtained from self-reports, hence, may be subject to social desirability response bias and common method variance. Second, we posited a relationship from commitment scales to psychological well-being and tested this through hierarchical multiple regression. However, the direction of effect is open to further investigation. For example, the direction of effects may be from commitment to psychological well-being, from psychological well-being to commitment, or

1
2
3 reciprocal. Longitudinal studies are needed to provide stronger evidence for the direction of
4
5 the effects. Third, we relied exclusively on variable-centered approaches in this study and
6
7 future research employing person-centered approaches could be applied.
8
9

10 Implications

11
12 This paper contributes to the existing literature by showing that both organizational and
13
14 occupational commitment can be integrated in order to better understand the commitment of
15
16 teachers. Rather than studying a single focus of commitment (i.e., organizations), we believe
17
18 that a better grasp of commitment will be attained if commitment to occupations is also
19
20 included in studies. While commitment theory has been widely tested in other industrial or
21
22 organization settings this study provides evidence that commitment theory is also applicable
23
24 to the educational context.
25
26
27

28 Building on these findings, there are some clear practical implications which may
29
30 inform school administrators and teachers themselves. To enhance the psychological
31
32 well-being of Hong Kong teachers, it is essential to nurture their normative and affective
33
34 commitments which can be done by fostering a healthy and warm organizational climate in
35
36 schools.
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

References

- 1
2
3
4
5 Abd Razak, N., Darmawan, I.N., & Keeves, J. P. (2010). The influence of culture on
6
7 teacher commitment. *Social Psychology of Education, 13*(2), 185-205. doi:
8
9 10.1007/s11218-009-9109-z.
10
11
12 Allen, N. J., & Meyer, J. P. (1990). The measurement and antecedents of affective,
13
14 continuance and normative commitment. *Journal of Occupational Psychology, 63*, 1-18.
15
16 doi: 10.1111/j.2044-8325.1990.tb00506.x.
17
18 Arbuckle, J. L. (2007). AMOS (Version 7) [Computer software]. Chicago: SPSS.
19
20 Borg, M. G. (1990). Occupational stress in British educational settings: A review.
21
22 *Educational Psychology, 10*, 103–126. doi: 10.1080/0144341900100201.
23
24 Boyle, G. J., Borg, M. G., Falzon, J. M., & Baglioni, A. J. (1995). A structural model of the
25
26 dimensions of teacher stress. *British Journal of Educational Psychology, 65*, 49–67. doi:
27
28 10.1111/j.2044-8279.1995.tb01130.x.
29
30
31 Brunetto, Y., Shriberg, A., Farr-Wharton, R., Shacklock, K., Newman, S., & Dienger J.
32
33 (2013). The importance of supervisor-nurse relationships, teamwork, wellbeing,
34
35 affective commitment and retention of North American nurses. *Journal of Nursing*
36
37 *Management, 21*, 827-37. doi: 10.1111/jonm.12111.
38
39
40 Byrne, B.M. (2010). *Structural equation modelling with AMOS: Basic concepts, applications,*
41
42 *And Programming*, 2nd Ed. New York: Routledge.
43
44
45 Carnoy, M., Brodziak, I., Luschei, T., Beteille, T., & Loyalka, P. (2009). Do countries paying
46
47 teachers higher relative salaries have higher student Mathematics achievement? *Teacher*
48
49 *Education and Development Study in Mathematics (TEDS-M)*. International Association
50
51 for the Evaluation of Educational Achievement (IEA).
52
53
54 Census & Statistics Department (2012). Hong Kong 2011 Population Census - Summary
55
56 Results. Retrieved February 8, 2009 from
57
58
59
60

<http://www.censtatd.gov.hk/hkstat/sub/sp170.jsp?productCode=B1120055>.

- Chan, D. W. (2006). Emotional intelligence and components of burnout among Chinese secondary school teachers in Hong Kong. *Teaching and Teacher Education, 22*, 1042–1054. doi:10.1016/j.tate.2006.04.005
- Chan, D.W. & Hui, E.K.P. (1995). Burnout and coping among Chinese secondary school teachers in Hong Kong. *British Journal of Educational Psychology, 65*, 15–25. doi: 10.1111/j.2044-8279.1995.tb01128.x
- Chan, W. Y., Lau, S., Nie, Y., Lim, S., & Hogan, D. (2008). Organizational and personal predictors of teacher commitment: The mediating role of teacher efficacy and identification with school. *American Educational Research Journal, 45*, 597-630. doi: 10.3102/0002831208318259.
- Choi, T. H., & Tang, K. C. (2009, April). *An exploration of parental choice of secondary schools in Hong Kong*. Paper presented at the 8th Discourse Power Resistance Conference, Manchester, UK.
- Cohen, A. (1999). Relationships among five forms of commitment: an empirical assessment. *Journal of Organizational Behavior, 20*, 285-308.
- Cohen, A. (2000). The relationship between commitment forms and work outcomes: A comparison of three models. *Human Relations, 53*, 387-417. doi: 10.1177/0018726700533005.
- Cohen, A. (2003). *Multiple commitments in the workplace: An integrative approach*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Dagenais-Desmarais, V., & Savoie, A. (2011). What is psychological well-being really? A grassroots approach from the organizational science. *Journal of Happiness Studies*. Advance online publication. doi: 10.1007/s10902-011-9285-3.
- Day, C. (2008). Committed for life? Variations in teachers' work, lives and effectiveness.

- 1
2
3 *Journal of Educational Change*, 9, 243 – 260. doi: 10.1007/s10833-007-9054-6.
4
5 Dec, J. R., Henkin, A. B., & Singleton, C. A. (2006). Organizational Commitment of
6
7 Teachers in Urban Schools: Examining the Effects of Team Structures. *Urban*
8
9 *Education*, 41(6), 603-627. doi: 10.1177/0042085906292512.
10
11 Dunham, J. & Varma V. (1998). *Stress in teachers: Past, present and future*, London,
12
13 Whurr, Wiley.
14
15 Dunham, R. B., Grube, J. A., & Castaneda, M. B. (1994). Organizational commitment: The
16
17 utility of an integrative definition. *Journal of Applied Psychology*, 79, 370-380. doi:
18
19 10.1037/0021-9010.79.3.370
20
21
22
23 Ebmeier, H., (2003). How supervision influences teacher efficacy and commitment: An
24
25 investigation of a path model. *Journal of Curriculum and Supervision*, 18(2), 110-141.
26
27
28 Ebmeier, H. & Nicklaus, J. (1999). The impact of peer and principal collaborative
29
30 supervision on teachers' trust, commitment, desire for collaboration, and efficacy.
31
32 *Journal of Curriculum and Supervision*, 14, 351-378.
33
34 [http://www.ascd.org/publications/jcs/summer1999/The-Impact-of-Peer-and-Principal-](http://www.ascd.org/publications/jcs/summer1999/The-Impact-of-Peer-and-Principal-Collaborative-Supervision-on-Teachers'-Trust,-Commitment,-Desire-for-Collaboration,-and-Efficacy.aspx)
35
36 [Collaborative-Supervision-on-Teachers'-Trust,-Commitment,-Desire-for-Collaboration,-](http://www.ascd.org/publications/jcs/summer1999/The-Impact-of-Peer-and-Principal-Collaborative-Supervision-on-Teachers'-Trust,-Commitment,-Desire-for-Collaboration,-and-Efficacy.aspx)
37
38 [and-Efficacy.aspx](http://www.ascd.org/publications/jcs/summer1999/The-Impact-of-Peer-and-Principal-Collaborative-Supervision-on-Teachers'-Trust,-Commitment,-Desire-for-Collaboration,-and-Efficacy.aspx)
39
40
41 Education Bureau (2013). *The government of Hong Kong Special Administrative Region*.
42
43 [Data file]. Retrieved May 30, 2013, from
44
45 <http://www.censtat.gov.hk/hkstat/sub/so370.jsp>
46
47
48 Eisinga, R., Teelken, C. & Doorewaard, H. (2010). Assessing cross-national invariance of the
49
50 three-component model of organizational commitment: A six-country study of
51
52 European University Faculty. *Cross-Cultural Research*, 44(4), 341-373. doi:
53
54 10.1177/1069397110370932.
55
56
57 Engels, N., Aelterman, A., Van Petegem, K., & Schepens, A. (2004). Factors which influence
58
59
60

1
2
3 the well-being of pupils in Flemish secondary schools. *Educational Studies*, 30(2),
4
5 127–143. doi: 10/1080.0305569032000159787.
6

7 Fink, S. L. (1992). *High commitment workplaces*. New York: Quorum Books.

8
9
10 Firestone, W. A. (1996). Images of teaching and proposals for reform: A comparison of ideas
11
12 from cognitive and organizational research. *Educational Administration Quarterly*, 32,
13
14 209-235. doi: 10.1177/0013161X96032002003.
15

16 Finney, S.J. & DiStefano, C. (2006). Non-normal and Categorical data in structural equation
17
18 modeling. In G. r. Hancock & R. O. Mueller (Hrsg.). *Structural equation modeling: a*
19
20 second course (S. 269–314). Greenwich, Connecticut: Information Age Publishing.
21

22
23 Fischer, R. & Mansell, A. (2009). Commitment across cultures: A meta-analytical
24
25 approach. *Journal of International Business Studies*, 40, 1339-1358. doi:
26
27 10.1057/jibs.2009.14.
28

29
30 Glazer, S., Daniel, S. C., & Short, K. M. (2004). A cross-cultural study of the relationship
31
32 between organizational commitment and human values. *Human Relations*, 57, 323-345.
33

34 Hakanen, J. J., Bakker, A. B., & Schaufeli, W. B. (2006). Burnout and work engagement
35
36 among teachers. *Journal of School Psychology*, 43, 495–513.
37
38 <http://dx.doi.org/10.1016/j.jsp.2005.11.001>.
39

40
41 Hambleton, R. K. (2001). The next generation of the ITC test translation and adaptation
42
43 guidelines. *European Journal of Psychological Assessment*, 17(3), 164-172.
44
45 doi:10.1027//1015-5759.17.3.164.
46

47 Henkin, A. B., & Holliman, S. L. (2009). Urban Teacher Commitment: Exploring
48
49 Associations with Organizational Conflict, Support for Innovation, and Participation.
50
51 *Urban Education*, 44(2), 160-180. doi: 10.1177/0042085907312548.
52

53
54 Helmke, A. (2001). Research on classroom instruction and its effects - shortcomings, dead
55
56 ends, and future perspectives. In F. Salili, C. Y. Chiu, & Y. Y. Hong (Eds.), *Student*
57
58
59
60

1
2
3 motivation: The culture and context of learning (pp. 335–345). New York, NY: Kluwer
4
5 Academie/Plenum Publishers.

6
7 Ho, R. (2006). *Handbook of univariate and multivariate data analysis and interpretation with*
8
9 *SPSS*. Chapman & Hall. Taylor & Francis Group.

10
11 Hofstede, G. (2001). *Culture's consequences: Comparing values, behaviors, institutions,*
12
13 *and organizations across nations* (2nd Ed.). London: Sage Publications.

14
15 Hofstede, G. (1993). Cultural constraints in management theories. *Academy of Management*
16
17 *Executive*, 7, 81-94.

18
19 Hofstede, G. & Bond, M.H. (1988). The Confucius connection: From cultural roots to
20
21 economic growth. *Organizational Dynamics*, 16, 4-21.

22
23 Hunt, S. D., & Morgan, R. M. (1994). Organizational commitment: One of many
24
25 commitments or key mediating construct? *Academy of Management Journal*, 37,
26
27 1568-1587. doi: 10.2307/256799.

28
29 Ingersoll, R. (2001). Teacher turnover and teacher shortages: An organizational analysis.
30
31 *American Educational Research Journal*, 38, 499-534.

32
33 Kyriacou, C. (2001). Teacher stress: Directions for future research. *Educational Review*, 53,
34
35 27-35. doi: 10.1080/00131910120033628.

36
37 Lau, P. S. Y., Yuen, M., & Chan, R. M. C. (2005). Do demographic characteristics make a
38
39 difference in teacher burnout in Hong Kong secondary schools? *Social Indicators*
40
41 *Research*, 71, 491–516. doi: 10.1007/s11205-004-8033-z.

42
43 MacCallum, R. C., Browne, M. W., & Sugawara, H. M. (1996). Power analysis and
44
45 determination of sample size for covariance structure modeling. *Psychological Methods*,
46
47 1, 130-149. doi: 10.1037/1082-989X.1.2.130.

48
49 Maneesriwongul, W., & Dixon, J. K. (2004). Instrument translation process: A methods
50
51 review. *Journal of Advanced Nursing*, 48, 175-186.

1
2
3 doi: 10.1111/j.1365-2648.2004.03185.x.
4

5 Markus, H. R. & Kitayama, S. (1991). Culture and the self: Implications for cognition,
6 emotion, and motivation. *Psychological Review*, 98, 224–253.
7

8
9 doi: 10.1037/0033-295X.98.2.224.
10

11 Markus, H. R., & Kitayama, S. (2010). Cultures and selves: A cycle of mutual constitution.
12

13 *Perspectives on Psychological Science*, 5, 420–430. doi:10.1177/1745691610375557.
14

15
16 Meyer, J. P., Allen, N. J., & Smith, C. A. (1993). Commitment to organizations and
17 occupations: Extension of test of a three-component conceptualization. *Journal of*
18 *Applied Psychology*, 78, 538-551. doi: 10.1037/0021-9010.78.4.538.
19
20

21
22
23 Meyer, J. P., Stanley, D. J., Jackson, T. A., McInnis, K. J., Maltin, E. R., & Sheppard, L.
24

25 (2012). Affective, normative, and continuance commitment levels across cultures: A
26 meta-analysis. *Journal of Vocational Behavior*, 80, 225-245. doi:
27

28
29 10.1016/j.jvb.2011.09.005.
30

31
32 Meyer, J. P., Stanley, D. J., Herscovitch, L., & Topolnytsky, L. (2002). Affective,
33 continuance, and normative commitment to organization: A meta-analysis of
34 antecedents, correlates, and consequences. *Journal of Vocational Behavior*, 61 (1),
35 20-52. doi:10.1006/jvbe.2001.1842.
36
37
38

39
40 Mo, K. W. (1991). Teacher burnout: Relations with stress, personality, and social support.
41

42 *Education Journal*, 19, 3–11. <http://www.fed.cuhk.edu.hk/en/ej/1901/1901003.htm>
43
44

45
46 Morrow, P. C. (1993). *The theory and measurement of work commitment*. Greenwich, CT:
47

48 Jai.
49

50
51 Mueller, C. W., & Lawler, E. J. (1999). Commitment to nested organizational units: Some
52 basic principles and preliminary findings. *Social Psychology Quarterly*, 62, 325-346.
53

54
55 Near, J.P (1989). Organizational commitment among Japanese and US workers. *Organization*
56 *Studies*, 10, 281-300. doi: 10.1177/017084068901000301.
57
58
59
60

- 1
2
3 Ng, C. & Renshaw, P. (2002). Self-schema, motivation and learning: A cross-cultural
4 comparison. In D. M. McInerney & S. Van Etten (Eds.), *Sociocultural Influences on*
5 *Motivation and Learning*, (pp.55-87). Greenwich, CT: Information Age Publishing.
6
7
8
9
10 O'Connor, P. R., & Clarke, V. A. (1990). Determinants of teacher stress. *Australian Journal*
11 *of Education*, 34,41-45. doi: 10.1177/000494419003400103.
12
13
14 Park, I. (2005). Teacher commitment and its effects on student achievement in American
15 high schools. *Educational Research and Evaluation*, 11, 461-485.
16 doi:10.1080/13803610500146269.
17
18
19
20
21 Randall, D. M. (1993). Cross-cultural research on organizational commitment: a review and
22 application of Hofstede's value survey module. *Journal of Business Research*, 26,
23 91-110. doi:10.1016/0148-2963(93)90045-Q.
24
25
26
27
28 Rhoades, L., Eisenberger, R. & Armeli, S. (2001). Affective commitment to the
29 organization: The contribution of perceived organizational support. *Journal of Applied*
30 *Psychology*, 86, 825-836. doi:10.1037/0021-9010.86.5.825.
31
32
33
34 Rowan, B., Correnti, R., & Miller, R. J. (2002). What large-scale, survey research tells us
35 about teacher effects on student achievement: Insights from the prospects study of
36 elementary schools. *Teachers College Record*, 104, 1525-1567. doi: 10.1111/1467
37 -9620.00212.
38
39
40
41
42
43 Schwartz, S. H. (1999). A theory of cultural values and some implications for work. *Applied*
44 *Psychology: An International Review*, 48, 23-47.
45 doi: 10.1111/j.1464-0597.1999.tb00047.x.
46
47
48
49
50 Sezgin, F.(2009b). Relationships between teacher organizational commitment, psychological
51 hardiness and some demographic variables in Turkish primary schools. *Journal of*
52 *Educational Administration*, 47(5),630-651. doi: 10.1108/09578230910981099 .
53
54
55
56
57 Shin, H.S., & Reyes, P. (1991). Teacher commitment and job satisfaction: Which comes
58
59
60

1
2
3 first? Paper presented at the Annual Meeting of the American Educational
4
5 Research Association, IL, Chicago, USA.
6

7
8 Skaalvik, E. M. & Skaalvik, S. (2009). Does school context matter? Relations with teacher
9
10 burnout and job satisfaction. *Teaching and Teacher Education*, 25, 518-524.
11
12 doi:10.1016/j.tate.2008.12.006.
13

14
15 Someck, A., & Bogler, R. (2002). Antecedents and consequences of teachers' organizational
16
17 and professional commitment. *Educational Administration Quarterly*, 38, 555-557. doi:
18
19 10.1177/001316102237672.
20

21
22 Stoeber, J., & Rennert, D. (2008). Perfectionism in school teachers: Relations with stress
23
24 appraisals, coping styles, and burnout. *Anxiety, Stress, & Coping*, 21, 37-53. doi:
25
26 10.1080/10615800701742461.
27

28
29 Titus, L. S. P. & Ora, K. W. Y (2005). Teacher Education. In Bray, M. & Coe, R (Eds.),
30
31 *Education and Society in Hong Kong and Macao: Comparative Perspectives on*
32
33 *Continuity and Change*. (pp. 73-85). Comparative Education Research Center, The
34
35 University of Hong Kong.
36

37
38 Triandis, H. (2001). Individualism-collectivism and personality. *Journal of Personality*, 69,
39
40 907-924. doi: 10.1111/1467-6494.696169.
41

42
43 Tseng, V. (2004). Family interdependence and academic adjustment in college: Youth from
44
45 immigrant and US-born families. *Child Development*, 75, 966-983.
46
47 <http://www.ncbi.nlm.nih.gov/pubmed/15144497>
48

49
50 Tsui, K. T., & Cheng, Y. C. (1999). School organizational health and teacher commitment: A
51
52 contingency study with multi-level analysis. *Educational Research and Evaluation*, 5,
53
54 249-268. <http://repository.ied.edu.hk/dspace/handle/2260.2/2976>
55

56
57 van de Vijver, F., & Hambleton, R. K. (1996). Translating test: Some practical guidelines.
58
59 *European Psychologist*, 1, 89-99. doi: 10.1027/1016-9040.1.2.89.
60

- 1
2
3 van de Vijver, F., & Leung, K. (1997). *Methods and data analysis of comparative research*.
4
5 Thousand Oaks, CA: Sage.
6
7 van de Vijver, F. J. R., & Tanzer, N. K. (2004). Bias and equivalence in cross-cultural
8
9 assessment: An overview. *European Review of Applied Psychology*, 54, 119-135. doi:
10
11 10.1016/j
12
13 Vandenberghe, R. & Huberman, A. M. (1999). *Understanding and preventing teacher*
14
15 *burnout*, Cambridge University Press, Cambridge, England.
16
17 Weiss, E. M. (1999). Perceived workplace conditions and first year teachers' morale, career
18
19 choice commitment, and planned retention: A secondary analysis. *Teaching and Teacher*
20
21 *Education*, 15, 861-879. doi:10.1016/S0742-051X(99)00040-2.
22
23
24
25 Wentzel, K. R. (1998). Social relationships and motivation in middle school: The role of
26
27 parents, teachers, and peers. *Journal of Educational Psychology*, 90, 202–209.
28
29 doi:10.1037/0022-0663.90.2.202.
30
31
32 Zhue, Y. & Leung, F.K.S. (2011). Motivation and achievement: Is there an East Asian
33
34 model? *International Journal of Science and Mathematics Education*, 9: 1189-1212.
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

For Peer Review Only

Table 1

Descriptive statistics, internal consistency reliability, and zero-order correlations among the variables

	1	2	3	4	5	6	7	8	9	10	11
1. Affective commitment (Org)	-	.48***	.11**	.28***	.43***	-.44***	.34***	.45**	-.13***	.03	-.01
2. Normative commitment (Org)		-	-.24***	.56***	.87***	.17***	.75***	.89***	.55***	.54***	.65***
3. Continuance commitment (Org)			-	-.62***	-.40***	-.64***	-.57***	-.40***	-.56***	-.24***	-.45***
4. Affective commitment (Occ)				-	.68***	.31***	.80***	.62***	.41***	.46***	.47***
5. Normative commitment (Occ)					-	.31***	.81***	.93***	.59***	.66***	.66***
6. Continuance commitment (Occ)						-	.34***	.27***	.59***	.27***	.60***
7. Interpersonal fit at work							-	.77***	.63***	.53***	.68***
8. Thriving at work								-	.50***	.51***	.63***
9. Feeling of competency									-	.46***	.65***
10. Perceived recognition at work										-	.57***
11. Desire for involvement at work											-
Mean	4.58	5.24	3.61	4.62	5.09	4.29	4.85	5.13	4.73	4.62	4.72
SD	1.32	.69	1.21	.77	.67	.69	.79	.75	.60	.63	.59
Cronbach's alpha	.80	.67	.73	.85	.80	.75	.90	.92	.88	.88	.81

Note: Bolded means are the two highest ranked means for commitment and psychological well-being; * $p < .05$, ** $p < .01$, *** $p < .001$

Table 2

Goodness of fit indices for the measurement models

Model	χ^2	df	p	RMSEA	TLI	CFI	NFI	IFI
Commitment Scale	799.596	118	.000	.08	.90	.91	.90	.91
Psychological well-being Scale	1965.10	254	.000	.08	.90	.93	.92	.93

Note: RMSEA = root mean square error of approximation; TLI = Tucker-Lewis index, CFI = comparative fit index; NFI = normed fit index, IFI = incremental fit index. Values of above 0.90 for TLI, CFI, NFI, and IFI are deemed acceptable, while RMSEA should be below 0.08 (Byrne, 2010).

Table 3

Summary of hierarchical regression predicting dimensions of psychological well-being (standardized beta coefficients are shown)

	Psychological well-being										
	Interpersonal fit at work		Thriving at work		Feeling of competency		Perceived recognition at work		Desire for involvement at work		
	β		β		β		β		β		β
Step 1											
Gender	-.061		-.051		-.087*		.013		-.074*		
Income	-.021		.101*		-.003		-.020		-.018.		
Highest education	.090*		.058		.066		.048		.045		
Step 2											
Gender	.003		.005		-.031		.046		-.022		
Income	-.059**		.061		-.004		-.026		-.026		
Highest education	.047**		.009		.045*		.025		.017		
Affective commitment (Org)	.102***		.082***		.414***		-.278***		-.350***		
Normative commitment (Org)	.599***		.794***		.655***		.661***		.764***		
Continuance commitment (Org)	-.441***		-.221***		.363***		-.057		.236***		
Step 3											
Gender	-.015		.008		-.014		.028		.008		
Highest education	-.051**		.039**		-.023		-.053*		-.026		
Income	.035*		-.006		.039		-.001		.012		
Affective commitment (Org)	.026		.058**		.351***		-.433***		-.148***		
Normative commitment (Org)	.301***		.374***		.466***		-.033		.512***		
Continuance commitment (Org)	-.202***		-.129***		.371***		.142***		-.004		
Affective commitment (Occ)	.339***		-.069***		.217***		.120**		-.011		
Normative commitment (Occ)	.232***		.569***		.307***		.892***		.173***		
Continuance commitment (Occ)	.001		.007		.086*		-.130**		.394***		
Step 1 change in R^2	.013*		.018**		.013*		.003		.008		
F for change in R^2	3.47		5.15		3.52		.70		2.18		
Step 2 change in R^2	.729***		.818***		.609***		.360***		.602***		
F for change in R^2	768.95		1369.56		440.35		153.84		421.46		
Step 3 change in R^2	.072***		.062***		.034***		.182***		.072***		
F for change in R^2	105.84		165.94		26.79		108.37		61.26		
Total R^2	.814		.899		.656		.544		.682		

Note: * $p < .05$, ** $p < .01$, *** $p < .001$

Table 4
Summary of hierarchical regression predicting dimensions of psychological well-being (standardized beta coefficients are shown)

	Psychological well-being					
	Interpersonal fit at work	Thriving at work	Feeling of competency	Perceived recognition at work	Desire for involvement at work	β
Step 1	β	β	β	β	β	β
Gender	-.061	-.051	-.087*	.013	-.074	-.074
Income	-.021	.101*	-.003	-.020	-.018	-.018
Highest education	.090*	.058	.066	.048	.045	.045
Step 2						
Gender	-.023	-.002	-.003	.057*	.012	.012
Income	-.051**	.034	-.025	-.065*	-.045*	-.045*
Highest education	.030	-.012	.031	-.001	.003	.003
Affective commitment (Occ)	.440***	-.007	.075*	-.008	-.047	-.047
Normative commitment (Occ)	.497***	.928***	.502***	.650***	.566***	.566***
Continuance commitment (Occ)	.059**	.001	.458***	.080**	.443***	.443***
Step 3						
Gender	-.015	.008	-.014	.028	.008	.008
Highest education	-.051**	.039*	-.023	-.053*	-.026	-.026
Income	.035*	-.006	.039	-.001	.012	.012
Affective commitment (Occ)	.339***	-.069***	-.217***	.120**	-.011	-.011
Normative commitment (Occ)	.232***	.569***	.307***	.892***	.173***	.173***
Continuance commitment (Occ)	.001	.007	.086*	-.130**	.394***	.394***
Affective commitment (Org)	.026	.058**	-.351***	-.433***	-.148***	-.148***
Normative commitment (Org)	.301***	.374***	.466***	-.033	.512***	.512***
Continuance commitment (Org)	-.202***	.129***	-.371***	.141***	.004	.004
Step 1 change in R^2	.013*	.018*	.013	.003	.008	.008
F for change in R^2	3.47	5.15	3.52	.70	2.18	2.18
Step 2 change in R^2	.768***	.840***	.524***	.445***	.610***	.610***
F for change in R^2	955.50	1623.9	308.78	219.49	435.90	435.90
Step 3 change in R^2	.033***	.040***	.119***	.097***	.064***	.064***
F for change in R^2	48.46	107.22	94.36	57.67	54.47	54.47
Total R^2	.814	.899	.656	.544	.682	.682

Note: * $p < .05$, ** $p < .01$, *** $p < .001$